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HOME DESIGNS
CELOTEX ROCK WOOL BATTs
and the new CELOTEX Hand-Pouring ROCK WOOL

The new, economical way to insulate open attic spaces.

Increased production from new modern plants
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THE CELOTEX CORPORATION, CHICAGO 3, ILLINOIS

CELOTEX
The Greatest Name in Insulation
A STEP AHEAD IN WINDOW DESIGN.
Here's a window that's built for sure-fire appeal to home buyers. Its built-in wind guard provides protected ventilation. Deflects incoming air upward, preventing direct drafts. It sheds rain and snow to the outside. It's one of those "extra features" that marks your house as truly up to date. And it is an example of the advanced design program that has kept Fenestra Steel Residence Casements in the lead over the years.

* We hope you can visit us at the NAHB Show to discuss these advanced products. We'll be there to answer questions on their application to your problems and building procedures. If you can't attend, write us for further information about them.
Simple Carpentry is All it Takes to
Apply UPSON DUBL-THIK Fibre-Tile

Do the whole job yourself.
Get Upson Dubl-Thik Fibre-Tile from your lumber dealer. You can buy it and apply it at a fraction of the cost of either tile or pre-finished tile-like materials.

Build your reputation with satisfied customers. Upson Dubl-Thik Fibre-Tile won't crack, craze or loosen. Has been used with satisfaction in tens of thousands of baths and kitchens for 10 years.

Application Direct to Studs. Provide continuous nailing base for all edges. Nail Upson Floating Fasteners to studs on 16" centers. Apply by first clinching Fasteners in center of panel. Leave 1/8" space between butt ends of panels. Nail edges of panels every 16". Use Upson Waterproof Tape on panel edges around built-in bath tubs. Enamel entire surface of panels before applying mouldings.

Over Old Plaster. Furr horizontally on 16" centers. Get started now!
Ask your lumber dealer for detailed direction sheets or write us direct.

Easily Identified By The Famous BLUE Center

THE UPSON COMPANY, Lockport, New York
Porcelain in Crackproof Panels. 6 Ply Strong Bilt—for new construction • 5 ply Kuver-Krak—for re-covering cracked plaster • 5 ply Dubl-Thik Fibre Tile—for baths and kitchens • 4 ply Upson Board—for general use • 3 ply Easy Curve Board—for displays and industrial uses.
How do you judge heating equipment and plumbing fixtures? By good looks? Sound engineering? Sturdy construction? Any way you judge them, American-Standard products are first! Proof of their dependability and public acceptance is found in the fact that more American homes have heating and plumbing by American-Standard than by any other single company.

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

Look for the Mark of Merit—it identifies the world's largest line of Heating and Plumbing Products for every use... including Boilers, Warm Air Furnaces, Winter Air Conditioners, for all fuels—Water Heaters—Radiators, Convector, Enclosures—Gas and Oil Burners—Heating Accessories—Bathtubs, Water Closets, Lavatories, Kitchen Sinks, Laundry Trays, Brass Trim—and specialized products for Hospitals, Hotels, Schools, Ships and Railroads.
Profits, Investment and Business

WHILE business in general was good at the beginning of 1947 there was considerable pessimism about it. At the beginning of 1948 after it has remained good for another year there is general optimism. This is the pattern that sentiment usually follows. The longer business stays bad, the more pessimists there are. The longer it stays good, the more optimists there are.

Experience does not justify this pattern of sentiment. General optimism usually has prevailed during a boom right up to the time when a bad break in business has occurred. It caused excessive accumulation of inventories at record prices to continue until immediately before the violent decline of business began in 1920. Millions of optimists were still buying stocks at the highest prices ever known when the stock market crashed in 1929.

The wise business man does not let himself be swayed by mob sentiment about business prospects, whether this mob sentiment is pessimistic or optimistic. Whether at the bottom of a depression, or, as at present, in the midst of a great inflationary boom, the wise business man does his own studying of the important causes that are operating, and makes his own decisions regarding both the short-range and long-range effects that these causes are going to have on business in general and on his own business.

The present boom started because during the depression and the war there accumulated huge shortages of things needed by the consuming public and by business, and because during the war huge amounts of purchasing power accumulated both in the hands of consumers and in the treasuries of business. The boom will last as long as (1) the people continue to make large purchases of both consumption goods and such durable goods as housing and automobiles, and (2) business continues to make large purchases of durable goods.

If and when a recession or depression comes it will be started by a decline in the buying of durable goods by business. Most buying of durable goods by business is due to the investment of capital in housing intended for sale or rent and in the improvement and expansion of the plants used in production and transportation. The amount of such investment made by business depends on (1) the amount of capital available and (2) the rate of return on capital that those having it believe they will derive from it after it is invested. Investment declines when either available capital declines or prospective profits decline too much; and it is the decline in business buying of durable goods caused by decline of investment that starts recession or depression.

It follows that the $64 question regarding the future of business is how long enough capital will be available for investment, and how long those having or controlling it will be disposed to continue investing it. Virtually all the capital invested is derived directly and indirectly from past and current profits of business.

Willingness or unwillingness to invest it is determined by the prospective profits.

High and increasing costs of durable goods increase the amount of investment required to improve and expand the plants of industry and transportation, and, unless accompanied by a corresponding increase in current and prospective profits, restrict and finally arrest investment. Those who inveigh against large profits are ignorant of the fact that they are not only a result, but the principal cause of prosperity. When profits and investment in general are large and increasing, the wise business man is optimistic. When they begin to shrink, he knows the time has come to begin looking cautiously for the recession or depression that may be "just around the corner." The business cycle of "boom and bust" is not inexplicable. Its principal explanation is, wide fluctuation in the buying of durable goods by business due to wide fluctuation in the volume of investment by business.
for Rental Housing...

"It's Modular Brick and Tile for Title VI"

This picture is typical of what's taking place in rental housing today.

As contractors and builders swing into the production of housing for rent, they're building more and more of it with modular brick and tile.

One reason, of course, is—brick and tile are available in real quantity.

But there are other reasons! Rental housing represents an investment. Those who invest their money are cost conscious and income conscious.

Builders and contractors know that building with modular brick and tile is the best way to protect their clients' investment—their own reputation.

Brick exteriors, and structural clay tile interiors, cut down on repair and maintenance costs—charges that add to the original investment, eat into income and decrease profits. Elimination of these charges is very important to rental housing.

And looking to the future—the good looks, structural strength and great fire-safety give rental housing of brick and tile high rentability for years to come.

Let us help you with your building problems. Send 50 cents for our new plan book—"Your New Brick Home"—showing designs for 30 small brick homes. Our new book of 6 Engineered Houses in brick and tile is also available for 25 cents. Send your order to Structural Clay Products Institute, Dept. AB-2, 1756 K Street, N.W., Washington 6, D. C.

Now it will be built with modular-designed BRICK and TILE
NATIONAL ELECTRIC
ABC* CABLE

GIVES YOU DOUBLE PROTECTION

*Armored, Bonded and Bushed Cable

In National Electric A. B. C. Cable (No. 14 and No. 12), there's a double path to ground:

1. The flat grounding strip provides a continuous low-resistance path.

2. The armor itself with "bondhook" channel construction also assures a positive path to ground.

There are "PLUS" values in National Electric A. B. C. Cable too:

"Dilec Safecote" Insulated Wires—Flame retardant, moisture resistant, easy to strip.

Anti-Short Bushing—Protects the wire from sharp armor edges.

Flexibility without interfering with grounding contact between armor convolutions.

Buy National Electric A. B. C. Cable from your electrical wholesaler.

National Electric Products Corporation
Pittsburgh 30, Pa.
DOUBLE DUTY

INSULATES AS IT BUILDS...

(BILDRITE SHEATHING)
TWO uses for the cost of one. Sheathing PLUS insulation. Saves time — lowers costs. A faster way of enclosing the house. Better structural bracing and better moisture control. All this PLUS insulation. Double value for your customer's money!
What good is a house without heat?

This winter is proving many modern houses to be obsolete, due to conditions no one thought possible one year ago.

They cannot be adequately heated because of shortages of certain fuels.

It is predicted that shortages in those fuels will exist for several years.

Inventions and loans on houses that may become “fuel orphans” are imperilled by inadequate provisions for heating just as the health and comfort of their occupants are endangered.

Now is the time that houses are being designed, loans on projects being discussed, investments in developments being considered.

To maintain the value of all new construction, provision should be made for the storage and use of anthracite (hard coal), the clean, smokeless, abundant, domestic fuel.

In following issues of this magazine, we shall bring you news of modern developments in heating with anthracite—information that you can use to give modern buildings modern heating.

ANTHRACITE INSTITUTE
101 PARK AVENUE • NEW YORK 17, NEW YORK
**Miami-Carey Bathroom Cabinets and Accessories**

- Asbestos Shingles & Sidings
- Asphalt Shingles & Roofings
- Asphalt Roll Brick Siding
- Rock-Wool Insulation
- Waterproofing Materials
- Roof Coatings and Cements
- Asbestos Coverall Wallboard

**Miami-Carey 75 Years Serving Home and Industry**

**Miami-Carey Bathroom Cabinets and Accessories**

- BATHROOM CABINET . . . Eye-easy lighting — either tubular or fluorescent. Skillful harmonizing of chromium and mirror. All wiring completed at the factory.
- EXTRA CABINETS . . . May be installed alongside large cabinet over lavatory or on adjacent walls. Door mirror set in chromium-plated frame. Crystal Snow inside finish.
- RECESSED TUMBLER HOLDERS AND SOAP DISHES . . . Chromium plated over brass for everlasting lustre. Add unmistakable touch of luxury to any bathroom.
- TOWEL BARS . . . Smooth, sparkling chromium finished . . . complete selection . . . both detachable and permanently fixed models.
- MIAMI ELECTRIC BATHROOM HEATER . . . Compact, safe, efficient, this fan-driven heater fits snugly into any wall and is easy to install. Carries approval of Underwriters’ Laboratories, Incorporated.
- SHOWER GRAB BAR AND SOAP DISH . . . Eliminates bending under shower while searching for soap. Grab bar lends a safety factor, too.
- RECESSED SHELF . . . Another modern Miami-Carey idea! This smart accessory is mirror-lined and available in either the regular silver or rose (flesh) colored mirror.
- TUB SOAP HOLDER AND GRAB BAR . . . All Miami-Carey accessories are easy to install. Their design eliminates open joints. They will not crack or craze.
- RECESSED TOWEL SUPPLY AND UTILITY CABINET . . . The perfect convenience extra for any bathroom. Features a full-length mirror set in chromium-plated frame . . . and five plate glass shelves.
House & Garden creates new trends in living for an audience that thousands of others follow. Prestige stores display these trends...knowing that acceptance by the people who influence other people is the key to multiple sales. House & Garden's far-reaching influence...through key people...and key stores...becomes a powerful force at the point of sale.

This is the golden touch.

House & Garden

alert management uses House & Garden's golden touch in the golden markets
"Like Going to Florida"

says this owner of a B & G Hydro-Flo Panel Heating System

Here's a report on B & G Hydro-Flo Heating that requires no further comment: "In 1945 your company made a layout for a radiant heating job which was to be installed in a new home which we were to build and occupy. To my knowledge, this was the first job of this kind in this immediate neighborhood.

"The house was completed and occupied in the Spring of 1946. We have now completed one full heating season and want to tell you how very much we enjoy this luxurious heating.

"To go home is like working in the cold all day and then going to Florida for the night. It is hard to describe the comfort that this type of heating provides.

"We have used much less fuel than we anticipated—at least a third less. The house has been comfortable, no drafts, less dirt, and warm floors all of the time. The room temperature is carried at 68° to 70° and we were actually very comfortable.

"Our boiler has been fired with a Winkler self-feed stoker, the coal bin being between the utility room and the garage which are connected together as one unit. We have a one-story house with no basement. We used wrought iron pipe with concrete floors throughout. The garage is heated also, although at a lower temperature than the house. The pipes in the bathroom are four inches apart and the balance of the house, twelve inches apart. They are eighteen inches apart in the garage.

"I appreciate the engineering information furnished by your company and want you to know all of the B & G equipment is performing 100%."
Johns-Manville Asbestos Flexboard is STRONG AND TOUGH

One man can handle the big sheets.

Exclusive J-M manufacturing process makes this fireproof, rotproof building board so strong and tough that it can be lifted and handled by one man without cracking or breaking. You save on time and labor, and avoid waste.

It can be nailed close to edge

Another advantage of Flexboard—you can drive a nail even close to the edge of the sheet without cracking or chipping... no drilling required!

Send for this FREE Handbook—contains complete information about cutting and working asbestos Flexboard. Easily understood drawings show how to apply it indoors or out... how to handle the joints, door and window openings, ceilings, and floors. Your copy is ready. Ask for the Flexboard Handbook. Address Johns-Manville, Box 290, New York 16, N. Y.

Still another exclusive feature... Flexboard is so tough and flexible it can be bent on either axis to a degree unmatched by any other product of its kind... a great advantage where curved surfaces are required.
They'll look for

Quality Hardware

The extra cost is little... the pay-off is big... when you use quality hardware. And the outstanding name in quality hardware is YALE.

In our new advertising in BETTER HOMES & GARDENS, SATURDAY EVENING POST and SMALL HOMES GUIDE, we're telling new home buyers why it's so important to specify or look for quality hardware.

You'll be making a hit with your customer when he sees the name YALE on his hardware. He'll recognize it as a good sign of a well-built house.

The Yale & Towne Manufacturing Company, Stamford, Conn., U. S. A. Makers of the famous YALE Lines of Locks, Door Closers, Hardware.

SIGN OF A WELL-BUILT HOUSE
BLEND RADIANT HEATING...

See those arrows coming from the Modine Convecton Panel below the window?
That’s radiant heating—mild radiant heat in just enough quantity to offset heat loss from window area.

RESULT:

Modine Convecton Radiation
... the greatest forward step in modern heating science

Two great heating principles blended into one—that’s what Modine Convecton Radiation offers you! This modern, combination heating is the dependable new hot water and steam heating system for moderate, cost homes and apartments... as well as commercial and institutional buildings.

Best of all—Modine Convecton Radiation now costs less than any other form of radiation. It gives you these extra advantages which you can’t afford to overlook: 1) individual room control. 2) instant response to automatic controls. 3) gentle air circulation without the use of moving parts that wear out.

4) distinctive room charm and cleanliness without unsightly radiators.

If you’re planning to build or modernize, specify Modine Convecton Radiation. Call Modine’s Representative listed in the “Where-to-Buy-it” section of your phone book. Or send for new, free Convecton Booklet! MODINE MANUFACTURING CO., 1501 DEKOVEN AVENUE, RACINE, WISCONSIN.

Modine CONVECTOR RADIATION
The modern “proved by use” heating method
GENERAL ELECTRIC HOME BUREAU offers years of practical experience and a coordinated technical and sales service in helping architects and builders achieve better homes and bigger profits.
Yes... there's more to kitchen and laundry planning than just allotting space for appliances.

All General Electric kitchens are designed around the “work center” idea—a Refrigerator Center, a Range Center, and a Sink Center. But every home is different, has a different space and shape allotted to the kitchen, and requires a different solution.

The plans on this page show the General Electric Home Bureau’s suggestions for revising two average kitchens, using the same floor area and the same appliances.

A few relatively simple changes in the cut-up plan at the left result in the efficient, attractive U-shaped kitchen on the right. The door has been moved and the small pantry for the refrigerator has been eliminated. A built-in planning desk and buffet is provided, with a pass door opening into the dining room for service purposes. The dining-room side has storage space for china, linen, etc.

Inefficient use of space is shown in the plan at the left. By moving the door leading to the hall only a foot, an attractive step-saving L-shaped kitchen with space for a breakfast nook is provided. The electric range makes it possible to eliminate the flue, giving still more work surfaces.
How one kitchen can be fashioned in four ways with no change in equipment or space.

Once the kitchen plan—the location of appliances and cabinets, of doors and windows—has been decided upon, then it's time to give the kitchen its "character."

Kitchens should be designed not only for efficiency, but for charm. Because it is one of the most-used rooms in any home, the kitchen should also be one of the most cheerful, most livable rooms in the home.

The pictures on this page show how one basic kitchen plan can take on four different—yet equally charming—characters.
No longer need the laundry be a wet spot in the cellar. Today, the “most-wanted” homes are those with bright and cheerful all-electric laundries — upstairs!

And did you know that reliable studies have shown that the average family will realize direct savings of more than $200 a year through electric home laundering?

Think what a selling point that can be for your new homes!

A separate laundry in a room of its own ... a room that can become an extra room for living. Attractive, compact General Electric equipment leaves plenty of room for other home activities.

A Kitchen-Laundry combination. Where space for a separate laundry is not available, two-in-one plans like this are still far better than the old-fashioned basement laundry. The General Electric Home Bureau can help you plan a combination like this.
adequate wiring costs so little more...

MEANS LOTS MORE SATISFIED CUSTOMERS!

After all, the goal of every builder is to win more satisfied customers and that, to a builder, means satisfied owners in every one of his homes.

One of the best ways to win satisfied owners is to impress them with the adequacy and the quality of the wiring and the wiring devices. Your customers see and use these daily. Silent switches . . . weatherproof outlets . . . and plenty of convenience outlets in every room will fairly shout; "Quality!" for the entire home.

General Electric has a complete line of wiring devices, including many for special uses, such as silent switches for bedrooms, clock outlets with hangers for electric clocks, and weatherproof switches for use outdoors.

And the Home Bureau has a thorough knowledge and understanding of what people need and want in home wiring today.

So, when you're sending us your kitchen and laundry plans, why not let us look over your wiring plan, too? There's no charge and no obligation on your part, and we may be able to suggest some important improvements.

This room is poorly wired. Not enough outlets mean a tangled network of unsightly cords. Too many appliances on one circuit mean poor operation. Poor electrical planning doesn't provide lights for closets.

This room is adequately wired. There are plenty of convenience outlets, well spaced, so that furniture can be arranged as desired. Outlets are located where they are easy to reach. Switch at the door controls any desired outlets. Separate switch for closet lighting.
The General Electric Company organized the Home Bureau to meet the constantly increasing demand for technical help in planning truly up-to-date homes.

Today, professional planners and builders will find that the Home Bureau offers a fully coordinated technical and sales service...insuring proper arrangement, installation, and use of electrical appliances. Here's how it works:

**Kitchen and Laundry Planning Service**

Before you build, make sure that your kitchens and laundries are right!

When your plans are sent to the Home Bureau, a skilled staff of experts checks every detail, and suggests improvements, if needed.

After the final plan is decided upon, the room is actually set up in the Home Bureau, using exact scale models, including General Electric equipment. It is then photographed, and the picture is hand-colored, so that you can really see just how your all-electric kitchen or laundry will look in your homes.

This helpful service is free to the professional builder and planner, through General Electric distributors (listed herein).

**Do such homes cost more to build?**

It doesn't cost you a dollar more, Mr. Builder, to put in G-E All-Electric kitchens and laundries, because you are buying for resale. In fact, you make an extra profit on every bit of equipment sold.

**And the BUYER profits, too!**

The owners of your new homes will require this electric equipment in any home they buy...but when they buy from you, they buy their appliances in a package, already installed and ready to use.

**Home Planning Consultant Service**

The General Electric Home Bureau does not originate or sell house plans. However, at your request, the Home Bureau will have its skilled staff of experts review your plans and offer suggestions for their improvement. Many architects have found this Home Planning Consultant Service helpful in designing up-to-date homes.
Helping You Sell

General Electric's Home Bureau service to you doesn't stop when the plans are complete. It's a selling service, too! It's designed and operated to help you turn your plans into homes marked "SOLD"—into satisfied customers—and into money in your own pocket.

Here are some other parts of the Home Bureau "package," each of which can be a mighty big help in your selling plans.

When you send us your plans, this is what you get back. A special brochure with your customer's name (or with your own name, if you prefer) on the cover. Inside there's a beautiful, hand-colored picture of the kitchen or laundry, with complete blue prints, specification sheets, and lighting suggestions. Extra copies of the pictures are available upon request.

Architectural Studies—a 32-page book of architectural hints, illustrating the importance of good design and ingenious planning.

How to Measure a Kitchen—a handy guide to taking room measurements the right way. An invaluable aid for all remodelling jobs.

Advertising Your General Electric Equipped Homes. A book of eye-catching, hard-selling layouts and advertising ideas that you can use for your own promotions.

Your New Home and Your Pocketbook. Facts and figures which prove that it can cost less per month to live in an all-electric home.

Planning Your Home for Better Living, Electrically. A 64-page book of full-color illustrations of beautiful rooms, electrical ideas, remarkable new appliances. Complete information on electrical planning for every room in the home. There is a 25-cent charge for this booklet.
REMODELING has its problems, too. And the General Electric Home Bureau can offer valuable help to architects and builders in solving these problems. Here’s how the Home Bureau changed one old-fashioned kitchen into an up-to-date, efficient, all-electric kitchen.

This kitchen can be found in thousands of homes today. It is old-fashioned and inefficient. The refrigerator and the range are well placed in relation to the sink, but the room lacks proper work surfaces, adequate storage space and lighting at important work centers.

The remodeled kitchen can hardly be recognized as the same room...but actually, few design changes have been made. Modern equipment has replaced obsolete equipment; the room has been made bright and cheerful; and lighting has been provided at all work centers.

For further information, write to

GENERAL ELECTRIC HOME BUREAU
GENERAL ELECTRIC COMPANY - BRIDGEPORT 2, CONNECTICUT

Or get in touch with your nearest General Electric distributor:

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Everything Electrical for Every Home You Build
Take this low-cost Portable Saw-Shop to your job!

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—saeir 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., 12 Fountain Avenue, Lancaster, Penna.
What about the heating equipment?

Don't worry. It's all Post-advertised!

IF QUALITY IS THE QUESTION—"IT'S POST-ADVERTISED" IS THE ANSWER
Modern Building calls for MODERN HEATING

and that calls for Cor-o-aire

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

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.

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THE COR-O-AIRE HEATER CORPORATION

Cleveland 15, Ohio

AMAZING HEAT EXCHANGER

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Cleveland 15, Ohio

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

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THE COR-O-AIRE HEATER CORPORATION

Cleveland 15, Ohio
Moisture seeping through walls is a major annoyance to home-owners. To prevent this penetration in new houses, or check it in homes already built, call on Bondex. The world-wide reputation of this patented Cement Paint has been won in the face of all types of climates. From every viewpoint — performance, acceptance, economy — Bondex is a product which justifies your complete confidence.

A Bondex treatment checks moisture, adds color distinction, preserves

- Stucco
- Concrete or Cinder Block
- Brick
- Masonry
- Building Tile
- Stone
- Asbestos Siding

For color chart write —

The Reardon Company, St. Louis 6
Chicago 9 • New York 6 • Los Angeles 21 • Montreal 1

The Patented Cement Paint
that outsells all other cement paints combined
Rugged Strength

This corner bar is one of several Pittco Metal members specially constructed to provide an insulated metal setting for Twindow, "Pittsburgh's" new window with built-in insulation. Its tubular construction gives sufficient strength and rigidity for most installations, but it may be strengthened with five different reinforcing members where extra support is required. And, like other Twindow settings, it can be used with Pittco DeLuxe frame mouldings. This combination of strength and beauty makes Twindow available for a wide range of store front installations.

Pittco Store Front Metal settings for Twindow are produced by the extruded process to provide strength, sharp profiles and a rich, smooth finish. With Pittco Metal, setting operations proceed rapidly. No special tools are required, and setting procedures are so simple that a substantial saving in setting time is usually effected.

Twindow settings in Pittco Store Front Metal

No. 21 Corner Bar 120°
No. 21 Corner Bar 90°
No. 5 Sash
No. 7 Sash
No. 23 Division Bar
No. 25 Division Bar

PITTCO STORE FRONT METAL

PAINTS - GLASS - CHEMICALS - BRUSHES - PLASTICS

PITTSBURGH PLATE GLASS COMPANY
... almost ready now!
It won’t be long now before the last pieces of machinery are in place in this big new fiberboard plant at Macon, Georgia. Very soon these modern machines will begin large scale production of the great new Armstrong’s Temlok Line. When you see the first samples of these Temlok fiberboard products, you’ll see that real engineering has gone into their manufacture. Every piece of equipment has been specially designed to improve the quality features of fiberboard... and the plant itself was located at the source of the best raw material available.

The new Armstrong’s Temlok will be well worth the time you’ve had to wait. It’s going to be stronger, lighter in weight, better designed, thus easier selling. It will be highly moisture resistant, too, and easy to handle. It will offer outstanding insulating efficiency.

Your Armstrong wholesaler will soon be able to give you complete details about the new Temlok. See him and find out for yourself why the new Armstrong’s Temlok ‘means new sales opportunities for you.
Officially Grade-Marked

Douglas Fir Doors

are held to rigid standards of quality and uniformity through Fir Door Institute inspection service

NOW in effect are new quality standards for all Douglas fir doors, and new dimension specifications for stock interior doors—both backed by official Fir Door Institute inspection.

Stock interior doors are pre-fit to 1/2-inch less than previous catalog height and 3/16-inch less than catalog width, which permits on-the-job installation without sawing or trimming. Stock doors are also resin pre-sealed for better finishing and improved dimensional stability.

On order, Douglas fir interior doors are available Factri-fit as well—pre-fit, pre-sealed and completely machined for locks and hinges.

All these features come under official inspection—as does workmanship and grade. The F.D.I. "grade trade-mark" is your assurance of a high-quality, uniform product.

One of these distinctive F.D.I. "grade trade-marks" appears on the bottom of every officially inspected Douglas fir door—and only on doors so inspected. Look for the F.D.I. seal. It is your symbol of fine craftsmanship, backed by rigid inspection.
MULTIPLEX is not just another radial arm saw. Enthusiastic users everywhere are praising MULTIPLEX saws for the additional plus features not found in any other make saw.

The Exclusive Versatile Elbow, or center pivoted track arm, gives it a distinct performance advantage over all other designs.

Left hand as well as conventional right hand miters are cut with ease on any angle (see illustration).

Circle Shaping, Dado Mitering any angle, right or left hand.

Circle Routing, Bevel Circle Routing.

These are some of the advantages, found only in a MULTIPLEX, that speed up output and lower operating costs with greater ease of operation.

Write for full information and name of nearest dealer.

MULTIPLEX
Radial-Arm Saws

Optional for Models 30A and 40A -- A MULTIPLEX Radial Arm Drill Press, quickly and easily attached to and driven by the saw motor, offers exceptional flexibility in drilling, routing, planing, tenoning, carving and other operations.
Stop!

AND SEE US AT THE

N. A. H. B. SHOW

STEVENS HOTEL

CHICAGO

BOOTH 144

Leigh BUILDING PRODUCTS

A complete line of all metal building products smartly styled and mass produced to give you the highest quality at very low cost.

For more livable, more salable homes... use Leigh Building Products.

Styed and Built by

AIR CONTROL PRODUCTS, INC.
Coopersville

Michigan

ATTIC VENTILATORS

ORNAMENTAL STEEL SHUTTERS

FOUNDATION VENTILATORS

BRICK VENTILAT

ROOF VENTILATORS

BUILT-IN MAIL BOXES WALL TYPE

MILK & PACKAGE RECEIVERS

CLOTHES CHUTE DOORS

BUILT-IN MAIL BOXES DOOR TYPE

DUST CHUTES

* Write for Catalog 47-L
The great new Ford Trucks for '48 are revolutionary not only because they are new all through but because they are the amazing result of a time-proved truck engineering principle. This principle is Ford Bonus Built construction.

Every single one of the great new Ford Trucks for '48 is Bonus Built... designed and built with a margin of extra strength in every vital part. But that is only part of this vital truck building principle:

**Bonus Built—Extra Strength!**

These Bonus Built work reserves give Ford Trucks a greater range of use by permitting them to handle loads beyond the normal call of duty! That means that Ford Trucks are not limited to doing only one single, one specific job!

**Bonus Built—Longer Life!**

What's more, these same work reserves allow Ford Trucks to relax on the job... to do their jobs easier, with less strain and less wear. Thus, Ford Bonus Built Trucks last longer because they are built to work easier!

See the great new line of Ford Bonus Built Trucks for '48 now!

*BONUS: "Something given in addition to what is usual or strictly due."—Webster's Dictionary

**LIFE INSURANCE EXPERTS PROVE... FORD TRUCKS LAST UP TO 19.6% LONGER!**
ON May 3rd 1948, when the British Industries Fair opens, buyers from all over the world will have an opportunity of inspecting the products of 3,000 United Kingdom manufacturers.

This annual event is the world’s largest national trade Fair. Such is its size and importance that you are urged to come yourself. You are assured of personal contact with actual manufacturers or sole selling agents and you will find exhibits carefully grouped by trades so that comparisons may be made quickly. Above all you will see new achievements, new methods of manufacture and new ideas all executed with superb craftsmanship.

This is your only opportunity in 1948 to review within a few days the achievements of 87 United Kingdom industries.

For information and assistance you should apply to the nearest British Embassy, Legation or Consulate.
Here's the modern method of creating beautiful, attractive interiors — with Marlite plastic-finished wall and ceiling panels — and with Marsh Mouldings and Marsh Adhesives to help you make every installation letter perfect! Marlite wall-size panels come in colors and patterns that permit almost limitless decorative treatment. Marlite is quickly and easily installed, with just regular carpenter's tools, over new walls or old, in any room in any building. And, in these days of soaring material costs, you'll be agreeably surprised to learn how economical Marlite really is. Marsh Wall Products, Inc., 203 Main St., Dover, O.
"We consider the Servel All-Year Gas Air Conditioner to be a worth-while investment, and do not hesitate to recommend it," says Sam Rubin, jeweler, of 323 De Siard St., Monroe, La. "Customers have been attracted to the conditioned space, and we have been able to keep our merchandise in better condition."

"Ideal for efficient work in medical offices," says Dr. Fred. L. Scott, of Huntington Park, Calif., about the temperature and humidity conditions maintained the year round in his offices by Servel.

"Very satisfactory in all respects," agrees W. D. Owen, Vice President and Cashier of the Bank of Beaumont, California, which is kept cool in summer, comfortably warm when needed, by the Servel unit.

Business and professional men

American Builder, February 1948.
praise all-year gas air conditioner

THEY SAY SERVEL All-Year GAS AIR CONDITIONER

PROMOTES HEALTH, EFFICIENCY, BUILDS PROFITS

Typical of hundreds of letters in our files from business and professional men all over the country are the testimonials on these two pages. Practically everyone who has a Servel All-Year Gas Air Conditioner is more than pleased with the results. In fact, as you'll see on the right, one enthusiastic user has installed three units—one in his home, one in his automobile agency, and one in a store he owns!

Everywhere, users agree that this wonderfully efficient year-round conditioner is worth every penny it costs. Some go so far as to declare it will actually pay for itself in a very few years! So you can recommend Servel All-Year Gas Air Conditioning to your clients with every assurance that it will perform up to expectations. And that your clients will be glad you brought Servel's advantages to their attention.

Complete in one unit, the Servel conditioner refrigerates and dehumidifies the air in summer. In winter, the same unit heats and humidifies the air. In between seasons, it offers independent air circulation at prevailing temperatures. Year-round, it filters dust, dirt, and irritating pollen from the air. A "flick of the finger" controls all operation.

Check your list of clients today. Determine which are logical prospects for Servel All-Year Gas Air Conditioning. Then ask your local gas company for more detailed information about these types of application. Or, write direct to Servel, Inc., for application data and names and addresses of satisfied users with comparable installations. Address Servel, Inc., 1802 Morton Ave., Evansville 20, Indiana.

"If I could find another place to install Servel All-Year Gas Air Conditioning, I would do it," says Frank M. Bowman, Alice, Texas, businessman. He already has three Servel units, one in his automobile agency (above), and one each in his store and home (below).
American Builder, February 1948

FOR GAS

Mueller Type 101 Steel Gas-Fired Gravity Furnace — For small and medium-size homes. Convertible to oil-firing.

Mueller Type 105 Steel Gas-Fired Winter Air Conditioner — Type 101 furnace plus forced-air circulating and filtering unit. Convertible to oil-firing, easily and at low cost.

Mueller Type 106 Cast Iron Gas-Fired Gravity Furnace — Sectional cast-iron heat exchanger. Vertical design cabinet for basement and utility room installation. For small and medium-size homes.

Mueller Type 107 Cast Iron Gas-Fired Winter Air Conditioner — Type 106 unit plus Mueller forced-air circulating and filtering unit.

Mueller Series SHP Steel Gas-Fired Winter Air-Conditioning Furnace — Vertical cabinet type for utility room or basement installation.

Mueller EPS Gas-Fired Winter Air-Conditioning Furnace — Sectional type forced-air circulating units.

Mueller Series E-F Gas-Fired Forced Air Furnaces — Sectional construction. For larger residential, apartment house, and commercial installations.

Mueller Type 10 Forced Air Boiler — Mueller type for utility — Sectional type forced-air larger residential, apartment house, and commercial installations.

Mueller Type 20 Gas-Fired Boiler — Mueller Type 100 Gas-Fired Winter Air-Conditioner — Type 106 unit plus Mueller forced-air circulating and filtering unit.

Mueller Type 900 Summer Air-Conditioner — Available in three-ton and five-ton sizes. Can be installed in any forced warm-air system.

You provide supreme...when you plan your jobs

Other Mueller
Climatrol Equipment

Mueller Blower-Filter Units — For heating, ventilating, air-conditioning, and processing applications. Wide range of sizes available.

Mueller Furnace Pipe, Ducts, and Fittings — Gravity and forced-air types available.

Mueller Automatic Hot-water Furnace — May be installed in the hood of any size or make of warm-air type furnace.
comfort and satisfying economy...with any fuel
with Mueller Climatrol, the complete indoor-comfort line

There’s one sure answer to the indoor comfort problem... no matter what size house is to be built, no matter what fuel or type of heating your client prefers. That answer is Mueller Climatrol! There’s a size and type for every home, each designed for top efficiency and economy with the preferred fuel—gas, oil, or coal. Mueller also offers a complete line of fittings, and auxiliary equipment for year-round air-conditioning. Recommend a complete Mueller Climatrol installation for complete satisfaction. It’s a nationally-advertised name your clients know. And Mueller’s 91-year performance record proves you can stand behind your recommendation. See Sweet’s File for Builders, and for Architects, or for additional information write today direct to L. J. Mueller Furnace Company, 2016 West Oklahoma Avenue, Milwaukee 7, Wisconsin.

More Than Windows
More Than Walls

The modern way to build a home... the beautiful way to build a home... is with expansive walls of windows... ANDERSEN WINDOWALLS.

By combining stock-size Andersen Casement or Gliding Window Units in rows, bays, corners or picture window arrangements, you achieve an effect sponsored by leading architects and home builders everywhere. Single units can form miniature WINDOWALLS in kitchens, bedrooms and bathrooms.

Andersen Window Units are made of beautiful, enduring, insulating wood—precision-fitted at the factory so they'll operate over a lifetime without trouble. They're weatherstripped—so your WINDOWALLS won't run fuel bills up, won't create unhealthy, uncomfortable drafts.

But best of all, ANDERSEN WINDOWALLS bring outdoor beauty right into the home, framing the glorious scenery, admitting ample sunshine and fresh air.

Get all the facts about ANDERSEN WINDOWALLS. Let us show you what WINDOWALLS can add to a new home or a remodeled home.

- **Andersen Casement Window Unit.** An outswinging casement window with double glazing that rides right on the sash. Inside screen, with roto-gear operator that opens or closes the window firmly, without rattling. Exceptionally weathertight. Wide range of sizes—which can be further combined into WINDOWALLS.

- **Andersen Gliding Window Unit.** A revolutionary kind of window, with sash that glide from side to side, yet, when closed, are in the same plane. Made in extra large sizes for those who want WINDOWALLS. Weatherstripped; equipped with double-glazing and screens. Sash removable.

- **Andersen Basement Window Unit.** Prefabricated at the factory, and carton packed complete with screen. Weatherstripped and all hardware applied. Opens to several positions, and sash come all the way out. Prefitted storm sash also available as an extra.

For complete details, sizes and prices, see your Andersen jobber, or write

**Andersen Corporation**

**BAYPORT, MINNESOTA**

Window Specialists for 42 years
WINDOWWALLS in a sunny diningroom.
The corner installation is formed by combining Andersen Gliding Window Units.

STUDY-LIVINGROOM has Andersen Casement Window Units in an attractive picture window combination at a corner.
PC Glass Blocks—completely modern in appearance and function—have won the favor of builders largely for one reason: they do so many things so well, when used in residential, commercial and industrial buildings.

They add to the appearance of houses of all sizes... because they form bright, neat, translucent panels very appealing to the eye. They transmit daylight generously into building interiors, and can even direct the daylight to where it is most needed.

The excellent insulating properties of PC Glass Blocks mean greatly reduced heat loss through light areas, with consequent savings in home heating and air-conditioning costs. They prevent infiltration of dust and dirt, deaden outside sounds, clean easily. PC Glass Blocks can be readily combined with transparent glass sash construction, harmonize perfectly with any architectural style.

When you are figuring on new buildings and modernizing projects, whether for dwellings or business buildings, you can use PC Glass Blocks with confidence. They're the mark of a modern building.


Also makers of PC Foamglas Insulation

YOU ARE INVITED to visit our booth at the National Home Builders Show in Chicago, Hotel Stevens, February 22-26. It is Booth No. 72. We shall be glad to have you make it your headquarters.
Americ

You'll Find Just the Right Type and Size to Fit the Job — and the Owner's Pocketbook!

Large city residences or small country cottage — liberal or modest hardware allowance — Stanley Floating* Door Equipment meets the whole range of style and price!

Four floating types are easy operating, weather-tight, long-lasting, easily installed. All are priced within a few dollars of ordinary, old-style garage door equipment. Worth looking into, isn't it?

Stanley Floating* Door Equipment is stronger-built, better assembled, and backed by the greatest name in door hardware! Try one on your next house. See for yourself. Your local Stanley dealer can supply you. Folders on request. The Stanley Works, Garage Door Division, New Britain, Conn.

1. "ECON-O-MATIC"— The economical, automatic hardware equipment for lightweight doors up to 150 lbs. A twist of the handle and the door "floats" up and over.

2. "SLIDE-UP"— A bargain in convenience. Can be applied to old or new doors. A simple weight-box, sand-filled, balances the weight of the door.

3. "SWING-UP"— Simple pivot principle swings the door up effortlessly. For doors up to 250 lbs. and any size up to 8' x 8'. Excellent for converting old, hinged doors into a smooth working unit.

4. "SWING-UP" (Heavy Duty)— De luxe hardware equipment. Its rugged construction handles heavy 8' x 8' doors. By substituting heavier springs this set will swing up doors up to 16', wide weighing up to 700 lbs.

STANLEY

THE GREATEST NAME IN DOOR HARDWARE!

For Any Residential, Commercial or Industrial Door
That Lifts—Slides—Swings—Rolls—Or Folds.
Saves Time...Reduces Labor Costs

ANYTHING that will reduce labor costs on the job makes a worthwhile saving. Your plywood customers are looking for any possible means of reducing costs—whether they are contractors, builders, furniture manufacturers, cabinet makers, or fixture houses.

Roddiscraft plywood saves labor costs because it is a quality product—sanded to satin smoothness, cut absolutely true, with edges clean as a whistle—all ready for application.

Show Roddiscraft quality point by point—show how it requires less finishing, fitting and trimming. Your customers can see the difference.
The heating qualities of heat by convection, the even, more comfortable room temperatures, the ultimate savings in fuel costs...these are the vital statistics that have influenced more and more home owners to express a preference for this type of heat distribution. Appearance and space-saving features—other important customer demands—have resulted in another preference. For recessed convectors.

That's where a "plaster problem" develops...

unless you specifically recommend Tuttle & Bailey Recessed Conectors.

When ordinary convectors—not exclusively designed for recessed installation—are used, wall plaster line is extended to the top and sides of the unit. In many cases this means cracked, broken plaster in a relatively short time...marred appearance of an otherwise attractive installation.

Tuttle & Bailey Recessed Conectors—built for recessed installation only—completely eliminate this "problem." Constructed with front panel that extends beyond edges of recess, sufficient overlap is provided to cover the wall plaster line...a neat, trim installation is permanently assured.

Home-Owners-to-be should know what this "plaster problem" can mean to new home appearance...and how to avoid it with Tuttle & Bailey Recessed Conectors.
**Make us PROVE it!**

**Atlas Speed Forms**

*Cut to *50%* Off Your Poured Concrete Costs*

**BECAUSE ............**

1. They cut Form Costs in half.
2. They cut On-Site Labor in half.
3. They're easy to assemble, strip, store.
4. Forms last indefinitely. Many contractors have had 400 uses, are still going strong.
5. On job after job, for hundreds of contractors, on large and on small operations, Atlas Speed Forms drastically reduced costs.

Let us prove it! At our expense and with no trouble to you. Send in the coupon below, it will bring you a data sheet to be filled out. We will then furnish you with a verified estimate on your form work and you can figure the savings for yourself. Five minutes of your time against a fifty per cent saving—the odds are in your favor! And here's the coupon....

*An average figure. Of course special cases will prove an exception. But we may surprise you!*

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**IRVINGTON FORM & TANK CORPORATION**

**IRVINGTON 84, NEW YORK**

Please send me information on Atlas forms. I am particularly interested in forms for **Walls** [ ] **Floors** [ ] **Tunnels** [ ] **Bridges** [ ] **Sewers** [ ] **Columns** [ ]

**NAME** .............................................................

**FIRM** .............................................................

**ADDRESS** ..........................................................
SAVE 50% OR MORE BY
INSULATING WITH SISALATION
at about $25* per 1000 square feet

*Contractors' Price

1 You get insulation that is completely effective, since SISALATION, properly applied, is equivalent in heat-saving values to approximately 3/4" of flexible or rigid types of good insulations most commonly used...based on M.I.T. tests on sidewalks constructed with a single layer of reflective SISALATION.

2 SISALATION acts as an air-tight moisture-vapor barrier, thus protecting against dry-rot, paint failure, condensation. Exceeds FHA requirements as a vapor-barrier.

3 SISALATION, reinforced with steel-like sisal fibres, is so strong that one man can apply it over two stud-spaces at one time without danger of having the SISALATION rip or tear (see illustration). This makes for low application costs.

4 SISALATION does two jobs at one application cost...provides insulation and a vapor-barrier both at the same time.

5 SISALATION is AVAILABLE NOW for prompt delivery through your lumber or building supply dealer.

For complete information, use coupon below or write

The SISALKRAFT Co.
205 W. Wacker Dr., Chicago 6, Ill.
New York 17, N. Y.
San Francisco 5, Calif.

The SISALKRAFT Co.
Department AB, 205 W. Wacker Drive, Chicago 6, Ill.

Please send complete information and tell me where I can buy SISALATION.
I am an ARCHITECT CONTRACTOR OTHER

Name
Address
City, Zone & State
MORE EFFECTIVE DISPLAY, more customer interest, and an increased volume of business follow the installation of an "open vision" store front. Sell a "Pittsburgh" remodeling job to merchants who want to add sales appeal to their stores. "Pittsburgh" is widely known as the leader in the store modernization field...its complete line of Pittsburgh Glass Products and Pittco Store Front Metal means modern shops and satisfied merchants.

SPECIALY DESIGNED members have been added to the Pittco line of Store Front Metal for use in setting Twindow, "Pittsburgh's" new window with built-in insulation. Because Pittco Twindow sashes have been insulated, Twindow is more effective than ever in cutting heat losses, and reducing down-drafts and window fogging. And like all Pittco Store Front Metal members, these special settings for Twindow have rugged strength, clear, sharp profiles, and a rich, lustrous finish.

EASY TO INSTALL is this new Herculite Door-Framt Assembly. The entire door frame assembly comes as a complete package, ready to install as a unit as soon as a building is ready to receive doors. Time- and labor-saving assembly accommodates standard Herculite doors. It's one of the sturdiest and handsomest extruded structural shapes ever designed...made in twelve styles to satisfy every building need.
A BRIGHT, CHEERFUL BATHROOM and a smart, modern kitchen are any housewife's delight. Walls or wainscots of Carrara Structural Glass help to give them to her. Carrara is colorful, easy to keep clean. Other uses: splash panels behind stove or lavatory, fireplace surrounds, shelves, window sills. Note the handsome built-in mirror and the decorative, light-transmitting Pittsburgh Corning Glass Blocks in this Carrara bathroom.

**A MODERN HOME NECESSITY**... a full-length door mirror of Pittsburgh Plate Glass... every member of the family will find it useful. And other Pittsburgh Mirrors add beauty and convenience which modern homemakers appreciate. A mantel mirror makes a living room seem brighter and larger. "Spruce up" mirrors are popular in entrance hall and kitchen. Suggest installations like these to your customers.

**EVERYBODY LOVES A PICTURE WINDOW!** By framing outdoor scenes and introducing plenty of natural light, they add beauty... and sales appeal... to every home. Pittsburgh Polished Plate Glass is the perfect choice for picture windows—and if insulated windows are required, suggest "T-window," Pittsburgh's" new window with built-in insulation.

We will gladly send you free our special " Builders Kit" which includes illustrated literature showing how you can use glass effectively on all types of jobs in which you are interested.

**Build it better with**

**Pittsburgh Glass**

Pittsburgh Plate Glass Company
2062-8 Grant Building, Pittsburgh 19, Pa.

Please send me without obligation your "Builders Kit" of illustrated literature.

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Pittsburgh Plate Glass Company
PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY
Give Your Homes ANOTHER FEATURE

- and SAVE MONEY

at the SAME TIME

Nationally Advertised Trane Convector-radiators Help Sell Homes

Now you can show your prospects an entire heating system that bears a nationally advertised brand name. It's another feature to make your homes still easier to sell—yet its low cost makes it possible for you to save money on a quality heating system.

Here Is Luxury Heating

Trane Convector-radiators provide the ideal combination of warmed moving air plus just the right amount of radiant heat. They give full decorative freedom and amazing ease of control.

Save Money Three Ways

Both purchase price and installed cost of Trane Convector-radiators are actually less than any other type unit for steam or hot water heating systems. Control is easy, requiring no complicated arrangements. "Lifetime" metal heating elements assure complete freedom from trouble. Best of all, these remarkable units are now available from local jobbers' stocks. Write for Catalog A3 and the names of authorized Trane jobbers in your area.

National Advertising

Builds TRANE Convector-radiator DEMAND

ADVERTISEMENTS, like the one above, are appearing in color in five national "home interest" magazines. Millions of people are reading about luxury heating with Trane Convector-radiators.

BUYER PREFERENCE will go to this tried and proved brand name method of heating. Your prospects want heating they know will work, and Trane Convector-radiators have proved themselves for 20 years.
1948-1853
95

95 years in business! Our old-fashioned slate also reminds us that anniversaries are good times to say "Thank You" to friends.

This year we're doing it in a substantial way. With production—our 1948 program calls for still further increases in output. With quality—we're working to make Case plumbing fixtures even finer than before. With service—wherever you need it, coast to coast, there's a carefully selected Case distributor ready to do his best. And for your convenience, Case distributors are listed in Classified Telephone Directories.


95 Years of Service

Case

Vitreous China Plumbing Fixtures.
OUTSIDE

Used as siding for this boathouse, Apac must—and will—provide complete protection against the elements.

INSIDE

You'll find Apac ideal for interior construction: attic and basement linings, wainscoting partitions.

Build better, faster, more economically

with APAC

1. Cut it by scoring and snapping off

2. Fasten it with nails or screws

3. Goes up 32 sq. ft. at a time

We think you'll agree that resistance to fire...as well as to rodents, termites, moisture and severe weather conditions are important considerations on any construction job.

There's one sure way to provide this all-round protection—use K&M "Century" Apac asbestos-cement sheets. Apac is a tough, dense structural material that's as durable as rock, grows tougher with age. You'll find it low in cost, easy to work, convenient to handle. Supplied 4' x 8' in thicknesses of 3/16", 3/4", 3/8", Apac gives ample strength with minimum framing. Pleasing light gray color makes an attractive finish that will never need painting.

Get full information about "Century" Apac from your K&M Dealer, or write direct to us. We'll give your inquiry prompt attention.

Original manufacturers of asbestos-cement roofing shingles in this country.

KEASBEY & MATTISON
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Here's the KRESKY FLOOR FURNACE

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OIL HEAT

today's answer for

SMALL HOMES

- NO BASEMENT REQUIRED: Easy and inexpensive to install...takes as little as 30 inches clearance below floor.
- KRESKY MECHANICAL AIR INDUCTION: Assures instant, clean heat...dependable performance.
- EXCEEDINGLY LOW OIL CONSUMPTION: The unprecedented demand for Kresky under today's restricted fuel conditions attests to its exceptional efficiency and resulting low oil consumption.
- NEAREST THING TO TROUBLE-PROOF: Simplicity itself, Kresky burners are practically immune from need of service—truly "kickproof" from the standpoint of the installation contractor.
- The original oil burning floor furnace, Kresky is today the only one with forced air circulation bearing the Underwriters' label.

Write for folder and name of local Kresky dealer

KRESKY MFG. CO., INC.
Pioneers in Oil Burning Equipment since 1910
PETALUMA, CALIFORNIA

A Complete Line of Oil Burning Equipment for Small Homes
The new Industry-Engineered Homes Program is the building trade's answer to the need for modern technological developments in home construction. It will help you build homes better, faster, with greater sales volume, and increase your community prestige. The three Truscon Steel Window Products shown above will help you take full advantage of the modular principles on which the Industry-Engineered Home is based.

TRUSCON DOUBLE-HUNG STEEL WINDOWS cost no more to buy and install than ordinary windows. Completely factory assembled and delivered ready for installation, their cost will fit the budgets of the most modestly priced homes. They can be economically installed. And, because of their long life they actually cost LESS.

TRUSCON STEEL CASEMENTS, due to their flexibility in design and arrangement, add charm to any style of architecture. Their wide swinging vents provide the maximum amount of ventilation and the most convenient form of ventilation control. Their slender and graceful lines offer practically no barrier to light.

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Consult your nearest Truscon Sales Office for prices and delivery to fit your requirements. Write for illustrated literature.

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Subsidiary of Republic Steel Corporation
Look how ARKETEX CERAMIC GLAZED STRUCTURAL TILE fits into your picture!

Your picture will be "completed as planned" with versatile, beautiful Arketex Ceramic Glazed Structural Tile.

Arketex, with its wide range of sizes and textures, in your colors, ideal for interior and exterior use... for partitions or load-bearing walls. The first cost is the only cost—Arketex is a permanent wall and finish all in one.

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NATIONAL ASSOCIATION OF HOME BUILDERS' CONVENTION
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No extra hardware to buy, installation costs cut 80% • Planing and fitting eliminated.

Factory finished, no painting necessary • Precision made, ready to install without fitting.

Standard sizes, ready to install, eliminating work of fitting, trimming and painting.

Have you ever asked yourself “How can home building costs be reduced?” Now, that’s a practical question—and here at Ceco we have an answer. Certain Ceco products will reduce home building costs. Take steel windows for example: They cost less installed, because there are no hidden costs to overlook, such as hardware, prime coat, accessories, additional labor costs. Then, too, steel windows last, and last, and last. There is no need for repair—they cannot rot...they are Bonderized and painted for protection against rust. And that goes for steel basement windows, too. Another way to save is provided by Ceco metal frame screens. Installed, they actually cost less than old-style screens, are factory finished—need no on-the-job painting, trimming, or fitting. So, to reduce building costs, recommend Ceco metal casements, basement windows, and metal frame screens.

WHY SPECIFY CECO?

Ceco does more than design and manufacture fine construction products. Besides their wealth of technical engineering skill, there is available construction knowledge gained by 35 years of experience on the job. In 23 offices strategically located from coast to coast, Ceco stands ready to help you reduce home building costs. Call on Ceco today!

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In construction products CECO ENGINEERING makes the big difference
Residential Starts Over 80,000 For Five

ALTHOUGH the 82,000 new dwelling units started in November represented a decline of 13 per cent from the revised estimate of 93,800 for October, nevertheless November 1947 showed a 72 per cent increase over November 1946 and became the fifth consecutive month in which housing starts exceeded 80,000. Instead of following the usual seasonal pattern of starts, the fall months greatly exceeded the spring months. The volume of starts in the fall has demonstrated the capacity of the building industry to produce at the rate of at least 1,000,000 permanent dwelling units a year — and the willingness of the public to buy them.

Some Materials Will Be Scarce

The greatest obstacle to fulfillment of the peak volume of building expected in 1948 will be good quality lumber and nails. Other steel products, such as pipe, web joists, and rigid steel conduits will also remain tight, as will bath tubs which are made of pig iron or steel, and water closets.

An increasing supply of asbestos and asphalt products and insulation board is expected, mainly because of modernization and expansion of plant facilities. Further increases are limited by the short supply of raw materials, such as roofing felt, which is the basis for asbestos roofing, asbestos fiber from which many building materials are made, and wood pulp, an ingredient of insulation board.

Gypsum board will probably be in good supply this year, with production of 4,500,000 board feet anticipated. About 4,300,000 board feet would satisfy construction needs. Builders may be able to substitute some gypsum board sheathing for lumber.

Government forecasters say that lumber production this year may drop 1,900,000 board feet per month, from 36,500,000 estimated in 1947. Actual needs, the Department of Commerce says, will be about 38,000,000,000 board feet to take care of the present demand and inventory piling. Home builders will require 11,400,000,000 board feet.

Inventories now include many board feet of poor quality lumber. This lack of better grades produced a tight situation on carpenters and windows, for which cheaper lumber can not be utilized, and this millwork shortage is expected to continue throughout the year.

The demand for nails will reach about 900,000 tons, 100,000 tons more than last year, with the construction industry alone able to absorb about 772,000 tons. The nail industry is said to have the capacity to turn out 1,000,000 tons annually, enough to satisfy demands and build inventories, but actual production will depend upon whether the steel industry will accelerate the production of this product. Last year’s production was 830,000 tons.

Material Prices Move Upward

The wholesale building material price index of the Bureau of Labor Statistics, for which the year 1926 equals 100, stood at 185.8 in October 1947, up 2.5 points over September, indicating no slackening in the steep ascent of prices. In October 1946, the composite index was 134.8; in August 1939, it was 89.6. The principal reason the index is so high is the high price of lumber, whose index was 290 in October 1947, more than three times the 1939 level. The prices of other building materials have increased only moderately as compared with the increase in the prices of other goods and services. Lumber, however, has joined agricultural products in a near runaway inflation. The following table shows how wholesale prices of various building materials compared in 1947, 1946 and 1939.

WHOLESALE BUILDING MATERIAL PRICES—BUREAU OF LABOR STATISTICS INDEX

<table>
<thead>
<tr>
<th>1926 index</th>
<th>October 1947</th>
<th>October 1946</th>
<th>August 1939</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumber</td>
<td>290.0</td>
<td>178.9</td>
<td>90.1</td>
</tr>
<tr>
<td>Brick and tile</td>
<td>145.6</td>
<td>127.8</td>
<td>90.5</td>
</tr>
<tr>
<td>Prepared paint</td>
<td>144.5</td>
<td>101.0</td>
<td>92.9</td>
</tr>
<tr>
<td>Structural steel</td>
<td>143.0</td>
<td>120.1</td>
<td>107.3</td>
</tr>
<tr>
<td>Plumbing and heating</td>
<td>136.0</td>
<td>107.2</td>
<td>79.3</td>
</tr>
<tr>
<td>Cement</td>
<td>120.1</td>
<td>106.5</td>
<td>91.3</td>
</tr>
<tr>
<td>Other building materials</td>
<td>152.5</td>
<td>122.5</td>
<td>89.5</td>
</tr>
</tbody>
</table>

Composite index.... 185.8 134.8 89.6

A fifty per cent slash in the price of lumber, bringing it down to the level of other building materials, would certainly reduce building costs substantially, but it is about as hopeless as expecting a cut in the price of farm products with the world-wide demand as great as it is.

Mortgage Money Getting Scarce?

Rising interest rates in the bond market have given that investment outlet a substantial advantage over veterans' home loans pegged at a 4 per cent rate. It requires a lot of work and trouble for a mortgage house, which for the most part represents the large insurance companies, to process a G. L. loan. The actual net return amounts to only about 3 to 3.1 per cent. If bonds are available at this rate, it is much simpler to buy them in blocks of millions of dollars. However, life insurance company assets double each decade, and it is probable that they will be required to exploit every opportunity for first class investments. The supply of corporate and public securities will not be adequate for their available and increasing funds.

Construction Employment and Wages

Estimates of the Bureau of Labor Statistics show that about 1,900,000 workers were employed early this winter on all types of construction. According to BLS data, the average worker in building construction in October 1947 worked 38 hours per week and earned $66.14 per week, as compared with 38.8 hours of work in October 1946 and earnings of $59.20. Electrical workers, who worked 2 hours more per week than the average, with average earnings of $81.27 per week were the highest paid in October 1947; plumbers and fitters were next with $75.93; plumbing and heating workers earned $72.21. At the low end of the scale were general building laborers, who earned $61.94 per week, as compared with $56.39 in 1946.
Quality house unit package

Here, right at your finger tips in one handy package, are all the lock and latch sets required for two average small homes. Packed as complete house units, each individual lock or latch set is packed in a separate box, the carton being suitably labeled for the openings for which they are intended. Think of the convenience, the saving in time and labor, that this unit package plan means to you. It's a quality package, too — one you'll be proud to own — including, if desired, the famous Sargent Integralock with all sets furnished in solid brass trim. Front and rear door keyed alike.

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NEW YORK CHICAGO

On and Off the Record

HOME BUILDING—Builders have been working around the clock to overcome the almost insurmountable handicaps of government interference, material shortages, labor shortages and labor indifference. In spite of the handicaps, they have home building going at an unprecedented rate, and at prices in line with or below the general commodity price index.

LABOR—The leaders continue to insist on a 40-hour week with overtime rates for all over that. With the effort being made to hold home building costs down, that automatically limits the work week to 40 hours.

TRAGEDY—There is impending tragedy in the attempts of union labor leaders to maintain working conditions that were economically desirable in depression years. The depression picture in regard to jobs has been reversed.

JOBS NEED MEN—That is true, and likely will continue to be true in the home building industry for a long time. Labor leadership should encourage longer work weeks, and encourage management to institute incentive pay as a reward for competence. That will increase production, hurt no one, and reward the man who wants to work longer.

AMERICAN BUILDER—Its editors average closer to 60 than 40 hours a week, and will step that up with 18 to 20-hour days during the NAHB Convention in Chicago in February, publishing a daily newspaper (provided the printers do not strike) in addition to usual duties.

CONVENTION DAILY—The first Convention Daily, (published by American Builder at the 1947 NAHB Convention) filled a need, and, judging from comments still being received, was a hit.

1948 DAILIES—There will be four of them, considerably larger than the 1947 series, and with a changed format for easier reading. Coverage of all convention happenings will be as complete as space will permit.

NEWS ITEMS—Staff members will act as daily reporters, circulate freely in all gatherings, attempt to pick up all news. Anything they miss, however, can be filed at the American Builder booth in the main convention hall of the Stevens Hotel. Someone will be in attendance at all times.

CIRCULATION—Copies of the dailies will be given to all who enter either exhibit hall, or any of the meeting rooms in the morning. If you arrive too late, apply for a copy at the American Builder booth where extra copies will be available as long as they last. The dailies will carry no advertising. They will be devoted exclusively to carrying the news and the daily happenings of the NAHB convention.

NATIONAL DEBT—The country begins 1948 with a national debt set at the astronomical figure of 260 billion dollars. How to carry it seems to be the current problem in Washington. How to carry it and begin retiring it will have to be faced by someone in Washington eventually—probably not until after the 1948 elections.

HOW TO CARRY IT—Current strategy seems to revolve around inflating the dollar to the danger point, and keep prices at a level that will induce dollar holders to spend. The rapid transfer of dollars increases incomes, and consequently income taxes. Thus, the strategy—lots of cheap dollars changing hands at a rapid rate.

THE DANGER—It is possible to get the value of the dollar so low that people stop using dollars, and start bartering with goods. That is the danger, thus far avoided because the production of purchasable goods continues to increase.

WILLFORD I. KING—He recently pointed out that the supply of money and deposit currency has tripled between 1939 and April, 1947, and that the general commodity price index would be 300 instead of 187 if production of goods had not increased 60 per cent in the same length of time.

CONCLUSION—Skyrocketing prices cannot be blamed on a particular class of workers or businessmen, King concludes, but on legislators who decided not to finance the war by taxation or public borrowing, but to follow the primrose path, and borrow from banks.

SOLUTIONS—There are two. One is to effect drastic cuts in cost of national government. The other is longer work weeks, heavier man-hour production from both labor and management. Corollary to first solution, of course, is to get government entirely out of business.
American Builder, February 1948.

»..the improved @ Circuit Breaker goes into immediate action. Dangerous current is instantly and automatically interrupted and the handle of the circuit breaker trips to the "off" position indicating the circuit in trouble.

After the cause of trouble has been removed, you simply flip the handle of the @ Circuit Breaker back to the "on" position and full electrical service is restored. There's nothing to replace...no danger of shock.

Shockproof and simple to operate, these modern circuit protectors also provide all the electrical capacity needed for household appliances and future circuits. Available in 2 to 16 poles, 15 to 50 amperes, for 120 volts AC service.

See your electrical contractor for details...or write for Free Bulletin No. 203.
Wide-awake home builders recognize home-buyer trends. Today the trend is to Electric Ranges. Another million American families switched to Electric cooking last year. Estimates indicate that this year over a million more Electric Ranges will be installed.

This is a definite trend that cannot be ignored. Progressive builders recognize this trend. Electricity is a "must" in any house, and it's simple and economical to include wiring for an Electric Range leading to a range outlet in the kitchen at the time of construction. This is assurance that the houses you build are not only modern today, but will stay modern for years to come!

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Follow the trend...

YOUR HOUSES WIRE FOR ELECTRIC RANGES
Another 1,000,000 American families switched to Electric Cooking last year.
LETTERS

Popular magazine
To the Editor: We are and have been subscribers to your magazine for a number of years and it is the most popular magazine we keep on our reading desk.
—JOHN A. McLEOD, Myrtle Beach, S. C.

Housing shortage in England
To the Editor: The American homebuilder visiting here in England is impressed at once with the similarity of the problems of the housing shortage in England and in America. The vast increase of families who need accommodations appears to me to be a cause for shortage in both countries which is, of course, greatly intensified in England because of their war-damage.
They suffer from shortages of all building materials, and of labor; they suffer from the low productivity of their labor; they suffer from lack of improvements and innovations in construction methods. All these things are certainly parallel to our problems.
There is, of course, competition between government and private industry in the construction of housing, but the government is carrying the ball now because they feel that they can handle it better in the emergency. Do not forget that their housing shortage is a greater emergency, all over the nation, than ours. It became apparent to me that the British government is making an all-out effort to provide housing as one of the topmost needs now. There is, of course, great divergency of opinion as to whether they are doing it the best way. In my opinion this cannot be judged until the program has run another two years at least, because we must not forget that they have had only a little over two years to start their program since the war ended.
These remarks would be too long now if I told you just what the government is doing to accelerate the production of houses.
The private builder is severely restricted in the number of units he can build, and I am now looking into their construction methods to see if they are being curtailed by the government because of their methods, or because the government prefers to carry the ball, for social and political purposes, most of the time.—E. AVERY McCARTHY, JR., The McCarthy Co., Los Angeles, Calif.

Public housing
To the Editor: What's happened to the public housers? Haven't heard anything from them since Congress adjourned last summer. Have they given up?—M.C., Denver, Colo.

It's a bare fact!
Yes! The naked truth is: Home buyers prefer automatic Electric Water Heaters. To have them be completely satisfied with the homes you build—both now and in years to come—install the kind of water heating equipment your customers want.

How to reduce construction costs and add customer features
Construction costs can be reduced with Electric Water Heaters because there's no flue or vent, so installation can be made anywhere—in a closet, in the kitchen, in the bathroom, in the utility room. Hot water lines can be short, cutting piping cost.
Customers like Electric Water Heaters because they are: (1) AUTOMATIC (continuous hot water, no attention); (2) CLEAN (smokeless, sootless); (3) DEPENDABLE (short hot water lines; no flue or vent); (4) TROUBLE-FREE (as electric light); (5) ECONOMICAL (plenty of hot water, fully insulated storage at low cost); (6) SAFE (all-electric); (7) FLEXIBLE INSTALLATION (can be located in living quarters; does not consume oxygen).

Electric Water Heater Section NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
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It's easy to install an electric WATER HEATER
... in a house wired for an Electric Range!
Advertisements in leading building and plumbing publications are influencing more and more architects, builders and plumbing contractors to recommend and install Eljer's fine fixtures with Eljer's quality brass. This is another good reason for learning more about Eljer, now. See your Eljer Distributor or write direct to Eljer Co., Ford City, Pa.
Diversified Convention Program Has Much of Interest for Every Builder

The greatest array of experts in the home building field ever assembled in one place at one time will await delegates to the Annual Convention and Exposition of the National Association of Home Builders in Chicago, February 22 to 26.

Over 100 outstanding leaders, representing every phase of the home building industry from manufacturer to builder to banker to government will participate in a greatly expanded business program designed to give the builders new ideas and facts that they can take home with them—ideas that will help them do better jobs.

The exhibition of new building equipment, materials, and accessories, representing 120 leading manufacturers, will be the biggest and best ever assembled at one exposition. Requiring the exposition halls of two big Chicago hotels—the Stevens and the nearby Congress—the new and improved products to be exhibited will emphasize greater economy for both builders and home owners through multiple use of working tools and greater flexibility of home equipment.

Under the able leadership of Convention Chairman W. Hamilton Crawford, the convention committee has prepared a program packed with action, inspiring speakers, and fast-moving entertainment. Outstanding new features are new-idea clinics where builders can bring their problems for analysis and suggestions, conducted tours of Chicago's housing projects, and a dance for all delegates and their families.

The clinics, 11 in all, are to be conducted on an audience participation basis. An experiment last year showed this to be the ideal way of bringing new ideas to the builders. Staffed with the finest technical talent, they will have one fundamental purpose: to provide authoritative answers to specific technical and general problems facing the individual builder. Whether it is heating or the proper organization of a 608 application, the clinics will offer visual demonstrations and pointed discussion of the right way to do things. FHA Procedures; Insulation Technique; How Builders Should Process 608 Applications; Laundry and Kitchen Layouts, Heating (including radiant heating); Prefabrication; VA Appraisals and Processing, and House Design are subjects on the agenda.

"Land Planning for 1948" is another important feature carried over from last year because of its great popularity. Here builders get a chance to see the nation's leading land planners and community developers in action. Headed by the dean of all land planners, J. C. Nichols of Kansas City, a panel will discuss how present prices are affecting layouts, the best treatment for subdivisions and shopping centers, and planning

608 projects. W. P. "Bill" Atkinson of Oklahoma City, serving as general chairman, supervised the preparation of an exhibit comprising a comprehensive up-to-date study of community planning and development.

Under the auspices of the Community Builders Council, a "site plan analysis" session will be staged. Builders and developers who are members of the Community Builders Council can avail themselves of expert advice on land planning and community building without charge. Top developers will analyze any plans brought to the meeting or discuss any problem of site development with individual builders.

"Combining the greatest exposition of building materials and equipment in history with this streamlined program of action-packed convention activities should meet the needs of every builder, large or small," said Mr. Crawford.

Citing the modern style program, he explained that the main emphasis is on fact-producing panel discussions and clinics rather than on individual speakers. Among the limited number of individual speakers are FHA Commissioner F. P. Richards; HHFA Administrator Raymond M. Foley; Miles Colean, economist of Washington, D.C.; James C. Downs, Jr. of Chicago; Arthur H. Motley, nationally known inspirational speaker; and popular Bill "Yes Sir" Power of Chevrolet Motor Co. National Commander James O'Neil of the American Legion, and Commander Edgar C. Corry, Jr., of the AMVETS, will represent the veterans.

On the lighter side, a dance for all delegates and their families at one of Chicago's finest ballrooms on Monday night, and a banquet on Wednesday planned by President Eddie Carr "with an accent on fun" offer top entertainment. "Long speeches are out—let's have some fun," said President Carr. And the banquet will be just that, with real stars and a snappy program.

Grand opening of this 1948 Exposition is at 2:00 P.M. Sunday, February 22, in the Exposition Hall of The Stevens Hotel. The first general session will be on Monday afternoon in the Grand Ballroom of The Stevens. With Arthur H. Motley as keynote speaker and the added attraction of a new-type three-dimensional film presentation "The New America" to be shown, it sets the pace for the entire program.

With registrations pouring in at a record rate, according to Paul S. Van Auken, convention director, all previous attendance records are expected to be broken. Last year, over 13,000 builders, contractors, and others connected with the industry were registered. Accordingly the Convention Committee offers this suggestion: Get registrations in early through local associations. Plan to arrive Sunday and to stay through Thursday. This year the builders are invited to bring their wives and other members of their families. There is ample hotel space.
Evidence that the "Cleveland Plan" for building low-cost homes in 1948 is off to a practical start is seen in the fact that Cleveland has allocated a million and a half dollars for street improvements needed to carry out the plan. The Home Builders Association of Greater Cleveland announced the plan last fall. It is, briefly, that lower cost houses can be built if all groups involved in the construction will cooperate—builders, workers, and public agencies. The fund allocation gives concrete proof that the association plans to intensify efforts to have obsolete buildings codes and zoning regulations changed. As a part of its 1948 program, the association plans to intensify efforts to have the ban on gas heating installations. The association reports a higher scale of wages went into effect January 1 in accordance with its contract with the building trades. An escalator clause in the contract calls for a 5 per cent increase on the basic wage for each five point increase in the cost of living.

Under the new scales, bricklayers and stone masons receive $2.365, marble masons get 10 cents less and tile setters 20 cents less. Scales for the carpenters and allied trades range from $2.065 to $2.265, except for electrical helpers who get $1.665. Rates for plasterers, lathers, and painters are on a par with those mentioned. The lowest rate—for laborers, is $1.665. All foremen receive $1 over the journeyman scale.

The association is co-sponsor with the Seattle Post-Intelligencer of a housing show scheduled for March 28 through April 4.

Seattle Builders Raise Wages of Tradesmen Again

The Seattle Master Builders Association reports a higher scale of wages went into effect January 1 in accordance with its contract with the building trades. An escalator clause in the contract calls for a 5 per cent increase on the basic wage for each five point increase in the cost of living.

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David Swope Heads Westchester Group

The Home Builders Association of Westchester County, at the regular January meeting, installed David Swope as president for 1948. Mr. Swope is a prominent builder in the New York suburban area of Westchester. Fabian Crystal is the new vice president; Peter Doern is secretary; and Leo Skolkin is treasurer. J. E. Munson is legal counsel for Westchester association.

Earl Staten Named Executive Secretary of Utah Association

Earl P. Staten was named executive secretary of the Utah Home Builders Association, effective January 1. Mr. Staten, whose office will be in Salt Lake City, is a native of Utah and was educated in schools there.

EARL P. STATEN

He was graduated from the University of Utah in 1937 with a B.S. degree and received his LL.B. from the same institution in 1940. From 1940 on through the war years, Mr. Staten worked as a special agent for the Federal Bureau of Investigation in the United States. He is married and the father of two sons, six and three years of age respectively.

Oliver Black Heads Tulsa Home Builders

Oliver S. Black, a real estate representative, succeeds Otis Nidiffer as president of the Tulsa Home Builders Association, following the recent election of new officers. Mr. Black is also president and owner of the Black Building Corp. and the Arrow Building Corp.

Other officers are: Vice president, Vernon S. Mudd; secretary-treasurer, Mrs. George Wilder. New directors are Mr. Mudd, Arthur J. Black, Jeff P. Nix, Burl Johnson, Carl Mildner and John M. Moore.

Holdover directors are Mr. Nidiffer, Oliver Black, Lee Mulhall, Everett S. Johnson, Jr., Howard E. Hanna and Morris W. Turner. National director is Roy L. Morgan with Mr. Turner and Robert W. Adams as alternates.

The Tulsa association reports there were between 1,200 and 1,300 rental units under construction at the end of last year. Building costs were continuing to increase.

Dayton Builders Show Scheduled for April 17-25

The Dayton Builders Show, sponsored by the Montgomery County Builders Association, will be held in the Coliseum at Dayton, Ohio, beginning April 17 and running through April 25. Exhibits will be open for nine days. This is the first builders show held in Dayton for 20 years.

J. B. Haverstick is general chairman for the show and Chester R. Hinkle is show manager. E. Clarke King is secretary. Ninety-seven exhibit spaces are available in the Coliseum.

Cortright's Column

By Frank W. Cortright

The National Association of Home Builders moves into this new year of 1948 with every confidence that the outlook for the home builder will be as bright, if not brighter than it was in 1947. All the signs point in that direction.

Economists generally foresee the year as one of high production and business activity, with sustained employment, but warn against the serious dangers of a lack of price and wage stabilization and a third go-round of wage increases.

So far as the construction industry is concerned, economists of the Commerce and Labor Departments are in joint agreement that it will reach a level of better than $15,200,000,000 during the year. This would be a 20 per cent gain over the $12,700,000,000 expected to be produced in 1947. Of the 1948 figure, home building is expected to account for about $6,000,000,000. Commercial and industrial building, farm construction and public works is expected to reach the unprecedented figure of $9,000,000,000.

These optimistic assumptions, of course, are predicated upon the hope that there will be no serious recession in general economic activity and that construction costs "will rise only moderately above current levels."

At the same time, it must be realized that Congress must pass Title VI legislation to assure the construction of nearly 1,000,000 housing units during the year. Several committees, notably the Joint Committee on Housing, are presently conducting investigations which will lead to legislative proposals early in the year.

It is obvious that home building cannot support a long-range, high-volume housing program without unqualified assurance of long-term mortgage financing. I have emphasized before that the industry can not, and will not, continue at the current record breaking pace unless the essential of adequate financing for two, three, and five year projects is available.

Congress can enact no more important single piece of legislation at its present session than that of determining the place FHA should take for the next five years, and in re-establishment of a secondary mortgage market. In the meantime, builders will find new and more difficult conditions to meet as they apply for commitments under the recent and modest $750,000,000 Title VI authorization approved by Congress.

Then there are other things essential to a more productive year in home building.

Labor must train more apprentices, eliminate restrictive practices and increase productivity in line with high wages now being paid.

Builders must cooperate with FHA and VA so that more and better rental and sale housing is produced for veterans and others.

Builders must cooperate with all industry groups, particularly manufacturers and distributors of building materials in an effort to eliminate gray markets, increase building material supply, and stop the dangerously spiraling cost of these materials.

Public housing must be blocked to prevent the socialization of this industry as it has been socialized and destroyed in Europe.

The public must be informed through improved public relations that the industry is doing an immense job efficiently and economically—that it can meet the total housing need.
NINETEEN Hundred and Forty-Seven was a year which brought great satisfaction to the National Association of Home Builders for it found the efforts of the private home builder crowned with achievements that not even the most sanguine could have foretold as the year got under way.

They could not have foretold, for instance, that during the last six months of 1947, home builders would be constructing houses for veterans and other workers at a rate of better than 1,000,000 units a year, or that the 850,000 homes completed during the year would result in providing shelter for an estimated 3,400,000 people. This was no mean accomplishment, and perhaps is the most concrete and outstanding of them all.

It should be further pointed out that the home building industry, during the postwar period through which we have just passed, made a more rapid recovery than any other, outstripping the automobile manufacturing business, usually a leader, by a tremendous percentage. Automobile manufacturers recognize 1929 as their peak year of production. They claim that their 1947 production will be from 75 to 80 per cent of this figure. Home builders have recovered, re-establishing their productive capacity to the extent of building this year 167 per cent of the 1929 figure.

The year's great accomplishments stemmed from the inspirational and highly successful convention and exposition of the National Association of Home Builders, held in Chicago last February 23 to 27. This convention elected Edward R. Carr of Washington, D. C., a fighting leader, as national president. Under his guidance, the NAHB has grown further as a powerful fighting unit to protect the private home builder under a system of free, individual enterprise.
National officers and directors, backed up by the membership, waged a steady and unrelenting fight against all threats to cripple the private home building industry which is now producing housing at the rate of 1,000,000 units a year

by nearly a half-dozen Congressional committees and subcommittees, of which the special Joint Committee on Housing was the most broad gauge. NAHB not only cooperated with these committees, but supplied the Joint Committee with documented evidence of actual gray market sales.

While these and many other forward looking actions were being taken, and private builders were really building, a steady backfire was kept up against the Talt-Elender-Wagner public housing bill, before committees of Congress, and by speeches over the radio and on the platform by national officers of the NAHB. President Carr attacked the T-E-W bill before the Senate Banking Committee, listing point by point the objections to its provisions. He urged it be broken into four primary parts, slum clearance, reorganization of government agencies, "aids to private enterprise" and public housing, so each could be constructed and acted upon in accordance with its own merits. This bill, regarded as iniquitous by private home builders, is on the Senate calendar, but has been stymied there since last April, when it was reported out by the narrow margin of a single vote.

Another highlight of the year's record was the trip to England, France and four other countries in September, by Frank W. Cotright, Executive Vice President of the NAHB, to study European housing conditions. Upon his return to America, Mr. Cotright's reports burged into the consciousness of every advocate of private enterprise—every private home builder—the fact that unless the latter were

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even the street peddlers. On the personal side, both President Carr and Vice President Cotright spared no physical effort in carrying the private home builders' story to the nation. They both made coast to coast trips, traveled from the Canadian to the Mexican borders, spurring increased activity among the private builders, at the same time pointing out the pitfalls which lay ahead. On numerous occasions, these officials, particularly President Carr, engaged in radio debate with the public housers, successfully refuting their arguments that what America needs is bigger and better public housing.

Throughout the year, the NAHB carried on an aggressive and intelligently directed public relations and press campaign for more of the truth is coming out. In this manner, the housing market is being sustained.

NAHB's labor department, headed by William J. Tobin, Jr., did an invaluable job in 1947. Through the medium of surveys, a picture of the labor situation of each of our 110 local affiliated associations has been developed. As the result of the factual and statistical data obtained, NAHB has the facts regarding the labor problems of home builders throughout the country. Without credit lines, NAHB's Public Relations department has gotten the true story across to the general public.

The department has aided and advised individual members and associations on their labor problems. Close cooperation and exchange of information has been effected with numerous trade associations. Close contacts have been developed in all branches of the Department of Labor, the National Labor Relations Board, the U. S. Department of Commerce, the U. S. Chamber of Commerce and other agencies having to do with home building.

The Joint Committee on Housing held approximately 40 hearings throughout the country. In each instance it had the full cooperation of the NAHB, which stirred the enthusiasm of local associations where hearings were held, and supplied these associations with facts which should be supplied to the committee investigators. It was the experience of the Joint Committee that public housers tried to stymie the hearings in every city, but in every instance they were jolted back on their heels by facts from local builders that they were building homes while the public housers were just talking about it.

Just as the NAHB cooperated with the Joint Committee, so it did with the House committee headed by Rep. Ralph W. Cameron and the Senate committee headed by Rep. Harcourt Lewis, both of which set out to investigate labor racketeering in the building industry. This was in line with the stand taken by NAHB at its February convention, when it scored labor racketeering and governmental racketeering in the building industry. The FHA reported that almost up to the end of the year its average loan was only $6,941, while the VA reported its average GI loan was $8,200. From private home builders came word that houses would be built at a cost of as low as $5,500 a month in Cleveland, and could be carried for as little as $36 a month, including taxes and insurance. In Atlanta, great enthusiasm was expressed over housing to be built to sell at from $3,500 to $3,750, and which would rent from $30 to $32.50 per month.

(Continued to page 144)
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Secretary—B. H. Hunter, Jr., Fresno.


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Affiliated Local Associations of the NAHB

ALABAMA


CONNECTICUT

Home Builders Association of Hartford County, Inc. President—B. J. G. Bridges, Hartford.
Exec. Dir.—Shibley D. Burton, Hartford.

Exec. Secy.—Howard E. Cowdrey, RFD No. 2, New Canaan, Conn.

Greater Bridgeport Builders Association President—John W. Pray, Stratford, Conn.
Secy.—Edward J. Fairbank, Conn.

DISTRICT OF COLUMBIA

Home Builders Association of Metropolitan Washington

President—B. J. G. Bridges, Hartford.
Secy.—Howard E. Cowdrey, RFD No. 2, New Canaan, Conn.

Greater Bridgeport Builders Association President—John W. Pray, Stratford, Conn.
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Secy.—Edward J. Fairbank, Conn.
President—Clarence W. Gossell, Kenwood Chevy Chase.
Ex. Director—James W. Pearson, Washington, D.C.

FLORIDA
Daytona Beach Home Builders Association President—Frank B. Wright, Daytona Beach. Secretary—Gunner Carlson, Daytona Beach.

Home Builders Association of Greater St. Petersburg President—James H. Kulik, St. Petersburg. Exec. Secy.—Mrs. Norman Raffle, No. St. Peters-
burg.

Home Builders Association of Florida President—W. W. Patrick, Orlando. Secretary—W. E. Patrick.

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Macon Home Builders Association of Athens President—David T. Nicholas, Atlanta. Exec. V. Pres.—Roy J. Main, Atlanta.
Home Builders Association of Columbus President—Gardiner Gared. Secretary—Lon C. Gammage.

Home Builders Association of Savannah President—E. T. Taylor Smith, Savannah. Secretary—Mrs. Geraldine Berry, Savannah.

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Home Builders Association of New Hampshire President—Reginald I. Towers, Manchester. Secretary—Eugene L. Tougas, Manchester.

NEW JERSEY
New Jersey Home Builders Association President—Lawrence A. Meadliss, New Brunswick. Executive Secy.—John S. Wright, Newark.

NEW MEXICO

NEW YORK
Niagara Home Builders Association President—Daniel G. Young, Niagara Falls. Secretary—R. D. Peck, Niagara Falls.

OHIO
Ohio Home Builders Association of Dayton President—E. D. Shaw, Dayton. Exec. Secy.—John S. Wright, Columbus.

OKLAHOMA

PENNСYLVANIA
Home Builders Association of Erie President—J. W. L. McDaniel, Erie. Secretary—Harry E. Baughman, Erie.

TENNESSEE
Home Builders Association of Memphis President—W. W. Clark, Memphis. Exec. Secy.—Mary B. Murphy, Memphis.

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Salt Lake Valley Home Builders Association President—E. W. L. Snapp, Salt Lake City. Secretary—Rex Snapp, Salt Lake City.

VIRGINIA
Home Builders Association of Norfolk President—S. W. Allen, Norfolk. Exec. Secy.—C. E. Stubbs, Richmond.

WASHINGTON


Wisconsin Builders Association of Milwaukee President—B. W. Bailey, Milwaukee. Exec. Secy.—James V. Funaro, Cleveland.

Wisconsin Builders Association of Racine President—R. A. Laney, Milwaukee. Exec. Secy.—C. E. Hovey, Milwaukee.

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Spiros G. Ponty, newly elected president of the Home Builders Institute of Los Angeles, believes that the objective of all builders in the year ahead should be to produce houses in the lowest possible cost bracket. He says that what are needed are homes in the $5,000 to $6,000 bracket, including the lots. His view is that a strong offensive is better than a defensive, and that if builders want to stave off entry of the government into the building business, the best way to do it is to take care of the segment of the population that the public housers have in mind. Mr. Ponty also believes that FHA should make 32 year loans and that FHA should make 32 year loans available in order to reduce the down payments required on home purchases.

A native of Greece, Ponty came to this country in 1916. He got into the real estate business in Los Angeles, and in 1929, started building houses in a small way. Last year he completed 900 houses in three tracts and all are sold. They were in the $9,000 to $11,000 bracket. Ponty has an ambitious program for 1948 but is not yet divulging details. Energetic, he arises at 5 a.m. every day and goes to his club for a workout before eating breakfast.

In the accompanying picture, Lawrence B. Gibbs, second from left, retiring president of HBI, greets the newly elected vice presidents for 1948. They are: Arthur A. Beliveau, of Alhambra, first vice president, left of Mr. Gibbs; E. C. Vanderlip of Rolling Hills, second vice president, and L. S. Whaley of Long Beach, third vice president. H. Truman Browne of Inglewood is the newly elected treasurer.

New officers are: R. G. Brubacher of Montebello; Jim Driggers, South Pasadena; William H. Evans, R. DeWitt Lee and S. M. Taper of Long Beach; Matt Flynn, La Canada, S. V. Hunsaker, Downey; Grover D. King, Whittier; H. C. Roberts and E. P. Tucker, Burbank; K. P. Schmidt, Glendale; Mark A. Thoreson, Roscoe; Nate Bershon, Fritz Burns and Fred W. Marlow, Westchester; Ernest A. Becker, Walter Bollenbacher, Milton S. Brook, Sr., C. L. Gillespie, Allen Jones, E. A. McCarthy, Jr., K. S. Semness, E. A. Tomlin and A. C. Wright, all of Los Angeles.
DO NOT DELAY construction of industrial buildings . . . Sharon Stainless Steel for your roof drainage specifications is available for immediate delivery. Architects and builders agree that stainless steel is the finest, most durable material known for gutter, downspout, conductor pipe and flashing.

SHARON STAINLESS STEEL'S extra strength prevents sagging, buckling or cracking caused by heavy accumulations of ice and snow or by widely varying temperatures. A solid metal, Sharon Stainless has a tough, flake-proof, peel-proof surface that is virtually immune to wear from roof gravel, soot or other air-borne abrasives.

SHARON STAINLESS STEEL banishes costs of maintenance, painting and replacement even on structures under constant attack by corrosive industrial atmospheres. Since there is no surface reaction, Sharon Stainless cannot “bleed” . . . there is neither patina nor corrosion to discolor adjoining areas. Its permanent, neutral finish is appropriate for any type of construction. And 28-gage Sharon Stainless can be soldered and worked as easily as 26-gage galvanized sheet.

Remember, Sharon Stainless Steel lives up to its name—forever. Full details upon request to

SHARON STEEL CORPORATION
Sharon, Pennsylvania
They're here!

See! This amazing new kind of refrigerator! It's refrigerated from top to bottom! First time ever!

See! Kelvinator's "Space-Saver Package" Saves floor space in small kitchens!

These are the wonderful postwar appliances housewives and homemakers are greeting with open arms. Architects and builders, too! Kelvinator, of course, means smart, ultra-modern kitchens... with efficiency stepped-up as never before!

See! The "Automatic Cook" Electric Range that cooks whole meals by itself!

See! Kelvinator's 6 cu. ft. "Space-Saver" Home Freezer... 210 lbs. storage capacity... in a cabinet no larger than a kitchen table!

Kelvinator — of Course!
Increased Labor Costs

A STUDY made late in 1947 in an area where home building is proceeding at an unprecedented rate reveals the extent to which higher building labor costs contribute to higher home building costs. The study was based on comparative man-hour production and labor wage scales in 1940 and in October, 1947, for seven trades on a typical one and one-half-story house, 33½x26½ feet.

In 1940, the 9,000 bricks required for the house were laid in 72 hours at a wage rate of one dollar an hour, for a cost of $72. In 1947, 126 hours were required at a rate of $2.75 an hour, plus three per cent for the union welfare fund, for a cost of $357. In 1940, plasterers applied 355 yards of plaster in 40 hours for $40, while in 1947, they used 48 hours at three dollars an hour, plus three per cent for the welfare fund, for a plastering cost of $148.

It will be noted that two factors are at work to increase labor costs. One is increased wage scales. The other is decreased man-hour production. Bricklayers' scales increased 183 per cent, and production decreased 43 per cent. Plasterers' scales increased 209 per cent, and production decreased 16 per cent. Lathers' scales increased 154 per cent, and production decreased 34 per cent. Painters' scales increased 155 per cent, and production decreased 25 per cent. Carpenters' scales increased 135 per cent, and production decreased 18 per cent. Plumbers' and steamfitters' scales increased 150 per cent, and production decreased 15 per cent. Tile setters' scales increased 185 per cent, and production decreased 40 per cent.

Since prewar wage scales in the area where the study was made admittedly were lower than in most similar areas, the increases generally are considered justifiable. There is, however, no justification for decreased man-hour production, which averages about 23 per cent for all seven trades studied, and accounts for 38.9 per cent of the total increase in labor cost. Nor is there any justification, in view of a continuing demand for new houses, for adhering to a work week which ranges from 30 to 40 hours for the seven trades studied. Reports from other parts of the country indicate that the decrease in production shown by the study, and adherence to the short work week are typical.

The 40-hour work week resulted from the wage-hour law passed in the depth of the depression in an attempt to spread the work when millions of men were looking for jobs. Today, the problem is to spread labor. There should be an end to the obsolete depression measure requiring overtime rates for all over 40 hours a week. That would automatically increase the hours in the work week, speed production, and increase the weekly earnings of building trades mechanics without increasing building costs.

Decreased production results from indifference on the part of labor because there are more jobs than there are men to fill them. Labor should be made to realize that its own best interests as well as the interests of the country as a whole will be served best if production is raised at least to prewar standards. That would decrease building costs without decreasing mechanics' earnings.
BUILDING PRODUCTS ON REVIEW

Many new building products and equipment items have been placed on the market in the last year. Many others have been refined and improved. Manufacturers catering to the light construction industry can be justly proud of this achievement in initiative and engineering. It not only enables builders to produce better houses and other structures, but permits builders to incorporate within the structures more value in livability and permanence for the money expended by the ultimate purchaser.

In this issue of American Builder many of the new products, as well as those which have been improved, are presented. Obviously it is impossible to present in the limited space all the products of all manufacturers, or describe all the merits and details of each product shown. Supplementary information, which may not be found in the advertising pages, can be obtained by filling out the coupon on page 142, using the key numbers of those products on which additional information is desired, and mailing the coupon to American Builder.

Many of the manufacturers' products shown in this issue will be on display at the National Association of Home Builders Convention and Exposition in Chicago February 23-26.
Consumer magazine for women selects youthful woman builder of Milwaukee to construct model home which blends modern architecture with the conventional.

The first of a series of demonstration houses sponsored by Good Housekeeping magazine has been constructed by Henny Mollgaard, youthful woman builder of Milwaukee, Wis. Well grounded in traditions and trends peculiar to her locality and the people who comprise it, Mrs. Mollgaard has produced a house which demonstrates how simply modern architecture blends with the conventional for practical purposes. In a community like Milwaukee, where weather strikes both warm and cold extremes, and the people are inherently conservative, this is a pleasant combination.

The house cleaves to the conventional in that it faces the street, provides space for formal, gracious living, for privacy by separated rooms, and features only one bathroom. It achieves modern functionalism with a low, spreading ranch-type design that includes a combination study-guest room with an all-glass exterior.

Mrs. Henny Mollgaard, young Milwaukee housewife, who is a successful builder.
AB28110—Widespread adoption of national standard window sizes by many manufacturer-members of Ponderosa Pine Woodwork Association, plus prefitting and preservative treatment means economies in manufacturing, distribution and construction. These standard window sizes coordinate with the building material industry's efforts to standardize dimensions on a commonly adopted unit of measure based on universal use of the 4-inch module.

AB28109—Kelvinator's newly-designed, 21-inch electric range is introduced as a working companion to the Kelvinator Space-Saver refrigerator. With a full-sized, two-unit oven for baking or broiling, the range helps to pack the facilities of a full-size kitchen into limited space. The refrigerator has a storage capacity of six cubic feet, although the Space-Saver uses no more floor space than previously required for four cubic foot models.

AB28103—A new and completely non-ferrous heating unit as well as additional enclosure types and sizes are included in the new line of convective radiation of Modine Manufacturing Co., Racine, Wis. Brazed and otherwise metallically bonded into a single structure supported at the sides by rigid steel plates, the new unit possesses unusual strength. It contains no dissimilar metals—headers, tubes and fins are copper or copper alloy.

Some of the comfort-contributing equipment items are automatic light switches in closets, built-in dust pan in the kitchen floor, an electric wall heater in the bathroom, a garbage disposal unit, an electric dish washer, a kitchen ventilating fan, a water softener, a combination clock and door chime, and an electric garage door opener.

The house, designed by Russell W. Geske, Milwaukee architect, is 1,420 square feet in size, situated on a corner lot 88x120 feet. The exterior is of Lannon stone painted with one coat of white Bondex. Where siding is used on gable ends and on the rear side, it is made up of 54-inch exterior type plywood, cut in 24-inch strips and lapped with four inches exposed.

AB28100—Kelvinator's newly-designed, 21-inch electric range is introduced as a working companion to the Kelvinator Space-Saver refrigerator. With a full-sized, two-unit oven for baking or broiling, the range helps to pack the facilities of a full-size kitchen into limited space. The refrigerator has a storage capacity of six cubic feet, although the Space-Saver uses no more floor space than previously required for four cubic foot models.

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low house. Masonry work in foreground is an outdoor fireplace.

The house has an east-west exposure, which permitted the architect to feature two separate terraces at the rear, or west side. One is off the breezeway or porch and handy to the kitchen for outdoor eating. The other, outside the den, is for relaxation. The latter terrace serves to extend the width of the house and to merge the indoors with the outdoors.

Within the house, the plan provides privacy and isolation for the two bedrooms, but easy access to the work and study areas. The living-dining rooms and study-living rooms can be used as one large area or walled off at will by means of louvered folding doors.


GOOD HOUSEKEEPING MODEL HOME

AB2897—The "Symphonette" is a new electric door chime by the Rittenhouse Co., Honeoye Falls, N.Y. It has simple, rectangular lines, and measures approximately \( \frac{3}{4} \times \frac{1}{2} \) inches. Color combinations include blue and silver, ivory and burgundy, gray and white, and others. At the same time the firm announces its new "Lyric III", which has three long lacquered brass tubes suspended from an ivory plastic housing. Both the models are modest in price.

AB28226—The portable Monarch Uni-Point radial arm saw makes every kind of production cut in wood, from a rafter compound to stairway stringer routing. It has a 3\( \frac{3}{4} \) -inch crosscut and 2\( \frac{3}{4} \) -inch ripping capacity. Designed for compactness as well as ruggedness, it will slide through a 30-inch doorway. An outstanding feature is the elimination of a loftsling arm over the work area. Prices were recently reduced 20 per cent on this saw.

AB28611—The Caterpillar Tractor Company's diesel D4 track-type tractor, equipped with Tracavator, is utilized by builders to excavate foundations for houses and other structures at the start of construction work. When construction is actually under way, the unit is suited to numerous jobs on the site, especially for back-filling and leveling ground. This tractor is a number of units which are manufactured by Caterpillar Co. for use by builders.
FURNACE is a Mueller Climatrol, oil-fired

doors of striated plywood which match the wall finish around and above the living room fireplace.

Good lighting, a specially-designed wall mirror over the lavatory, two large storage cabinets, and a normal-sized window glazed with clear glass reveal careful planning of the bathroom. The house is heated by an oil-fired Mueller Climatrol forced warm air furnace.

PUSH button in car moves an Electronic Serviceman which opens and closes garage door

BUILDING PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW

AB28180—A new electric hot water heater—the Lochinvar—has just been developed by the Michigan Tank & Furnace Corp., Dearborn, Mich. The tank is galvanized inside and out by hot dip process. Hot water outlet is located at top of tank and then drops down inside casing to form heat trap. Heating elements are immersion type.

AB28157—The Plas-Tex Corp., Los Angeles, Calif., makers of many plastic household items, are launching a new line of electrical wiring devices. The new duplex receptacle is fully encased in a one-piece housing of plastic, dust proof and sturdy. Other features are heavy bronze double-wiping contacts, T-slots and large screws.

AB28223—Baseboard radiant panels, made of cast iron by American Radiator & Standard Sanitary Corp., replace regular baseboards to become an integral part of the room. They are 8 inches high and 2 inches thick, and provide adequate heat at floor level; available in two types, radiant heat alone or combined radiant and convected heat.
Architect Russell W. Geske has effectively blended modern with conventional in this attractive model home. In a community like Milwaukee, where weather strikes both warm and cold extremes, and people are inherently conservative, it is difficult to design a house with modern lines that will be acceptable to the tastes of native residents.
AB28124—Widely used in Wisconsin for a number of years, the Milwaukee Sash-Balance Weatherstrip combination is now offered on the national market. Highly efficient, it helps cut building costs by doing double duty as a sash-balance and weatherstrip for old or new buildings. Its simple construction affects economy by slashing installation time. This product is manufactured by the Milwaukee Strip Service, Inc., Milwaukee, Wis.

AB29219—The specially designed burner in the new floor furnace manufactured by the Roberts Furnace Co., Detroit, Mich., burns No. 3 oil or better and reduces carbon to a minimum. It can be installed between conventional 16-inch on center joists because overall dimensions are 14×30 inches with a 35-inch depth. The heat exchanger is heavy steel, electrically welded. It is approved for automatic temperature controls by Underwriters.

AB2883—Latest addition to the Shopmaster line of woodworking tools made by Shopmaster, Inc., Minneapolis, Minn., is a 6-inch ball-bearing jointer-planer. Front table capacity is 17×5/8 inches, and overall capacity is 34 inches. Maximum depth of cut is 1/4 inch, and large pieces may be handled with ease. The specially designed head permits easy blade adjustment and holds the cutters accurately in place. Operates with 1/2 H.P. motor at 1750 rpm.

Houses on north side of street. Note location of driveways that double uninterrupted west. Therefore, the large window areas of the houses on the north side of the street, face the street, while the large window areas of the houses on the south side of the street face the rear of the lots. The accompanying plot plan shows the manner in which the distances of the houses from the street are staggered, and also illustrates the arrangement of garage driveways that doubles the view of uninterrupted front lawns from each house. There is a choice of two and three-bedroom layouts, and prices range from $15,200 to $15,500. Several of the houses have been completed and occupied by purchasers since the first of February. Foundations are poured concrete below grade, and cement block above grade. Cinders packed to a depth of one foot are placed inside of the

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New methods of construction, new materials and design that permit the use of the sun's heat in combination with warm air, radiant, floor panel heat characterize the modern housing project of H. M. "Ted" Sloan. A project that sparkles with newness from floor to ceiling, inside and outside

width of lawns

foundation perimeter, and topped with a vapor barrier. Heating in addition to that supplied by the sun is from warm air, circulated through ducts in the cement floor. Over the ducts, which are six inches high, a finished three-inch floor slab is poured.

The heating unit is a Lennox gas furnace, located in the utility room. Ducts are aluminum with Johns-Manville transite sound insulation in the first two feet to eliminate sound from the furnace. An accompanying drawing shows the heating plan with part of the ceiling furred to provide a plenum chamber, and dampered floor registers to control the flow of warm air from the furnace in any part of the house. Another drawing shows the warm air duct used for radiant floor heating.

All walls are insulated with Kim-
KIMPREG-PLYWOOD panel ready for installation in wall is handled by one workman

AB28173—A new, compact, hot water boiler, gas or oil-fired, is being produced by Triad Products Corp., Chicago, Ill. Units are completely "packaged" with all controls, gauges, pumps, etc., in place and ready for connection to supply and return lines. The submerged copper coil provides a supply of hot water all year. Design increases safety. Two winches, equipped with 150 feet of steel cable, are each geared-operated, are each equipped with 150 feet of steel cable where the owner required a finished floor over the cement in the living rooms and bedrooms, the new Hasco block flooring is being used. This flooring is made in 3-ply plywood blocks, 3/4-inch thick and 12 inches square, tongued and grooved, and with a slight bevel on each edge. The red oak surface pattern is factory-finished, including the waxing. Blocks are of balanced construction, and have little or no expansion and contraction. While the block can be nailed to a wood sub floor, its chief advantage is that it is usually laid in mastic directly on the concrete floor.

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LEFT, top to bottom: Four stages in construction of heating ducts and concrete floor. Note construction of forms to create heating ducts.

AB28175—A new, compact, hot water boiler, gas or oil-fired, is being produced by Triad Products Corp., Chicago, Ill. Units are completely "packaged" with all controls, gauges, pumps, etc., in place and ready for connection to supply and return lines. The submerged copper coil provides a supply of hot water all year.

AB28171—Safeway Steel Products, Inc. of Milwaukee makes this light duty swing stage, called Saf-T-Swing. It is designed especially for such jobs as maintenance work, painting, cleaning, tank-painting, etc. The new winch design increases safety. Two winches, entirely gear-operated, are each equipped with 150 feet of steel cable where the owner required a finished floor over the cement in the living rooms and bedrooms, the new Hasco block flooring is being used. This flooring is made in 3-ply plywood blocks, 3/4-inch thick and 12 inches square, tongued and grooved, and with a slight bevel on each edge. The red oak surface pattern is factory-finished, including the waxing. Blocks are of balanced construction, and have little or no expansion and contraction. While the block can be nailed to a wood sub floor, its chief advantage is that it is usually laid in mastic directly on the concrete floor.

AB28150—A new line of plastic toilet seats with tarnish-proof, rust-proof, nickel-chrome plated, cast-brass hinges is announced by York Seating Co., Irvington, N. J., manufacturers of plastic sanitary equipment. Since each seat and cover is molded from a solid piece of plastic there is no opportunity for ugly cracks or scratches.

AB28148—The Stackcraft Co.'s copper armored Stack-welt, used by builders for many waterproofing purposes, is now available after an absence of five years. The product is not a substitute but an actual sheet of pure copper backed up with reinforced heavy creped kraft. Recommended for concealed flashing, and termite barriers.
American Builder, February 1948.

FOUNDATION plan showing warm air, radiant, floor panel, heating ducts. Ducts are six inches high.

HEATING plan showing ceiling furred to form plenum chamber. Also shows dampered floor registers.

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AB28179—New styling, two giant burners, a special simmer burner and a more convenient work zone are some of the features of the new quality gas ranges manufactured by Roberts & Mander Corp., Hatboro, Pa. The burners, on the Centre-Cook top, are designed for maximum ease in cleaning. All models are now available.

AB28165—Doozit is a new product developed by the E. L. Bruce Co., Memphis, Tenn., for cleaning, waxing and polishing wood floors and linoleum. It is used by many builders to give the finished floors in a house the final touching up they usually need after workmen have finished. Doozit cannot be used with self-polishing wax.

AB28188—Feature units of the Norge Heat Division are Models 908 and 1208 winter air conditioners of 90,000 and 120,000 B.T.U. output respectively. These units have the Whirlator Combustion Head and patented vacuum draft features as well as single motor operation. They will burn No. 2 fuel oil, straight distillate or catalytic stock.

AB28166—The Model 60 MallSaw is a sturdy, portable electric hand saw weighing only 9½ pounds, and is manufactured by the Mall Tool Co., Chicago, Ill. With the available saw table and attachments, the Model 60 may be used for sanding, grinding, wire brushing, sharpening tools and knives, drum sanding, and other jobs.
without requiring the installation of sleepers or a wood sub floor. It is designed particularly to meet the need for a prefinished floor that can be laid economically on the concrete floor of a modern basementless house.

A variety of sidings are used on the houses, but one house completed in mid-January made the first use of Kimpreg-plywood in the Northbrook Manor project. This product is a 3/4-inch plywood sheet, masked on both sides with Grade 3002 Kimpreg, a product of the Kimberly-Clark Corp., which is sold to plywood manufacturers and other material producers. Coated with Kimpreg, the plywood is adaptable as a combination sheathing and siding. Used for this purpose by Mr. Sloan, Kimsul insulation was added between the studs as well as a vapor barrier on the warm side of the wall. Accompanying photographs show the ease with which the material is handled and cut, and its attractive appearance when batten strips are applied at the joints. Speed of application is indicated by the fact that on one of the Sloan houses, three men working one-half day applied all of the siding and batten strips.

Another use for Kimpreg-plywood is concrete form panels. When used as siding, if the natural reddish-brown color is not acceptable, the surface provides an excellent paint base. Kimpreg masks the plywood grain, and is an effective moisture barrier.

The equipment in the houses include a Roper stove, Servel refrigerator and cabinets, Ambassador water heater, Launderall, Hamilton clothes dryer and plumbing fixtures by both Kohler and American Standard. Perhaps another first is the kitchen drainboard. The board is made with a plywood core, sheathed in tile top, and the natural reddish-brown color is used over and over again to give an authentic and natural sub floor to the basementless house.

Bunk beds are set up in the basement rooms of the modern houses, and, although the basements are unheated, the rooms are comfortable and snug.

HASCO block flooring in place in living room. Blocks were laid directly on concrete with mastic. Note pleasing pattern resulting from red oak grain in blocks. Below, laying flooring on cement slab with mastic.
Plastic Surface
Fir Plywood
3/4" Rad.
Aluminum

Note that the top surface is plastic with an impregnated base sheet under a clear plastic overlay. The surface resists stain and damage from practically every substance that ever would be applied to it. High temperatures and quick temperature changes do not affect the surface. Finished thickness is 3/4 or 3/4 inch. Shipped flat, the material is bent at the job site to provide the splash board. Aluminum angles applied with wood screws to the back are also furnished.

The drainboard and sink combination was worked out jointly by the Haskelite Manufacturing Corp., manufacturers of the drainboard, and the Briggs Company, makers of the kitchen sink.

While the houses, located within easy walking distance of the shopping center in Northbrook, are by no means experimental, they do represent careful choice of many new building materials, and advancement in design to accommodate both new materials and equipment in the most efficient way.
Public
Demand
Determines
Style

Columbus builder says that demand for houses still follows the traditional. When this trend changes he will then go in for modern.

ARCHITECT'S rendering of a group design in Mayfair development. A number of interesting exterior variations have been developed from four basic plans. Street view of project shown below.

HERE has been no desire on the part of Don M. Casto, prominent builder of Columbus, Ohio, to change the trend of thinking in the minds of the building public. Nevertheless, he has had great influence in moulding opinions in his area through the splendid examples of traditional colonial-type houses that have been built over the past years in the numerous developments completed by his organization.

In the Mayfair Boulevard addition, Mr. Casto's latest development in the west end of Columbus, Ohio, the same fine, traditional lines prevail in all the houses. This project extends for about a block and a half along the boulevard with houses placed on both sides of the street.

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AB28118—To control ventilation of understructures, the E. L. Bruce Co., Memphis, Tenn., offer a foundation ventilator made of cast aluminum with built-in screen and adjustable glass shutter. The shutter can be opened or closed from outside. This eliminates need of makeshift covers in winter, helps prevent cold floors and frozen water pipes, allows light beneath building. Built-in screen keeps out reptiles, insects and mice.

AB28196—Refinements in their No. 1 radial saw which include a patented "angular" to simplify and speed up cutting of rafters are announced in their No. 1 radial saw which include a patented "angular" to simplify and speed up cutting of rafters. The accessory bolts to the column of the saw, providing a rotating surface that may be used with a carpenter's square to position the machine for correct plumb and plate angles. Readings are taken directly from the square and need not be converted to degrees.

AB2885—An electric refrigerator 34½ inches high to fit in with equipment for the modern, table-height kitchen is being manufactured by Paley Manufacturing Co., Brooklyn, N.Y. Known as the "Lo-Boy," its height matches the sink, range, and other counter-height kitchen components. Exterior has a white, baked-on, highly-polished finish, and interior is full porcelain with automatic lighting. The capacity of the refrigerator is 3.5 cubic feet.
Four basic plans have been used throughout with a great variety of exterior designs. A number of the designs have been repeated in the overall project, but care has been exercised to separate them so that the entire development appears to be individually-designed homes.

To provide additional variation and to eliminate any possibility of monotony, the builders have established a variable building line. The design of the house thus determined its distance from the street. An illusion of great depth in the building line has been created through the elimination of sidewalks and the accompanying boulevard. Front lawns extend from the house to curb line. Consistent progress has been maintained from the time the project started in 1946 until its completion in 1947. All of the houses have been completed and sold and are now being occupied. The purchase price was $15,000 including grading and minor landscaping. Each house contains six rooms and bath, including three bedrooms with ample closet space and, with a few exceptions, an attached garage.

The Don M. Casto organization has been active in the building field since 1921.

At the present time this company has 250 living-units under construction. These units are composed of single houses and apartments. These are being completed at the rate of 25 units per month. The architect for the Mayfair Boulevard project is J. Edgar Outcalt who is a member of the Don Casto organization.

**CONSTRUCTION OUTLINE**

- **FOUNDATION**—Concrete blocks.
- **STRUCTURE**—Exterior walls—stone, brick, red cedar siding, 15 lb. slate felt, studs, rock lath and gypsum plaster, U.S. Gypsum Co.
ANOTHER exterior variation of plan at right, is shown above. Change in roof pitch and the use of local stone in place of brick on the front wall of the house, produces an entirely different appearance. Iron rail at entrance adds an interesting note.

THE well-proportioned house shown at left follows the traditional manner in its exterior design. Chief among its many features is the combined treatment of the garage and front entrance with its overhanging canopy. This house contains six rooms, including three bedrooms and attached garage. Fireplace and open stair at one end provide interesting features in living room. Direct access is obtained from garage to kitchen. Plan of house is shown below.

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AB28163—Adaptation of the Launderall automatic home laundry for coin-meter use in apartment houses and similar installations is announced by the Sunline Co., Detroit, Mich. Conversion of the units to coin-meter operation is achieved quickly by substitution of the regular Launderall side panel for one containing a flush-fitting coin meter.

AB28001—The Milcor Solid Partition is a steel reinforced vertical slab of plaster, 2 inches thick. Hot or cold rolled-steel channels, running from floor to ceiling, reinforce the partition vertically and hold the metal lath to which the plaster is applied. The metal lath reinforces the plaster partition both horizontally and diagonally.

AB28177—The new Mototruk is made by the Comet Manufacturing Co., Minneapolis, Minn. It is built along lines of a conventional two-wheeled hand truck but with sturdier construction to accommodate heavier loads, and equipped with power to handle heavy work where there is no need for three or four-wheel trucks.

AB28224—Aluminum residence windows in both the casement and awning types are manufactured by Ware Laboratories, Inc., Miami, Fla. To insure storm-proof sturdiness, heavier aluminum extrusions are used and the mitered corners are integrally welded. The exclusive Ware Bank-Safe hinge also keeps these windows weather-tight.
TWO interesting exterior variations of the plan above are shown at right. By reversing the plan and adding an entrance porch, an entirely different appearance is obtained. A full size bedroom is provided over the garage in both arrangements. Blinds in contrasting colors are placed on windows on the front elevation to enhance the fenestration.
Traditional Style
Includes Several Modern Features

Modern features are incorporated in this $37,000 traditional colonial house adding to its charm and convenience without giving it the appearance of a hybrid. Built by F. H. Mulcahy, it was designed by Emil A. Schindlin of East Orange, N. J., in collaboration with Mrs. Ellis Leigh. Quality materials and construction are used throughout. The large modern cabinet kitchen is finished in wall linoleum, the linoleum floor being laid over plywood atop the subfloor. Plaster walls are finished over gypsum lath. Ceilings are metal lath. Floors are clear red oak. Sidewalls are insulated with 2 inches of mineral wool, and 4 inches are used for cap insulation.

Baths are ceramic tile. Copper tubing plumbing throughout. All but double-glazed windows are zinc weatherstriped. Roof is slate.

Brand Name Products Used in Construction of This House
- Thermopane double-glazed windows
- Curtis sash and millwork
- U. S. Gypsum insulation
- Thatcher forced-air gas furnace
- Standard Sanitary bathroom fixtures
- Nairn Linoleum
- Tappan gas range
- Bronze-Art light fixtures
- Schlage hardware
- Fenestra steel casements

AB2836—Here is a tool designed for quick application of flooring, siding and sheathing with the tightest possible joints. Patterned on a lever principle, similar to a jack, it can force even badly warped boards into line and hold them in position for nailing. A tap of the hammer against anchor sets tool into position on joists, and lever action squeezes the boards together. The tool is made by Maco Corp., Huntington, Ind.

AB2838—David E. Kennedy, Inc., Brooklyn, N. Y., have added Kenserts to the line of asphalt floor tile decorative inserts. Supplied in a wide variety of designs, the Kenserts can be worked right along with the regular tile. The firm also makes ThemeTile inserts 9 inches square with pictures and designs to fulfill the requirements of a wide variety of motifs in floor design. Names, slogans, sales ideas, can be put in floors, using Kenserts.
AB28194—The line of Radiiluxe stainless steel sinks, made by Just Manufacturing Co., Chicago, Ill., embodies two special features—built-in anti-splash rims on bowls and double pitch drain boards without channels or grooves. Sink and cabinet tops are fabricated from No. 16 gauge solid stainless steel, bowls from 18 gauge. They are available in standard sizes or may be custom fabricated to meet specifications or customer requirements.

AB28211—The Taco truss, designed by Timber Engineering Co., Washington, D.C., permits clear span roof construction on residential housing projects, both single unit and multiple. It is adaptable to most architectural styles from low pitched ranch style roofs to steeper slopes of Colonial and Cape Cod. Savings in lumber compared to conventional joist and rafter construction vary from 15 per cent to more than 30 per cent in long spans.

AB28214—Now in production by J.W. Appley & Son, Inc., St. Petersburg, Fla., makers of the Little Giant line of vibrator concrete block machines, mixers for the block industry, skip hoists, hoppers and pallets, is an automatic drive which, by simple mechanical principles, activates all moving operations of the Little Giant concrete block machine except removal of moulded blocks from the off-bearer. It can be attached to any Little Giant.
28 Moderns in a Group

Park Planned Homes is a radical departure in concept from speculative and real estate custom. The result is a practical solution.

HIGH up in the foothills of the San Gabriel mountains at Altadena, California, 15 miles northeast of Los Angeles, lies one of the most unique sub-divisions in the entire southern California area. Twenty-eight modern individual houses, each one identical with the others, are grouped together in two long rows. The design of each house follows a similar pattern, and yet a feeling of monotony has been happily avoided.

The Altadena site is a continuous slope; therefore, each lot has been leveled off, creating a series of terraces that are separated from each other by a retaining wall. The houses, extremely interesting in their severity of line, are located within a few feet of each other. Complete privacy has been obtained for each family in both service-play yard and garden. In addition, the windows extend across the long side, light through the sides. The effect is one of unity.

The Altadena development is a road to a group of homes. The route tends to lead around each group, so that they are separated from each other. Complete privacy has been obtained for each family in both service-play yard and garden. In addition, the windows extend across the long side, light through the sides.

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AB28136—A lightweight steel beam, named the Junior Beam, for floor and roof construction is made by Jones & Laughlin Steel Corp., Pittsburgh, Pa. In steel beam construction, the beams rest directly on foundation and are held in place by concrete floor slabbing and concrete firestop along foundation wall. Flooring such as hardwood or composition is then applied over the slabbing, making the first floor an integral part of foundation.

AB28132—This Stanley-Carter J5 Plane is designed to cut costs and save time for the builder and carpenter. Equipped with a spiral cutter driven 18,000 revolutions per minute, it will plane surfaces up to 2½ inches wide in a fraction of the time that it takes by hand. It can be used to fit doors, sash, screens, storm windows, transoms. A bench bracket is furnished so the J5 Plane can be used as high speed jointer for inside trim.

AB28106—Standardization of sizes in the ornamental iron field for small homes is announced by the R. G. Coffman Co., Inc., Orlando, Fla. The Coffman loose-foot-anchor-plate design on porch posts permits on-the-job lowering of stock heights, which the firm produces in three lengths. Up to ¾ inches can be sawed from the legs. Distribution of the line through normal building supply channels permits greater output and lower prices.
TO the left on opposite page is a view of one half of the project (14 units). This view is taken at the upper level of slope, showing the area that will be eventually landscaped.

LOWER view on opposite page shows the enclosed service-play yard with overhead shelter extending from the garage to house.

STREET front of one of the houses above indicates the relation of garage and service yard to house. Seclusion is given to living quarters by this method. Retaining walls step down in the center of paired driveways across the front and rear only. Sunlight is assured in every room through the introduction of a series of inset clerestory windows on two sides.

The approach to the houses is by a road placed in the center of the two groups of buildings. This road extends along the entire length of the

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AB28233—This plastic Ornament drainboard sheeting is medium pressure laminate with an aluminum base. Product of Haskelite Manufacturing Corp., Grand Rapids, Mich., it is heat resistant, stainproof, and will not crack or lose its color through constant use. Drainboards are furnished flat, or bent and reinforced with 1/16-inch thick aluminum angle applied with wood screws. Instructions for cutting and fitting accompany shipment.

AB28138—The improved design of Hi-Bond reinforcing bars affords greater grip between steel and concrete, eliminating wide cracks, and often makes the use of hooks unnecessary. The interlocking of ribs and firm anchorage of the wires which are easily and quickly attached holds the bars securely in position. Product of Joseph T. Ryerson & Son, they help produce sound structures and lower construction costs through materials and labor saving.

AB28140—Introduction of a completely new line of deep and shallow well self-priming centrifugal jet water systems is announced by the Barnes Manufacturing Co., Mansfield, Ohio. The line contains 46 models of electric driven units as well as 11 models powered by gasoline engines. This line of deep and shallow well jet pumps has been thoroughly tested both in the Barnes engineering laboratories and by actual experience in installations.
Looking into dining portion of kitchen from far corner of living room. Five-foot high cabinet, used for clothes storage on living room side and dishes on the other, separates the two rooms. Clerestory windows above provide an abundance of daylight and ventilation in all of the rooms.

Another view of living room looking toward window wall. Open book shelves extend across front wall over to fireplace. Plaster walls adjoin striated plywood ceiling that follows the slope of the roof.

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AB2854—The Anthratube, revolutionary new type heating unit developed by the Anthracite Institute, is a complete boiler-burner unit burning pea-size hard coal in bin-fed models and chestnut-size in hopper models. Institute claims it operates at 80 per cent efficiency, resulting in fuel savings of from 15 per cent up to 38 per cent.

AB2855—The new Westinghouse 40-gallon table-top hot water heater, shown above, has four square feet of acid-resistant porcelain anealed work surface—can replace a 24-inch base cabinet in the kitchen. Has water temperature range from 120 degrees to 170 degrees. Immersion type heating element. Also in 30-gallon capacity.

AB2818—The new Hidalift vertical sash balance for double hung sash is made by Turner & Seymour Manufacturing Co. of Torrington, Conn. Unit is concealed completely when installed. A spring sealed in the tubing prevents dust wear. Tension adjusts without special tools or removal of sash or screws. Non-slip clutch holds window.

AB2832—The new Westinghouse 40-gallon table-top hot water heater, shown above, has four square feet of acid-resistant porcelain anealed work surface—can replace a 24-inch base cabinet in the kitchen. Has water temperature range from 120 degrees to 170 degrees. Immersion type heating element. Also in 30-gallon capacity.

AB2831—The new Hidalift vertical sash balance for double hung sash is made by Turner & Seymour Manufacturing Co. of Torrington, Conn. Unit is concealed completely when installed. A spring sealed in the tubing prevents dust wear. Tension adjusts without special tools or removal of sash or screws. Non-slip clutch holds window.

AB2852—Two additional cubic feet of refrigerated storage space is made available in the new line of General Electric refrigerators. Leader of the line is an 8-foot box that takes the same floor space used by the former 6-foot box. The extra refrigerated space is made possible by development of a smaller refrigerating unit.

Designed by Gregory Ain, Los Angeles architect, for Robert Kahan, owner and builder, this project clearly demonstrates the possibilities that are contained within the severe limitations of speculative building. Through the collaboration of Garrett Eckbo, landscape architect, adequate natural beauty and screening is assured for the entire group.
Each house has an area of 1,400 square feet plus a two-car garage. The exterior walls are of frame covered with stucco. With an almost flat roof to contend with, the builder placed two layers of aluminum foil over the sheathing before applying the built-up roof. Insul-cote, a white, heat reflective coating was then applied to the top surface.

The framing elements built in four 12-foot units are composed of steel beams and columns. These support the wood rafters above that run parallel to the side walls. Side walls and ceilings are plastered except the ceiling of the living room which is finished in striated plywood. Floors throughout are asphalt tile laid over concrete. Forced warm air heating and cooling is provided. Indirect lighting is used in some rooms.

| View in master bathroom. Glass and steel shower enclosure is built on top of tub. Clerestory windows that are above shower compartment, but are not shown in photograph, permit tub and shower to be placed on the outside wall of the bath. View from dining room into kitchen. Counter height wall dividing these two rooms shown in foreground. Tiled wall counter containing two sinks, each serving a specific purpose, is shown beyond. Sliding windows in clerestory and outside wall provide an abundance of light and air. An interesting as well as practical wall pattern is created in the horizontal lines of wall cabinets and the sloping ceiling that follows the line of the roof.

AB2868—Ware Aluminum Windows for residences are made both in casement and awning types to give maximum light and good ventilation. Silvery in appearance, they need no painting. Are light weight, yet rigid; and maker states they will not warp or stick. Installed with Ware Bank-Safe Hinge solidly joining frame and vent section.

AB2869—The Given Manufacturing Co., Los Angeles, Calif., is showing its Waste King food waste pulverator, an electric disposer for home sinks. Unit holds three quarts of waste, is driven by a 1/2 H.P. motor. Can be installed in sinks having a 3/4 to 4-inch diameter drain outlet. Cutting parts are made of Durasteel to resist corrosion.

AB28115—This 66-inch double bowl sink is the newest product of American Kitchens, Connersville, Ind. Special features are the enlarged working areas and the special drainboard design which reduces breakage hazard of glassware. The faucet is placed atop the outside rim of the bowl; and a push button operates the spray outlet.

AB28187—An oil-burning furnace of 70,000 B.T.U. output, designed particularly for utility room or basement installation, is offered in the Model 708 by Norge. Equipped with a blower, the forced air unit is completely automatic and also has a special vaporizing burner. Filters and a humidifier may be added for winter air conditioning.
1,000 Vets Homes

Largest veterans’ housing development in New Orleans area will be complete new village including shops, school, churches and parks

C. EARL COLOMB, above, well-known New Orleans builder who heads project. Upper right, drawing of subdivision. Note school and playground at rear with shopping center flanked by apartment buildings in foreground. Right, four houses typical of nine different plans and designs used alternately to provide variety

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AR28169—Fourteen improvements have been built into the new model Bendix automatic home laundry. It washes, rinses, dries, dries, empties, cleans and shoots itself off—all automatically. Water now enters at top directly above clothes, and two deep rinses instead of one are used after flush rinses. It is work surface height and depth.

AR28163—Adams Rite Manufacturing Co., of Glendale, Calif., has just brought out this new Rite-Lock for sliding doors of thicknesses from 1/2 to 1 1/4 inches. Lock is easy to install, even in doors with narrow stiles. Cut a simple notch and tighten three screws. Mortising for face plate and strike improves the appearance.

AR28162—The dual register floor furnaces made by the H. C. Little Burner Co., San Rafael, Calif., are completely automatic in operation, with thermostatic control for the oil-fired units. An exclusive feature is electric ignition, eliminating pilot lights. The firm also manufactures regular floor-level register models in several sizes.

AR2804—Still another improvement by tag line for electrically driven ventilation fans and fans for drives.
HALMETTE VISTA subdivision, the largest veterans’ housing development in St. Bernard Parish, which includes New Orleans, La., was started recently by C. Earl Colomb, prominent developer and builder. Covering 300 acres on the lake side of St. Bernard Highway, two miles below the parish line, and facing the proposed Chalmette National Park, the development when completed will contain 945 single houses and 24 apartment buildings with a total of 94 units. Value of the houses is estimated at $8,337,500.

Four blocks of commercial buildings, owned and operated by the subdivision will include a theatre, two service stations, parking space for more than 900 cars, and two church sites. Cost of the commercial center is $1,580,000. A school will be built, and parks and recreation areas are also provided. Designers are William R. Burk, associated architects and engineers of New Orleans. The project has been designed especially for veterans. The construction company is the Chalmette Builders and Supply, Inc. Without basements, the houses will rest on cement piers. The heating units are floor furnaces. All houses will include a garage with a laundry room. The houses are of frame construction, and include one, two and three-bedroom layouts. All designs have been worked out to permit the addition of one or more rooms, subject to the approval of the subdivision. Prices range from $7,500 to $11,500, depending on size and location. The minimum lot size is 5,500 square feet, and minimum fronts are 50 feet wide.

While nine different exterior designs and a variety of floor plan layouts are being used, further variation in exterior appearance will be afforded by the use of a large number of different exterior building materials and combinations of them.

Mr. Colomb stated that the project will be protected with one of the most complete sets of restrictions in the south. The subdivision will control the addition of all commercial establishments, standards of construction for new buildings of all kinds, and all alterations and additions to houses for 25 years. After that a property owners’ association will be in control. Completion of the development is expected to require three years. All streets and sidewalks will be paved, and wiring and utilities, underground.

THE floor plans shown above are typical of several two and three-bedroom layouts available to buyers. Layouts and designs permit the addition of one or more rooms as families of owners increase in size.

AB2804—The powerful new Impact Tool by Ingersoll-Rand runs like any conventional electric tool until resistance in spindle rotation reaches a certain point. Then the power is turned into rotary impacts to produce a powerful tamping effect. Used for drilling brick, masonry, or metal, to tap, ream and drive screws or nuts, and similar jobs.

AB2814—The Truscon Steel Co.’s steel sash for double-hung windows are of welded tubular construction. No weights and cords. Operation is by means of motor type spring balances equipped with Enduro steel tapes. Each window is weatherstripped in spring bronze. Rebate on exterior frame permits flush installation of screens.

AB28175—Quikheater is a built-in type electric heater manufactured by the Frank Adam Electric Co., St. Louis, Mo. This comfort-providing bathroom unit has no moving parts and is made in two sizes with four capacities to provide either radiant or convection heat. Genuine Nichrome heat element assures lasting economical use.

AB2805—This circular aluminum doorway canopy, made by Koolvent Aluminum Awning Distributors, Inc. of Pittsburgh, has smart styling and color, and is installed easily. All-weather protection keeps doorways free of ice, snow and rain, and prevents warping of doors. Vents and louvers let air through, but reduce and diffuse light.
HAVE you tried to find a nice, new postwar home for yourself lately? If you have, you are undoubtedly as discouraged as about 20,000,000 other Americans.

That little white cottage you may have dreamed about during the war has a $15,000 price tag on it, which is twice as much as the average American should pay unless he wants to be mortgage-ridden for the rest of his life. Or if, instead, you more sensibly had set your heart on an airy new garden apartment, you now find such a place is just not available except at holdup rents.

These are the opening paragraphs of a vicious, unsupportable attack appearing in the December issue of The American Magazine, and written by Nathan Straus, former administrator of U.S. Housing Authority, under the title, "Why you can't get that new home."

A reply to Nathan Straus

In his opening statement Mr. Straus immediately identifies himself with the school of New Deal "economists" whose standard method of proving any point is to select an arbitrary figure, regardless of how fantastic it might be, and with no supporting evidence, represent the figure as fact. He does that when he says that there are 20,000,000 Americans discouraged in their attempts to find "a nice, new postwar home." He does it again in his next statement when he says, "That little white cottage . . . has a $15,000 price tag on it."

Let's debunk that $15,000 statement first. There are tens of thousands of new, well-built, efficiently-designed small homes for sale today at prices ranging from $7,000 to $10,000, with thousands more as high as $13,000, and a few as high as $15,000. Mr. Straus should be able to find hundreds of them at the lower prices on Long Island, practically in his own back yard, because they are there. If Mr. Straus will come to Chicago, the American Builder staff will take the time to show him hundreds more for less than $10,000. And if, on his way to Chicago, he will stop at Buffalo, Cleveland, Toledo, Pittsburgh, Columbus, Dayton and/or Indianapolis, he will find thousands for less than $10,000. Then, if he would like to go west and south, he can have his choice of any number of cities where he will find more thousands. A recent American Builder survey shows that the average price of all houses to be built in 1948 is $10,800.

In many of these cities, Mr. Straus will find builders advertising for customers. There are more small new homes for sale than there are buyers in these cities. Mr. Straus, of course, probably would say that that is because the price is too high. The truth is, that compared with practically anything that can be purchased today, new homes represent the best buy. The reason is that the average price increase of all commodities in 1947 over 1940 is 87 per cent, while the average increase in the price of new homes in the same period is only 82½ per cent.

Need for New Houses Grossly Exaggerated

The reason that the price of new houses has not advanced as much as the prices of other commodities is that builders have achieved new economies since the war by better use of land, the application of advanced engineering principles to floor layout, better architectural design, and improved fabrication and building techniques.

To go back to Mr. Straus' 20,000,000 figure, what does it mean? It can mean 20,000,000 family heads looking for as many new homes, or it can mean about 5,263,000 family heads, accepting the average size of a family as 3.8 persons. If it means 20,000,000 family heads, then about half the population is on the march, looking for new homes or new apartments, and feeling discouraged because the new homes and apartments cannot be found. Mr. Straus knows that the reason of this lack is not because of the 20,000,000 figure. Mr. Straus is right in saying that compared with practically anything that can be purchased today, new homes represent the best buy. But to make the assertion that there are 20,000,000 discouraged because that is the price of new homes is a double falsehood. The reason that the prices of other commodities is that builders have achieved new economies since the war by better use of land, the application of advanced engineering principles to floor layout, better architectural design, and improved fabrication and building techniques.

Valuable Costume Design

Each home owner must leave plenty of room for flexibility in his building and design. No home is modernized if ceilings are narrowed, if base mouldings are increased, or if bathrooms are decreased in size. It is the reason that the price of new houses has not advanced as much as the prices of other commodities is that builders have achieved new economies since the war by better use of land, the application of advanced engineering principles to floor layout, better architectural design, and improved fabrication and building techniques.

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that is not true, and any discussion of that interpretation of the 20,000,000 figure is idle. On the other hand, if Mr. Straus means 5,263,000 families, the figure is one he selected out of the air, or borrowed from the statistical studies of the late NHA, and the figures that agency arrived at, being purely in the class of light fiction. They were thoroughly exposed as such by Senators Wherry and Ferguson during the closing months of the last session of the 79th Congress.

The best figures available are those of the Bureau of the Census, resulting from a census of housing made in April, 1947. They show that actually there were 2,500,000 families doubled-up. That includes 1,500,000 veterans' families. Neither the number of veterans' families nor the total number of families doubled-up, however, is an indication of the number of families in need of new homes, since an unknown number of families always are doubled-up through choice, or through economic or other necessity. Various estimates place the number of families doubled-up under those circumstances at between 1,200,000 and 1,500,000.

**Vast Difference Between Desire and Need**

If the lower figure is accepted, that leaves about 1,300,000 families doubled-up against their wishes, and able to undouble if houses or apartments had been available in April, 1947. Since that time, not less than 600,000 new houses have been completed. If only 70 per cent of the home building program for 1948 is accomplished, the acute shortage will be relieved before the end of this year.

In a sense, however, everyone wants a shiny new home or apartment, or the same kind of automobile or refrigerator. With the exception of a few families who have sentimental or other attachments to their present dwellings, everyone would like something better, and Mr. Straus might just as well have used 140,000,000 as 20,000,000.

But, there is a vast difference between desire and need, or even between demand and need. A family that is housed in a safe and sanitary dwelling, but has both the desire and the ability to pay for something better represents demand, but not need. A family house in a safe and sanitary dwelling, but without the ability to pay for something better might, and under the American system should, desire something better. The only way to change that desire to demand is to increase the family income, usually, by working harder and longer. No one knows how many new homes are desired. There is no way to know. It is probable that there is a demand for something like three to five million new homes. No one knows, because demand is created in large part by intelligent salesmanship. The genuine need can be gauged relatively accurately as indicated by the Bureau of the Census figures already referred to in a foregoing paragraph. So, Mr. Straus begins his article with one figure which demonstrates his ignorance of current new home prices, and another figure which is subject to so much definition that it is meaningless.

**Relation Between Increase in Population and Housing Need**

Next, Mr. Straus charges that the housing situation is getting worse instead of better. In support of this, he says that the population is growing at the rate of 1,000,000 a year. Later, he says that the United States needs at least 1,500,000 new homes a year for the next ten years. The only way he could possibly arrive at such a fantastic figure is to assume that every one of the 1,000,000 increase in population each year will require a home. (Continued on page 146)
BUILDING PRODUCTS ON REVIEW

THE construction of low and medium priced single family dwellings, as well as garden type apartments to rent in two price groups, all on a sizeable scale, is the job Samuel Hechtman and his associates of Practical Home Builders, Detroit, are doing. Projects at the present time include 56 story and story-and-a-half frame houses selling for $7,750 and $8,250; 30 two-story brick veneer Colonials selling for $13,500 and more than 300 apartment units. The garden type apartment buildings are in two different styles and unit sizes, with one group renting for from $77.50 to $87.50 per month and the other renting for from $110 to $125 per month.

Scheduled for the coming year is construction of 155 more story and story-and-a-half houses, 50 more Colonials and completion of another sizable number of apartment units.

The story and story-and-a-half houses, located on lots 50 feet wide, are sided with asbestos cement shingles. Cotton insulation is used for sidewalls and ceilings and asphalt shingles cover the roof. Because the houses are basementless and set up on foundations with conventional floor joists, the under-side of the floors are also insulated. Windows and doors are weatherstripped and interior walls are plastered.

Hardwood is used for the floors except in kitchen and bathroom. Bathroom floors are tiled and walls are tiled six feet high around the tub and shown to be completely splashproof. Linoleum is used on warmer areas.

The house plan has a fully equipped and complete basement. Two stories of the high low-cost Colonials are on one floor.

The apartment buildings are low cost, with many extensions and built for quick move-in.

BUILDING PRODUCTS ON REVIEW

AB28104—The Leslie Welding Co., Chicago, Ill., has added aluminum louvers for attic ventilation to its roof and wall louvers line of galvanized steel. The new aluminum slant roof louvers are available with openings of 10x2 inches and 20x2 inches. Aluminum wall louvers in flush flange or self-framing center flange models are available in 8x8, 8x12, 8x16, 12x12 and 12x18-inch sizes. All models of the aluminum louvers are provided with detachable, framed screens.

AB28131—A radial saw and generator combination, known as the "Comet Power Package" has been introduced by Consolidated Machinery and Supply Co., Los Angeles, Calif. Easily transported on a well-designed trailer, this generator not only operates the three-phase Comet motor but can accommodate several single-phase portable power saws or drills or sanders from outlets placated conveniently on its panel. Available for quick delivery.

AB28133—To meet the demand for completely enclosed, envelope-type insulation, The Gilman Brothers Co., Gilman, Conn., has developed a new type Cellulite—flame-proof cotton building insulation. The new Type B Cellulite has a sturdy vapor seal on one side and a tough paper covering on the other. It is made in the same standard widths as the regular Cellulite and is packaged in cartons for easy shipping, storage and handling.
This firm builds houses to sell in the $8,000 and $14,000 price brackets and is also building more than 300 rental units in four price brackets. Good design and materials, plus efficient workmanship assure consumer acceptance.

shower. Kitchen work counters and splash are also tiled. Kitchen floor is linoleum. Heat is supplied by a forced warm air oil-fired furnace.

The $8,250 story-and-a-half house has a built-in stairway, making it simple for the eventual purchaser to complete two more bedrooms upstairs. Two basic floor plans are used for the low-cost houses with four elevations on one plan and five on the other.

The 30 Colonials built this year follow one basic plan with a number of exterior elevation changes that remove the tendency toward monotony.

Standard materials and construction techniques were used throughout. Floors are hardwood, walls are plastered and bathrooms are tiled. Each house has a fireplace and heat is supplied by an automatically-fired forced warm air furnace. Windows and doors are weatherstripped and ceilings are insulated. The houses set on lots 40 and 45 feet in width and 115 feet deep. The price of $13,500 does not include a garage.

After a study of the apartment requirements of the city, this firm decided to launch two different types...
IN the last year, 30 two-story, three-bedroom houses were built as another phase of operation. They set on 40 or 45-foot lots and sell for $13,500.

Rooms in these apartments are large, bright and airy, with large steel casements. Kitchens are equipped with Servel gas refrigerators, Magic Chef ranges and modern, roomy cabinets.

The higher priced apartment units were designed by Wiedmaier & Gay, architects, of Detroit. The buildings are larger than those just mentioned with more elaborate rooms. The firm is completing another group of these projects. One was to be in the medium price bracket, both offering above average accommodations and environment.

Louis G. Redstone, architect of Detroit, was commissioned to design a group of one and two-bedroom apartments to provide as much privacy and personal privilege for grownups with children as possible in that type of dwelling. Mr. Redstone and his associates, working with Mr. Hechtman, designed these multiple family dwellings so that each tenant has an individual automatic heating unit, controlled by him. Each apartment has complete control of an individual hot water tank, and each unit has an individual set of laundry tubs, all in a roomy basement arranged so there is a minimum of contact necessary with others in the building.

As part of this Elmhurst Terrace project, Mr. Hechtman set aside a large area as a playground for children and equipped it with swings and various recreational devices.

BUILDING PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW — BUILDING PRODUCTS ON REVIEW

AR2844 — The new model Sterling 1000 Portable Electric Sander to be introduced at the Chicago show, has three new features. An air scoop protects it in extremely dusty operations. Side housing fenders protect transmission. An auxiliary handle gives added support for vertical and overhead work. Made by Sterling Tool Products Co.

AR28160 — Frigidaire is now producing a fire-ion capacity packaged air conditioner, especially designed for stores, restaurants and business houses. Occupying only 1 1/4 square feet of floor space, the new unit is completely self-contained. The refrigerating unit, electric motors, cooling coils and fans are all housed in one single cabinet.

AR2856 — Silco cellar bulkheads are manufactured of 12 gauge copper steel. They are shipped knocked down in five parts with necessary assembly bolts. Regularly equipped with two hinges on each door and automatic safety catch to hold doors open until hinge device is tripped. Can be installed in brick or frame structures.

AR2846 — Colorcreting is a process of pneumatically applying a cementitious material to exterior and interior masonry surfaces. Colorcreting outfit consists of a mixing drill, compressor, electric or gasoline motor, a length of hose and a gun. Outfit and materials are available from Colorcrete Industries, Holland, Mich.
at the present time. Spacious apartments with exceptionally wide windows, large vestibules and roomy hallways are outstanding features in floor plans for these units. In all operations carried on by the Practical Home Builders most of the work is done right on the job, including cabinet construction. Portable power tools are utilized to the maximum, and all on-the-job work is carefully supervised to obtain the best volume and quality of work.

Samuel Hechtman, who is president of the company, handles planning, financing and sales. Jack Sylvan, vice president and treasurer, is construction superintendent and spends most of his time out on the jobs. Nathin I. Goldin is secretary and is responsible for procurement of materials, expediting and some construction supervision.

The firm has its own carpentry crews, both rough and finish, masonry crews and laborers. Electrical work, plumbing, heating, painting and plastering are sublet. About 110 persons are carried regularly on the Practical Home Builders payroll. The firm also operates a drafting department to design houses for its operations.

THE attractive entrance above is part of one of the large apartment buildings with units that rent from $110 to $125. These buildings were designed by Wiedmier & Gay, architects of Detroit. Floor plan of this building is shown at the right.

FLOOR plan at left is for the apartment building shown at far left. These buildings, designed by Louis G. Redstone, architect, Detroit, incorporate a maximum amount of privacy and independence for tenants. Planned for families with children, each unit has a separate, individually-controlled, automatically oil-fired, warm air furnace; individual hot water heater; and a set of laundry tubs for each apartment; all located in the basement so there is a minimum of contact between any of the tenants in the building.

BUILDING PRODUCTS ON REVIEW—BUILDING PRODUCTS ON REVIEW—BUILDING PRODUCTS ON REVIEW

AR2848—Two new oil-fired steam or hot water boiler-burner units have been developed by Conco Engineering Works of Mendota, Ill. Available in square or round-jacketed series, each is a compact packaged heating plant. Features include a built-in, tankless water heater, six horizontal-flue heat transfer units to minimize soot.

AR2815—This new all-aluminum storm-panel-and-sCREEN unit for windows is made by Caco Steel Products Corp., Chicago, Ill. It is a permanently-installed auxiliary window frame permitting instant transformation from summer screens to winter storm windows. Unit has a self-storing feature so storm panels stay in frame all year.

AR28159—Sika Chemical Corp., Passaic, N.J., announce Sika Seal which forms a black, tough, flexible film to protect concrete, mortar, wood, clean and rusted steel or other metal and non-metal surfaces against penetration of water or dampness by sealing pores and hairline cracks. The film is not affected by sea water, acids, or alkalies.

AR2842—For small apartments, cottages, motels or any dwelling where space is limited, Parsons Co., Detroit, Mich., manufactures the Pureaire Kitchen—a complete unit taking as little as 8 square feet of floor space. Made for either gas or electricity, the unit includes cooking range, refrigerator, sink, drawers and shelf space.
DEEP-RECESSED entrance porch, built-in stone flower box and trellis, present pleasing appearance to house, as approached from road.

Comfort for Four

First, and most important in the planning of a home, is consideration for the family's comfort. In the low, wide-spreading ranch type house shown above, Walter T. Anicka, architect of Ann Arbor, Mich., has placed the emphasis upon the function or workability of the house, rather than upon its style.

In the plans of this house, prime consideration has been given to circulation. Each unit, such as sleeping, living, and service, are accessible from the entrance hall. Each unit is independent of the other, yet intimately related in their functions. The basement under living and service portion, provides ample space for heating equipment and recreation.

Features of the interior include storage closet units, dual use bathroom, special areas set aside for laundering and eating in the kitchen, fireplace wall of white-painted brick in living room, in addition to others.

As an economy measure, the architect suggests that the entire ceiling of house be plastered before partitions are placed in position. Dry wall construction is indicated on walls and partitions with joints running horizontally. Exterior of house is covered with plywood and double-coursed wood shingles.

Color suggested for the body of the house is putty grey with the trim painted white. Walls surrounding the front porch could be painted lemon yellow with the front door in dark maroon. Gable ends would be effective in white. The architect suggests the use of radiant baseboard heating units along the outside walls of each room with a recessed convector unit under the windows of the living room.

Ab28105—The Aluminum Building Products Co., East McKeesport, Pa., announce the "Lewshield" window and door cap, rigidly made of aluminum alloy in a neat and pleasing ornamental design. The item is made in two widths—4 inches for small openings and 5½ inches for larger openings. Both are available in standard sizes or may be obtained in any special length up to and including 21½ feet, adaptable for all different styles and types of windows.

Ab28185—The new Norge Heat oil burner, Model COB-13 is a ½-gallon capacity gun-type unit which utilizes the basic principles of controlled combustion found in the Whirlator Head of the Norge Heat winter air conditioners. Primary air and secondary air mixing with fuel is constantly controlled, with special diaphragm on the outside of the burner for ready adjustment. Model COB-13 will burn straight distillate, catalytic stock or No. 1, 2 or 3 fuel oil.

Ab28217—A new completely automatic thermostat has been unveiled by Minneapolis-Honeywell Regulator Co. Taking only the name Chronotherm from its prewar predecessor, it is simple in external and interior design, free of troublesome, intricate mechanism and can be instantly set for day and night temperatures at any desired level. The clock is of the self-starting type with a low-speed motor to eliminate noise and assure dependable operation.
Satisfying Individual Needs

Enlarged demand for special requisites, presages increase in custom designed homes

The houses shown on this and the accompanying pages, are from the office of Norman R. Johnson, architect, St. Paul, Minn. They show his characteristically competent handling of the design and layout problems involved in small and medium-sized houses, as they apply to the individual client.

Mr. Johnson is not an advocate of the use of stock plans—or even the re-use of plans that were once used elsewhere. He maintains that it does not produce a satisfactory home. No two lots are alike nor are they perfectly flat, and the successful design of the house is affected by these facts.

The houses shown here were selected from a group recently completed in the Highland Park area of St. Paul.

Each house has been designed along semi-traditional lines, yet each is distinctive in itself through the introduction of some unusual or interesting feature that gives it a completely fresh approach. Each house has been designed for comfortable and informal living.

House shown above with plans at right, was designed to meet requirements of the owners, Mr. and Mrs. M. J. Cohen, of St. Paul, Minn. Five good-sized rooms are enclosed within the overall perimeter of house, containing 1,150 square feet. Large kitchen with circular dining nook, taking place of dining room, is typical of houses designed by Mr. Johnson. Simple, yet effective lines prevail throughout exterior. White-painted double-coursed shingles and random-laid Lannon stone are used on wall surfaces.

**Building Products on Review**

AB2863—The Servel gas refrigerator operates on a simple, continuous absorption principle with no moving parts in the freezing system. A small gas flame supplies the necessary energy. Outer shell is of heavy gauge furniture steel. Linings are seamless welded steel with rounded corners. Fiberglas insulation all around unit.

AB2865—A new masonry water repellent, "Raincheck", is announced by Protection Products Manufacturing Co., Kalamazoo, Mich. It penetrates into cement blocks, concrete, brick, tile or stucco and is said not to wash away or evaporate from finished surfaces. It guards inside walls from seepage and outside walls from any discoloration.

AB2866—The "Fairfax", a solid brass knocker-chime made by Edwards & Co. of Norwalk, Conn., is a period design by Laurelle Guild. Inside, a framed mirror conceals the chime mechanism. Two-tone signal can be heard throughout the house. Non-electric, only one hole is needed to fasten to door. Fits any standard door.

AB2867—The Coraire Hi-Boy is one of the line of winter air conditioning units manufactured by Coraire Heater Corp., Cleveland, Ohio, that will be exhibited at the show in Hotel Stevens. Gas-fired and automatic, it is a forced air heater that spins air through venturi tubes to insure a wiping contact with any heated surface.
ATTRACTIVE home of Mr. and Mrs. J. E. Thames of St. Paul, Minn., shown above, with its large central bay and scalloped sill line, is reminiscent of California. Projecting roof line across the front provides shelter for the entrance and protection for the bay window from the sun. Double-coursed shingles and Lannon stone, laid in random pattern, present a pleasing combination on exterior. Plan shown below indicates well-arranged house, with an abundance of built-in features, plenty of closets, ample bath and attached garage. Entire basement is excavated, providing ample space for each of many uses—for all utilities, for storage and for recreation.

BUILDING PRODUCTS ON REVIEW

A828213—Inland Steel Products Co., formerly Mil-cor Steel Co., Milwaukee, Wis., announce additions and refinements in its line of applied steel casings and trim for residential construction. Principal additions to the line are new corner fittings for additional patterns of trim, to eliminate the necessity for mitering. Many of these corner fittings are held in place by friction, simplifying erection as well as effectively reducing installation costs.

A828114—Designed for permanent installation in a kitchen cabinet, this electric dishwasher is made by the Jackson Dishwasher Co., Cleveland, Ohio. Water is pumped into the reservoir through double revolving spray tubes and withdrawn through the bottom; separate sprays carry the rinse water. When installed, only the top, which rests flush with the drainboard, is in view. Standard equipment are two baskets, one for dishes, one for glasses.

A828120—DeWalt, Inc., Lancaster, Pa., have released a new Cut-Master model. Combining the functions of many machines, this machine is designed for all-purpose cutting. Simple mechanism alignment adjustments are provided to maintain the accuracy of every setting. A new kick-back device is an exclusive safety feature for ripping. A wide work-table provides ample space for the handling of materials or for gang cutting jobs.
IN the house above, built for Mr. and Mrs. R. Z. Newman of St. Paul, Minn., the architect has featured the combination entrance porch and garage, and boldly placed them in foreground. This is in contrast to other houses where these features were placed in background. Other features including bay, provide interest and balance to a well-designed house. Floor plans below are good example of the proper relationship of living, sleeping and service units to each other. Basement and garage can be reached with ease from the kitchen; sleeping section is isolated; living unit forms the nucleus of the plan. Basement is provided under the entire house.

**BASEMENT PLAN**

**FIRST FLOOR PLAN**

**BUILDING PRODUCTS ON REVIEW**

AB28129—A kitchen ventilating fan that is adaptable to a wide range of locations is made by Steward Manufacturing Co., Indianapolis, Ind. The intake grill can be placed adjacent to or over source of heat, odors and grease vapors. The location of power unit on exterior wall eliminates duct obstruction; circumscribes grease dripping from grill; allows installation of large panels covering entire wall; removes fire hazard of motors exposed to exhaust air stream.

AB28220—Upson Strong-Bilt panels are made of wood fiber, fabricated under pressure into panels of uniform %" thickness. Each panel is water-resistant and surface-primed. Panels nail over frame work of new construction to form interior finish with the large panels covering the entire wall of an average room. Other Upson products are Dubl-Thik Fibre-Tile for baths and kitchens, and Kuver-Kraft panels for recovering cracked or broken plaster.

AB28219—The Heatilator fireplace unit made by Heatilator, Inc., Syracuse, N. Y., is complete from hearth to chimney flue, including scientifically designed firebox, throat, downdraft shelf, damper and smoke dome—all preassembled in one unit. Operating on the principle of a warm air furnace, the double-walled firebox forms a heating chamber which takes cool air from the floor, warming and circulating the air throughout the room.
The new three and one half million dollar shopping center, recently completed in the southwest section of Baltimore, is the result of extensive research and planning, over a period of years, on the part of the sponsors. Four acres of the total area for buildings and grounds, is devoted to off-street parking space.
IN THE completion of Edmondson Village, a new high in shopping centers has been reached. In this project 29 individual stores, each presenting a different type of merchandise, have been combined into one large homogeneous group. This development, located in the southwest section of Baltimore, Maryland, is the result of intensive study, careful research and scientific planning. Kenneth Cameron Miller, architect of Baltimore, together with Joseph and Jacob Meyerhoff, owners and builders of Edmondson Village, visited shopping centers throughout the country to acquaint themselves with the very latest and best ideas available.

Actually, Edmondson Village is not a copy of any shopping center now in existence. It is the first to present branch stores of many of the leading downtown stores, all united in one large structure. Moreover, it is the first commercial development in the United States to be patterned faithfully after colonial Williamsburg. The architect made sketches of important details of the restored buildings at Williamsburg. These details have been reintroduced in the design features in Edmondson Village shopping center.

An additional feature of this development is the large parking space occupying a full four acres of the 11 acre total which comprises the project. The parking area extends along the entire front of the buildings, with the exception of a small portion, at the south end, set aside for a future service station. The parking plaza, located between the main highway and private driveway adjoining the buildings, is easy of access. No expense has been spared to make it the last word in convenience. To maintain a clear and unobstructed view of the buildings from the highway, the pavement of the parking space is depressed below the street level. This space is enclosed with an attractive brick wall with appropriate planting introduced at each street intersection.

Exasperation with the parking conditions existing in downtown Baltimore was one of the moving impulses that drove Joseph Meyerhoff to serious consideration of this project. His conclusion, regarding the best site and scheme, seemed so logical that a corporation was formed. From this point it took several years of canvassing and campaigning to modify zoning laws and to adjust other differences, before the way was cleared for the development of the center.

Because Edmondson Village is designed to draw trade from a wide area of the city, easy access from all points was of major consideration. It is "just at the corner" to the residents of many of the surrounding communities. People in the central and eastern part of the city...
PARTIAL sidewalk view of store fronts is shown at left. Note the clean-cut appearance of the various stores, each one set apart from the other by its own distinctive design. Yet in the overall arrangement a definite uniformity of appearance is maintained. All display signs used on the exterior have been made a part of the architectural treatment. Use of large projecting illuminated signs is studiously avoided. Concealed lighting is given preference wherever possible. The Plot plan of development is shown below. Future theatre and restaurant to be constructed east of the present building.
AB2817—The Reid-Way "B" Floor Sander, manufactured by Reid-Way, Inc., of Cedar Rapids, Iowa, makes use of an edger unnecessary in finishing floors. The sander works up to within one-half inch of the baseboard on both sides. The surface speed is 3,534 feet per minute and drum speed is 1,800 r.p.m. It weighs around 85 pounds.

AB2820—Reardon's Tile Cement, a new product, is introduced by the makers of Bondex Cement Paint. It was developed by Reardon Co. of St. Louis to "bring the bath tub and wall back together." Mixed with cold water, it is inserted into cracks around the tub with a knife. It dries hard and white, will not shrink, can be painted.

AB28225—A new line of folding stairways that disappear into the attic, requiring no springs and no floor space to operate, is now available from Precision Parts Corp., Nashville, Tenn. Made of kiln-dried poplar with brackets and rocker arms of cast aluminum and hinges of cast brass, they are actuated by simple counterweights.

AB28148—The laundry equipment department of Westinghouse Electric Appliance Division announces the new model automatic washer, featuring one-dial control for length of time and water temperature. The single dial machine retains versatility of the former two-dial model with such features as pre-wash, rinse and ease of control.
Edmondson Village

can move at express speeds on highways to reach Edmondson Village in a few minutes.

The project as conceived by Joseph Meyerhoff and his associates, envisioned a long rectangular building separated into individual shops.

The construction of the buildings comprising the Village, centered around the structure containing the Hochschild-Kohn & Co., a department store. This building, being the largest of the group, is located in the center, and serves as a nucleus for the design and arrangement of the other units. In determining floor levels, consideration had to be given to a slight rise in the contour of the adjoining sidewalk. To avoid difficulties when tenant changes occur, the architect established a one percent continuous slope to the floor, thus when dividing walls are removed, abrupt changes in floor levels will be avoided.

Careful selection of all tenants is rigidly maintained. In addition, a fixed set of instructions on merchandising and display practices are enforced. Direct illumination in out-
door display signs has been avoided, with the emphasis placed upon the concealed type. Uniformity of type is mandatory. Ornamental and spot lighting are provided at strategic points to completely illuminate the Village and parking area at night. Fluorescent lights throughout all interiors make the lighting uniformly bright. Constructed in the rear of the stores is a large community building that will comfortably accommodate 200 people. This is maintained by the Merchants Association of the Village for the use of neighborhood groups, church societies, clubs and organizations of all kinds.

Basic structural members of all buildings are of steel and reinforced concrete. Interior walls are brick and cinder blocks, plastered. Floors are asphalt tile on concrete slab. Store fronts are all of special design. Four inch rock wool insulation is used in walls and roof. Slate, asphalt shingles and slag used on roof. Individual steam boilers are provided in each store. Sheet metal ducts are installed in a large number of the stores for air conditioning.

TYPICAL of the attractive individual shops in Edmondson Village, are the two above. In this structure, the architect has faithfully recalled the fine detailing, reminiscent of the restored buildings at Williamsburg, Va. To conform with the general pattern employed throughout, the front sash of stores is divided with muntins with a large single plate glass used on the return
ADIANT floor heating with hot water is the most popular method of panel heating today. Popularity of the floor type of installation may be attributed to several reasons, one of which is that many persons believe heat rises. Another is that the majority of heating contractors will install a floor system cheaper than one in a wall or ceiling. It is also thought by many persons that if feet are warm the entire body will be warm. Many individuals do not understand how it is possible to warm a floor from heat in a ceiling.

A radiant floor panel heating system is economical to operate when properly installed because the radiant panel itself is low temperature; the higher the temperature of a heating surface the more rapid is the rate of heat transfer. With a conventional heating system, the temperature gradient between the heating surface and the room or structure exposures is great, causing a rapid heat transfer. On the other hand, with a radiant panel heating system, the temperature gradient between the heating panel and the outside exposures is much less. Therefore, there is a lower rate of heat transfer and a resultant saving in fuel. Another reason for low operating cost is the low temperature of the heating medium used; and since the temperature of the medium is low, the temperature of the boiler where the medium is heated also remains low. The low temperature of the heating surface within the boiler will absorb more heat units from the fuel burned than it would absorb if the temperature of the heating medium was high. Since more heat units will be absorbed, a lower chimney and stack temperature will result and fewer fuel dollars go up the flue.

The initial cost of a heating system, whether it is one of the conventional design or whether it is radiant panel heating, is usually a prime consideration. Taking dollar for dollar cost in material and labor, a radiant panel heating system should cost no more than a good conventional forced warm air, forced warm water or vacuum steam heating system where identical control systems are applied.

The building used for this engineering example is the Anicka Blueprint House No. 10 designed by Walter T. Anicka, architect, Ann Arbor, Mich., which was presented in the November 1947 issue of American Builder. The heat loss calculations are based on an inside temperature of 70 degrees F., except the bathroom, which is figured on an inside temperature of 80 degrees F., with the outside temperature at 10 degrees F. below zero. Heat loss calculations are based on a wall construction of wood siding, 5/8-inch plywood, wood sheathing, studs and plaster on rock lath. Windows are figured as double hung wood sash without weather stripping or storm sash. Infiltration is based on between average and poorly fitted openings. Ceiling construction is based on plaster on gypsum lath with a 2-inch mineral wool fill. No downward heat loss was figured because after the system has been put in operation that loss is negligible—possibly one
Radiant Floor Panel Heating with Hot Water

By J. L. Shank,
Consulting Engineer

B.T.U. per degree difference at the most. Provisions are made, however, to afford a dry base upon which the concrete slab is poured. Also, a perimeter insulating strip is used to take care of expansion of the slab as well as to prevent heat flow from the edge of the slab. The coil installation detail shows the method used for building up the base, the insulating strip, and the slab. The contemplated floor finishes are asphalt tile in all rooms except the living room and dining room, which are to be carpeted.

The system is designed for oil-firing and year-round domestic hot water. The boiler selected is a wet base oil-burning unit with an extended metal insulated jacket. A wet base boiler designed for oil is a very efficient type of cast-iron sectional boiler for oil-burning when a pressure gun type oil burner is installed. The extended metal insulated jacket provides excellent insulation and also permits the controls and the burner to be concealed, presenting a neat, finished, compact unit. The oil burner selected is a high pressure gun type, designed to burn No. 3 fuel oil. The storage facilities consist of a 500 gallon underground storage tank buried below the normal frost line, and located in a convenient place for easy filling.

Domestic hot water is provided by a heater built into the tank. Tests have proved that heating domestic water indirectly by the heating boiler is economical and good for the equipment. During summer months, the cost for heating domestic water is greater than the cost by a direct fired unit. Thus the overall yearly cost for heating domestic hot water indirectly is approximately 25 per cent less than the direct-fired method. In addition to a lower heating cost, the cost for maintenance and depreciation of the equipment involved will be less since it is better to operate a piece of mechanical equipment a little each day rather than to leave it stand idle for several months at a time. The tank and heater installation is adaptable to most any locality regardless of the hardness of the water. If there is a rapid rate of mineral deposit, the coil may be readily removed and the tank descaled as the foreign matter is deposited on the outside of the tubes.

AB2809—The steel door pictured, on display at the NAHB Show, is a Fenestra standardized steel door by Detroit Steel Products Co. It is complete with prefitted, attached hardware. Some doors have prefitted frames also. All are standardized in size for economy in initial cost and to conserve installation labor.

AB2855—A new indoor-outdoor type control for radiator, convecter and all types of radiant panel hot water heating systems is introduced by the White-Rodgers Electric Co. of St. Louis, Mo. One bulb is installed outside to measure actual outdoor temperature, the other is inserted in heating system, giving close control.

AB28182—Carr, Adams & Collier's Bilt-Well Nu-Style unit kitchen cabinets form an assembly of sectional units grouped side by side—as many or as few as needed to accomplish the desired arrangement. Each unit is self-contained but becomes an integral part of the completed assembly. Units are graduated, fitting into any space.

AB28186—The Model 50B Norge oil-burning floor furnace with a CSR rating of 55,400 B.T.U. output, is equipped with a blower fan, making it easy to adjust for peak efficiency without depending on ideal chimney draft conditions. The heat exchanger has a "Permolain" finish, making it highly resistant to all soot and corrosion.
This one feature alone makes the tank and heater a worthwhile unit to use.

Many radiant panel heating systems have not come up to the expectations of users because of inadequate controls. The systems will function in a manner similar to the conventional heating systems whenever identical controls are used. The control systems usually used with the conventional heating systems are not sufficiently comprehensive for radiant panel heating systems, which are miraculous in operation if adequately controlled. An indoor-outdoor control system is the best that is available at present for controlling a radiant panel heating system. Room thermostats, operating motorized valves, are often required in addition to the indoor-outdoor bulb control system in portions of the building where solar gain is prevalent.

The oil burner is controlled from an immersion type aquastat mounted in the boiler and set to maintain a boiler water temperature of at least 180 degrees F. This aquastat operates a protec-to-relay which starts and stops the oil burner. In the hot lead from the safety switch to the protec-to-relay, a high limit strap-on aquastat is installed and set at 240 degrees F. The strap-on aquastat is strapped onto the supply connection leading from the boiler. With the oil burner control system set up in this manner, there is ample protection for the boiler. Heating of the building is controlled through the use of an indoor-outdoor temperature control system. There are many indoor-outdoor control systems available. The one shown on the plans is quite simple and operates as follows: When the outside temperature drops to 65 degrees F., the booster pump automatically starts and puts heat into the system by circulating temperate water from the boiler.

As the outdoor temperature continues to drop, the temperature controller will call for a higher temperature water to be circulated through the system. This being the case, the temperature controller will cause the temperature control valve to open, permitting the water from the heating system to enter the boiler causing the heated boiler water to mix with the heating system water, raising the temperature of the heating system water. When the heating system water has become sufficiently warm, the water temperature controller will cause the temperature control valve to close. The temperature of the water in the system is maintained at 180 degrees F. and is not permitted to drop below this point.

In using this control system the most important thing to remember is to install a booster pump whenever radiant panel heating systems are installed in buildings of more than ten floors unless there is no other way to maintain a constant water temperature above the critical 180 degrees F. The one shown on the plans is quite simple and operates as follows: When the outside temperature drops to 65 degrees F., the booster pump automatically starts and puts heat into the system by circulating temperate water from the boiler. This being the case, the temperature controller will call for a higher temperature water to be circulated through the system. This being the case, the temperature controller will cause the temperature control valve to open, permitting the water from the heating system to enter the boiler causing the heated boiler water to mix with the heating system water, raising the temperature of the heating system water. When the heating system water has become sufficiently warm, the water temperature controller will cause the temperature control valve to close. The temperature of the water in the system is maintained at 180 degrees F. and is not permitted to drop below this point.
temperature bulb will cause the temperature controller to close the temperature control valve. Thus proper balance is maintained between heating-system water temperature and outdoor temperature so that a uniform building interior temperature will result.

In addition to electrical controls, other equipment used to make the system complete is the compression tank, which takes care of the expansion of the water when it is heated. Capacity of the tank in gallons is approximately ten per cent of the total volume of water in the system. By maintaining the ten per cent ratio, there is assurance that an ample air cushion will be provided when the water temperature is increased. This will increase in volume about four per cent when the temperature is increased one hundred degrees F. To eliminate as much of the air as possible at the source where it generates, an airtrol is installed in the compression tank. The airtrol is a separate fitting which causes the oxygen which is released from the water in the boiler as it is heated to flow to the top of the compression tank and displace the water there. Use of the airtrol overcomes the big evil prevalent in a hot water heating system—air in the system. A pressure reducing valve is also used to maintain a minimum pressure within the system and to keep it filled at all times. Many systems are installed without pressure reducing valves, and the water is fed into the system by the means of a hand operated valve in the water supply. This arrangement is usually quite satisfactory, although if a system is to be completely automatic, it should also be kept filled by an automatic filling device such as a pressure reducing valve.

A relief valve set at 28 pounds is also installed in the system. Perhaps not enough can be said about the relief valve, as a hot water heating system can be dangerous without one. In many hot water heating installations, the users are not aware of the fact that there is a relief valve installed since it never functions. Parts of mechanical equipment which never function usually become fouled and corroded so that they will not function if they are called upon to do so. Therefore, when the relief valve is installed in the heating system, it should be one of good construction, manufactured by a reputable manufacturer. Last but not least is the booster pump, for without it the system would not be satisfactory. In the selection of the booster, it is well to choose one, manufactured by a reputable concern, that can be serviced locally, with moving parts that are interchangeable. By taking heed of this precaution, it is possible to feel assured that this piece of equipment will give long life and also be trouble free.

It will be noted on the plan that each room is heated individually by one or more panels. By setting up the panels in this manner, individual room temperature may be obtained. This is done by maintaining a water temperature in the system to obtain the maximum desired room temperature. Then, by partially closing the square head cock in the return piping from an individual room or rooms and reducing the flow of water through the panels in those rooms, the room temperature is reduced.

Construction of the panels is what is known as sinus or serpentine design. This means that all of the water which is required to heat the room will flow through one continuous tube or pipe. Caution should be taken when designing this type of panel, for if the coil becomes too long, the resistance will become quite great, and a booster with an extremely high head delivery will be required. High head delivery also means that the power consumed for circulating the water will be excessive and costly. For safe figuring, the total resistance through the panel should not exceed one to one and one-half feet. The pipe used in the fabrication of the panel can be black wrought-iron, black steel, or copper. When buried in concrete, such as is indicated on the plans, the overall result will be the same with any of the three kinds of pipe. With wrought iron or steel pipe, all of the buried joints should be welded. With copper pipe, the joints may either be brazed or of the sweat solder type. Regardless of the kind of pipe used, it is supposed to last the life of the building, since it is full of water at all times, and the outside is not exposed to erosive elements.

The heat loss calculations are similar to those normally used in figuring a conventional heating system. Additional calculations are required, however, in order to establish the true overall picture. The calculations are all set forth on the calculation data sheet. It might be well, however, to review the steps used in calculating the requirements of the system. First, the heat loss is calculated for each room, taking into consideration all of the room surfaces except that used for the heating panel. After these calculations are made, the average surface temperature for each of the surfaces within the room is taken from charts and graphs. Then, by multiplying each surface area by the corresponding surface temperature obtained, and the results summed up, the total surface temperature will result. By dividing the total surface temperature by the total surface area, exclusive of the heating panel, the MRT (mean relative
### HEAT LOSS CALCULATIONS AND DATA SHEET

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#### Infiltration

- Glass: 1610 B.T.U. per sq. ft.
- Total Outside Exposed Wall: 184 sq. ft. 64 B.T.U. per sq. ft.
- Total Outside Infiltration: 20 B.T.U. per sq. ft.

#### Surface Temperature and Exposures

- Kitchen: 66 B.T.U. per sq. ft.
- Dining Room: 58 B.T.U. per sq. ft.
- Living Room: 68 B.T.U. per sq. ft.
- Entry: 68 B.T.U. per sq. ft.
- Total: 68 B.T.U. per sq. ft.

#### Total B.T.U.

- Total Envelope: 4775 B.T.U.
- Total Area Less Heating Panel: 5280 B.T.U.

#### MRT and Room Air Temperature

- MRT Unheated Surfaces: 108 B.T.U.
- Room Air Temp.: 61 B.T.U.

#### Panel Emission Rate

- Panel Temperature: 4775 B.T.U. per sq. ft.
- Tube Spacing: 8" 10" 9" 8"
- Coil Number: 1 2 3
- Length of Coil in Ft.: 115' 0" 80' 0" 144' 0" 45' 0"
- Tube Size: 3/4" 3/4" 3/4"
- G.P.M. Flow through Coil: 30 30 30
- Pressure Drop through Coil: 40 40 40

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**BUILDING PRODUCTS ON REVIEW**

**AB2864**—The new seven cubic foot Westinghouse two-temperature electric refrigerator shown above will hold 56 pounds of frozen food, 43 in the freeze chest and 13 in the ice storage compartment. The temperature selector controls the temperature of the freeze chest, while the second control governs the general food storage area.

**AB2858**—Here is a new fully-automatic water softener tank and regulator assembly marketed by Auto-Softener Distributing Co., Detroit, Mich. Tradename Papco, it is said to regenerate itself completely every 24 hours. Has softening capacity up to 18,000 grains daily. Unit measures 54 inches high is 15 inches wide and 26 inches long.

**AB2853**—Important design changes in the Flexsaw general purpose radial saw are announced by the Flessaw Co. of Port Austin, Mich. Hand tightening levers have been added, to all adjustments can be made without tools. New precision-calibrated brass plates have been added at all adjusting points to increase accuracy and ease of setting.

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American Builder, February 1948.
Upon determining the center spacing of the tubes for each panel, they were indicated on the plans, the first tube in the panel located within six inches of the outside wall. The warmest water is also supplied to the tube nearest the outside exposure, thereby presenting the warmest part of the panel to the exposure where the heat loss is the greatest. After the tubing was indicated, each panel was measured as to actual length. The rate of flow in G.P.M. (gallons per minute) through each coil was then determined by taking the heat loss in B.T.U. in the room, which is supplied by the panel, and dividing by 9,600, this being the number of B.T.U. released from a gallon of water when taking a 20-degree Fahrenheit temperature drop in the water. Then, assuming the statement to be true that regardless of the size of the tube as long as the flow rate in G.P.M. is maintained through a panel or coil imbedded in a mass (such as concrete or plaster) the panel will emit the required B.T.U., the size of the tube was determined. After determining the maximum flow required in G.P.M. for each coil, the coil requiring the highest flow rate was used to determine the size of the tube. Using a chart showing water flow in G.P.M. and the resistance in milinches per lineal foot of tubing, the size of the tube to be used was found. Then by multiplying the milinch resistance per lineal foot of tubing by the maximum length of the coil in feet and dividing by 12,000 (milinches in a milfoot), the total resistance through the coil was determined in feet head. If this head resistance plus the resistance in the mains and other equipment should be greater than the head capacity of a standard booster pump, necessary steps should be taken to reduce the head resistance either through the use of a larger size tube, or splitting the coil or panel into a series of smaller units.

AB2815—The 46-year-old National Manufacturing Co., Sterling, Ill., keeps its builders' hardware line abreast of the needs of the times. One of the modern items is No. 460R ornamental hinge for use with doors having a 9/16-inch offset. The same model is made for flush doors. Either style can be had in a number of finishes.

AB2819—The Bennett "Fresh-Aire" grape- place unit, made by Bennett-Ireland, Inc., Norwich, N.Y., draws replacement air from out of doors, heats and circulates it throughout the room. incoming air is controlled by a simple valve. Conventional brick may be used for the sidewalls. No intake valves are in the room, only heat outlets.

AB2825—Standard Steel Cabinet Co., Chicago, Ill., announces a new, high-quality medicine cabinet with an arch top mirror door of Grade A plate glass 14x26 inches. A 15-watt fluorescent bulb is behind the mirror, and on each side of the mirror door. Mirror has wheel-cut floral design at top. Cabinet frame finished in white enamel.

AB2852—A new model has been added to the line of Ko-Z-Aire winter air conditioning units made by Jones & Brown, Inc., Pittsburgh, Pa., called "Hi-Boy," it occupies little floor space and is intended for small houses. Unit may be oil or gas-fired to furnish 65,000 B.T.U. per hour. Welded construction, large radiation area.
Quality Not Quantity Pays Off for This Home Builder

THE large two-bedroom house shown above is located on an attractive corner lot. It was designed by Arthur L. Weeks, architect.

BUILDING PRODUCTS ON REVIEW

AB28113—Rustproof, fireproof, rotproof, Reynolds Lifetime Aluminum shingles eliminate maintenance. Their surface is raised away from the sheathing of the roof, providing an air space faced by aluminum, which reflects as high as 95 per cent of radiant heat from either direction. Easy to apply, because they are self-aligning, they can be painted or left unpainted, in which case, natural weathering tones down brightness.

AB28207—The National Brass Co., Grand Rapids, Mich., makers of Dexter-Tubular locks and latches, have designed a bit guide to facilitate installation. In addition to assuring a faster precision job by experienced workmen, the device is especially valuable where apprentices and inexperienced help is a factor. Using this tool, carpenters can install three Dexter-Tubular locks in the same time one ordinary lock would be installed without the bit guide.

AB28218—A new device, the Honeywell air conditioning register, is being made by the Minneapolis-Honeywell Regulator Co. It is manually operated and provides a wide range of easily adjustable diffusion settings. The curved extension front, together with the individually adjustable vanes, permits adjustment so that any shape room can be blanketed with air regardless of register location. Balancing dampers in ducts are not needed.
The best in homes, with maximum value for each dollar, is achieved by Michael Rublin’s careful planning and special quality workmanship.

Michael R. Rublin, Dearborn, Mich., is not a mass production home builder and does not want to be one, although he has been a home builder for 20 years. Last year he built a few houses in his Elmhurst Park Colony in Dearborn and plans to build a few more this year.

There is nothing particularly unusual about this type of operation except that in Mr. Rublin’s case the houses he builds are exceptional. He does much of the designing himself and meticulously superintends every construction detail in person. The careful planning on each house, which is individually designed, is executed to the final detail so that each completed unit is one in which not only Mr. Rublin takes justifiable pride, but which each owner feels is as individualistic and perfect as any custom-built article can be.

Mr. Rublin’s houses are located on lots with a minimum width of 80 feet and sell at prices from $15,000 to $35,000. Standard practice with Mr. Rublin is to include a roomy breezeway or porch between the house and the garage. He also likes to include a library or study in each house.

Only the best in materials and workmanship go with the excellent design of these houses to make them the quality products that have produced not only a moderate income for Michael Rublin but also fancy dividends in personal satisfaction in a job well done.

Building Products on Review

AB28109—A steel molding with electrical convenience outlets spaced every 18 inches that can be mounted as functional trim on top of baseboard or wherever needed is being manufactured by the National Electric Products Corp., Pittsburgh, Pa. The “Plug-in“ strip provides 400 per cent more electrical outlets than obtained with duplex outlets. The firm also makes “Lopo-Trim,” a hollow steel quarter round with raceway for low potential wiring.
The United Kingdom's public housing program designed to choke off private home building as the initial step toward a completely socialized state is bearing fruit. It's the bitter fruit of disappointment, and not at all the kind Socialists had in mind when they first planted the seeds.

Succeeding months under the British public houasers have seen that program dwindle almost to the vanishing point. This is disheartening to the millions of bombed-out Britons who must fight health hazards in homes built for a single family and now housing three and four, and who eagerly await the day when they can have a cottage of their own, with a spot of land where they can grow roses, instead of raising rabbits, chicken and cabbages.

At least a minimum of 750,000 homes are needed and even the old optimistic war-time Coalition government figured they could build 220,000 permanent units the first year after the war. The present government built just about half that number in twice the time.

Competent and reliable London sources now say that there is a new plan afoot to cut home building from 260,000 to 210,000 units in the next seven months, including prefabricated and permanent units, and there is talk that it may have to be trimmed even further to 140,000 units. That is a cut in the program, not in the number of houses which will be started.

The British Socialist government is following a laissez-faire policy, obviously awaiting the effect of the Marshall plan on their wobbling material supply, if and when that plan becomes effective. Sources close to the government say the real reduction in the rate of capital spending between now and the outcome of the Marshall plan next summer will be small. Planners say they intend to review the cuts then, hence the tentative plans to reduce the housing program substantially.

One step with gloomy portent has already been taken. Chancellor of the Exchequer Sir Stafford Cripps made builders wince when he slashed the permitted 1948 public and private capital spending of $6,400,000,000 by $720,000,000.

Comparable figures on permanent homes constructed in Great Britain under a socialized industry and in the United States under private enterprise speak for themselves. While the population of the United States is three times that of the United Kingdom, nearly six times as many permanent housing units have been built here since the end of the war. United States private enterprise completed 980,700 houses, while the best the socialized industry of Great Britain could do was a mere 164,873 units.

Twenty-one months ago when the British government inaugurated its "Comprehensive Program" it decided that for every four houses built under direction of local public housing authorities, and owned by them, private builders would be allowed to build one house for sale. The result was astonishing. Even though the government staked out four-fifths of the operation for itself, private builders under license constructed 45,520 houses while the local housing authorities were able to build only 54,250 units in the same period.

This embarrassing outcome recently resulted in drastic action by the government. 'Minister of Health Aneurin Bevan ordered that all private enterprise construction of housing be cancelled. From now on, every home in England will be built and owned by the government, and houses will be built only for the low-income groups.

The private builder has been penalized.

(Continued on page 154)
**Triple Service Heating System**

New unit provides hot water for heating, adequate hot water for new automatic laundries as well as tempered water for use in baths and lavatories

A NEW "triple service" hot water heating system for homes in a single gas or oil-fired assembly is now in production by the Janitrol Division, Surface Combustion Corporation, Toledo, Ohio.

Since the water in this new system is mechanically circulated, either the conventional convector-radiator method of heating or any type of hot water radiant panel heating may be utilized.

The heat-generating unit is factory assembled, wired and tested, ready to operate. The water heater is of high-capacity, submerged type, built into the heat generator assembly.

A complete set of convectors, of either type, is furnished with each unit, and all necessary tubing, fittings, straps, solder and flux for installation are included.

With a 100 degree F. temperature rise above the temperature of the local water supply, the continuous output is 90, 135, and 185 gallons per hour for the three sizes of the system available (sizes are 100,000; 150,000, and 210,000 B.T.U. per hour input, A.G.A. rated). All tubing supplied for connections to convectors, etc., is of double wall steel type, copper coated internally and copper and solder coated externally.

Operation of the system is entirely by automatic controls. The system was designed according to the Steel Heating Boiler Code of the American Society of Mechanical Engineers.
**Industry Engineered House**

**As Adapted by John H. Geis & Co.**

A careful study of dimensions of plan shows how modular dimensions were changed by builder

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AB28127—Walker-Turner Co., Inc., Plainfield, N. J., offer a table saw specially designed to maintain accuracy and eliminate all unnecessary weight. The table is of close-grained gray iron, and the ripping fence is a solid steel bar, drilled to permit wood facing. A convenient crank raises or lowers the saw blade. The saw guard and safety kick-back guard are mounted on the steel splitter, a decided asset when working with green or damp lumber.

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AB28121—A new insulated siding product known as Insulated Weather-Tex Siding is manufactured by Bird & Son, East Walpole, Mass. Designed to simulate weathered wood shingles, this product is available in four popular colors: Birch Gray, Ivory, Cottage Red, and Pilgrim Brown. It is produced in panels about 1/4 inch thick and 43 inches by 14 inches overall. Each panel of the siding is protected from moisture by means of asphalt saturation.

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AB2894—The Lincoln Tractor Co., Arcadia, Calif., announces development of a small tractor weighing only 750 pounds, powered by a 6 H.P. motor manufactured by Salsbury Motors, Inc., Pomona, Calif. The tractor has an all-steel welded frame, pivoted front axle suspension, individual rear wheel brakes to facilitate turning and a transmission, providing three forward speeds and two power take-offs for operating mixers, pumps, generators, and saws.

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**American Builder, February 1948.**

ADAPTED from plans of a house with engineered dimensions by Randolph Evans, John H. Geis & Co., Inc., Baltimore, Md., constructed the small home shown here to demonstrate its practicability for people with limited means who want to build a house on a detached lot in a built-up community.

The house was built and sold for $6,300, subject to a ground rent of $1,200, a common practice in Baltimore. Sold to a G.I. who had rented the lot on a long-term lease, the sale was based on a down payment of $1,800 cash, and the balance, $4,500, was financed. The lot is approximately 60x175 feet.

Dimensions are not based on the modular system according to the original plan, but alterations provided for minimum job site fabrication. The house has no basement, and rests on concrete block foundation walls. The concrete outside slab and iron railing were added for appearance by the Geis organization.

The floor is built on 2x10 joists, spaced 16 feet o.c. Exterior walls are wood shingles, and interior walls are wallpaper over plaster board. Immediate demand was created, and three more of the houses are under construction at present.

**MATERIAL COSTS**

Sand, gravel, cement, bricks for chimney, blocks, lumber, millwork, hardware, paint, plaster board, wood shingles, roof and sidewall, sub floor, hardwood floor, flashing, redwood gutter, copper downspout—$2,800.

**LABOR COSTS**

Mason and carpenter, $1,500; painting, $150; wiring and fixtures, electrical connection, $250; heating, oil furnace, $600; five从根本, $150; gas water heater, $150; parging, $150; floor finish, $100; cement deck and iron rail, $200. Total material and labor, $4,500. Add $500 for well and electric deep well pump.

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**Building Products on Review**

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**Building Products on Review**

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**Building Products on Review**
California architect designs small solar house that provides for complete flexibility of floor layout

EXTERIOR and interior of the Evison solar house. Important rooms, including kitchen and dinette, face south.

DESIGNED for Cemesto board four feet wide, this house uses a four-foot module for all horizontal and vertical dimensions. The result is an unbroken transition from ceiling to roof soffit with no top plates. None of the walls are structural or bracing elements, and therefore, there is complete flexibility of floor planning. All base, base shoe, window and door frames, casing and cornices are eliminated. Living, eating and cooking areas form a unit which can be removed from the sleeping area.

The architect is Leland L. Evison, Pasadena, Calif.
Plan Kitchens For Efficiency And Convenience

A KITCHEN that is not only efficient but beautiful is a prime necessity in planning and constructing dwelling units in the United States at the present time. Manufacturers of kitchen cabinets, equipment and appliances have kept in step with trends toward more efficiency and beauty in kitchens so that builders now have a wide choice in quality, style and type of materials from which to choose kitchen furnishings.

Whether the kitchen contains an elaborate array of cabinets and appliances or only the bare essentials, it should always be planned so that operations will be routed in accordance with routine preparation of a meal and restoration of utensils and other items after the meal. The cabinets, the sink, the range and the refrigerator should be placed as nearly as possible to conform to the purpose of the kitchen—preparation of meals and cleanup afterwards.

The business of installing modern kitchens is not confined to new home construction. Thousands of old houses need and will have new, modern kitchen equipment installed.

In addition to adequate, attractive cabinet space, this kitchen was planned for efficient, step-saving production of meals. Note recessed ceiling light and glass block above counter along outside wall.

AB2895—The new line of light and medium duty truck models by GMC Truck and Coach Division of General Motors, features smart new styling, sturdier chassis and larger all-steel cabs with comfort and safety advancements. The GMC stake truck is available in nine models of 125', 137 and 161-inch wheelbase, in capacities of 1/2, 3/4, 1, 1 1/2 and 2 tons. The line also includes pickup, panel platform, canopy express and tractor models.

AB2884—Several nail manufacturers already are offering umbrella-head, screw-type and straight nails with the Gora-Lee neoprene washer in position under the head. Principal use is in fastening metal roofing and siding, especially in farm and industrial construction. The non-metallic washer composition eliminates the corrosion-sponsoring influences of dissimilar metals in contact. This is a development by Gora-Lee Corp., Stratford, Conn.

AB2888—A revolutionary, horizontal-vaporizing type oil burner known as "Conco-Breeze" is being made by Conco Engineering Works, Mendota, Ill. Since gassification is complete within the burner proper, refractory linings and refractory combustion chambers are not essential. The unit is complete with controls for fully automatic operation on warm air furnaces, steam and hot water boilers, domestic hot water heaters and coal-burning space heaters.
shown here are some of the small features of kitchen equipment design which add a great deal for small additional cost. A cup shelf permits concentrated storage without risky stacking. Cutlery and silver drawer inserts are always a welcome feature. Rounded corners, shelves and small niches appeal to most women. Facilities for storage of recipes and writing are time savers when space is available for them. Good ventilation is always desirable.

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AR2882—An innovation in building materials is the new steel bridging for floor joints marketed by The Pioneer Co., Pittsburgh, Pa. The Pioneer Tru-type steel bridging is formed from high carbon steel, rust-proofed, ribbed to provide extra strength, and comes in one standard size to fit 2x6, 2x8 or 2x12 joints. In addition to being carefully tested on the job, this new item affects a saving in labor and time to reduce bridging costs by one-half.

AR2887—A new, completely portable electric paint sprayer—"The Speedway"—is announced by the H. D. Hudson Manufacturing Co., Chicago, Ill. The unit has an adjustable spray head that works equally well with paint, enamel, varnish, lacquer or stains. The glass jar has a 24-ounce capacity and a wide mouth for easy filling and cleaning. The pistol grip has a shutoff valve, thumb-operated, to permit an instant control of the flow of the paint.

AR2888—A mechanical kitchen waste disposer, called the "Mullinaider," has been added to the Youngstown kitchen line. Thoroughly field tested, the unit is a self-cleaning device in which the grinding mechanism reverses itself each time the motor is turned on. It will handle any kitchen waste except the largest bones, if used according to instructions. The "Mullinaider" disposer is a product of the Mullins Manufacturing Corp., Warren, Ohio.
New Windows
Give Design
Flexibility

NEW styles in window treatment afford wider latitude to architects and home builders in adapting the fenestration of homes to particular demands of design or climate. Among the newer window treatments are the awning window, jalousies, and combination casement and ventilator styles.

The jalousie is gaining popularity in the warmer climates, especially, where the interior of the house needs protection from the direct rays of the sun. Actually, it is a sort of outdoor venetian blind, consisting of ventilating louvres that are opened or closed by operating a crank which actuates a worm and gear mechanism, usually concealed within the jamb. As can be seen from the accompanying photo, the jalousie gives an unusual and novel window treatment, quite different from the old-fashioned “blind” or shutter that was popular for sun protection a few generations ago.

The awning window probably has greater versatility than the jalousie. It could be popular in any section of the country. Architects like it particularly where they wish to achieve a horizontal effect.

THE jalousie provides protection from the sun, rain and also ventilates home interiors

AWNING windows supplement architectural treatment where horizontal lines are wanted

BUILDING PRODUCTS ON REVIEW - BUILDING PRODUCTS ON REVIEW - BUILDING PRODUCTS ON REVIEW

AB2837—General Electric's new line of speed-cooking electric ranges feature a built-in 6-quart pressure cooker, a high-powered broiler unit and improved surface cooking units. The built-in aluminum pressure cooker replaces the deep-well used in other ranges for non-pressure cooking. It also may be used as a surface cooker.

AB2812—The new Econolux oil-fired heating and hot water unit, made by S. T. Johnson Co. of Oakland, Calif., has adequate capacity for an eight to ten-room house. Comes completely assembled, ready to install. A separate shell surrounds firebox for fast heating of water for house supply. Bankhead pressure-atomizing burner fires down.

AB2867—The Vento Steel Products Co. of Buffalo, N.Y., has expanded its casement and utility window production with a complete line of steel casement windows. Electrically welded throughout, heavy channel-frame casements feature easily installed screens, matching hardware and a positive cam locking device for added protection.

AB2864—A tile lined, insulated, reinforced, lightweight masonry chimney, which is permanent, safe, efficient and low in cost, is available from the Van-Packer Corp., Chicago, Ill. The chimney can be used with any combination of fuels. It has been approved by FHA, the B.O.C. and the Underwriters'
Features of the awning window that appeal to home owners are the ease with which it can be washed from inside the house and the protection it gives from driving rain, snow or sleet while permitting ventilation.

As with casement windows, screens for awning windows would be installed inside the house. A crank arrangement through the sill permits opening or closing the awning sections without disturbing the screen. Awning windows may be made so that all section open, or with some fixed sections. They can be purchased complete from manufacturers, or they can be made from special hardware and standard narrow sash. Some factory-made awning windows have the top light fixed and the others movable so that the outside of the top can be washed more easily from inside. One firm, which makes all sections movable, has designed a special washing tool which does the job on the top section. Another manufacturer makes an awning window which drops all sections as they are opened, leaving space above the top section to reach through for washing the exterior.

SPECIAL hardware and standard sash were used by this builder to fabricate awning windows for this California ranch-style house which obviously is not located in California but in New Jersey.
JUST after the New York area’s greatest snowstorm in years, trucks of Nettleton Timber Co. were rolling out with profitable “upside-down” loads of lumber. With limited yard space, Manager McIntosh leaves no aisles between his stock piles. Loaders work directly off piles, using home-made roller conveyors to lighten task.

SECRET of “upside-down” load is to square up the back of load instead of front. This prevents thin boards breaking in unloading.

WHEN a buildings material dealer charges—and gets—$2 to $3 more per thousand for lumber than is charged by some of his local competitors, there must be a reason. In the case of the Nettleton Timber Company of East Orange, N. J., it is an extra service to his builders that saves them from $2.50 to as high as $6.25 per thousand in handling lumber on the job. It also saves them time.

Nettleton’s little twist, thought up by enterprising Manager Stanton J. McIntosh, is “upside-down” loading of his trucks and trailers. When a truck drops a load of lumber at a site, the builder can start right in. The materials he wants first will be on top of the load.

Depending on the customer’s construction method, loads may vary somewhat, but a typical load has roofers on the bottom. Next will be second floor joists, plates and studs. Then comes rough flooring, floor joists and sills.
TRUCKMAN chains free end of load at site, and drives off. Load is dropped as a unit. Square end of load lets thin boards hit together.

sills. Boards for sheathing are worked into the load at the proper point, depending on whether the builder sheaths as his walls go up, or roofs over the job first and then applies sheathing.

McIntosh says the "upside-down" load often saves as much as six hours time for the builder which normally would be spent in sorting the lumber at the site. The saving in dollars from this time depends on whether laborers or carpenters are doing the sorting.

Nettleton caters to the smaller builder who usually orders his lumber a house at a time, doing a monthly volume of about 85 houses. McIntosh says only good grades of lumber are carried, since he depends on service and not price-cutting to keep customers sold. He knows all his builders personally, and is always alert for new materials or methods to recommend if the materials will lower costs. As a result, customers stick.
A828128—A combination double bowl sink and cabinet unit in stainless steel with a slide cover is the new product of Tracy Manufacturing Co., Pittsburgh, Pa. The stainless steel cover slides easily over either bowl or can be removed completely. The sink is equipped with faucet, spray, strainer, drain plug and twin waste connections. The bonded all steel cabinet has four-compartment cutlery drawer and extra roomy space for storage.

A82197—The White-Rodgers Electric Co., St. Louis, Mo., announce a new “Level Temp” system of temperature regulation to provide greater efficiency with less fuel. It consists of an extremely sensitive room thermostat and a primary Level Temp control which works in conjunction with the other controls to automatically vary the period of burner operation, gas or oil, to maintain steady room temperature regardless of outdoor temperature changes.

A82205—The Migh-T-Safe wall model for homes or small business establishments is of sturdy, one-piece cast-steel construction. Removable dial permits installation behind pictures or screens for concealment. This model measures 12"x7½"x7½". Manufactured by Cal Management Co., Inc. of 4343 East Imperial Highway, Lynwood, Calif.

A82301—Revolutionary design of the new Feather-Touch line of plumbing fixtures, announced by H. B. Salter Manufacturing Co., Marysville, Ohio, eliminates metal valve seats, washers or ordinary packing. The advanced design of the valves utilizes the positive seating efficiency of “O” rings, which were proved during the war on all types of both high and low pressure hydraulic controls. Two rings replace metal seats, washers, packing.

A82306—The Marsh Wall Products, Inc., of Dover, Ohio, introduces a new line of bathroom accessories, shown on the dealers display board above. Line also includes a 16"x18"x18" insulated tile shelf. Marsh also introduces an improved Marlite polish, a new household adhesive, and a new waterproof caulking coming in tubes.

A82315—A light-weight, low-cost acoustical tile with high sound-absorbing properties for ceilings is announced by Owens-Corning Fiberglas Corp. Painted white at the factory, the tile has a felted fiber surface and is beveled on all four edges. It can be cemented to a solid backing, or it can be mechanically mounted on wood.

A82321—New sidewall material, 14 B & S gauge aluminum alloy, covered with baked white enamel, is used in the corner entrance Weiseway Cabinet shown above. This model can now be supplied complete with top ceiling unit, shower light and glass cabinet door. The receptor is vitrified porcelain with a non-slip floor.

A82355—A light-weight, low-cost acoustical tile with high sound-absorbing properties for ceilings is announced by Owens-Corning Fiberglas Corp. Painted white at the factory, the tile has a felted fiber surface and is beveled on all four edges. It can be cemented to a solid backing, or it can be mechanically mounted on wood.

A82365—An easy to locate keyhole in center of knob and easy-to-grip knobs are the outstanding features of a new lock for outside doors developed by Sargent and Co., New Haven, Conn. Designed to harmonize with the decor of small homes, this lock is made with a round rosette and furnished in several materials. Strong, precise and compactly simple, it is easy to install and functions with the finished smoothness of an automatic rifle.

A82379—the Berry Door Co., Wayne, Mich., has added a new single span double door to its line of aluminum garage doors. Light and perfectly balanced, the 16x7-foot door tilts up and rolls completely into the garage, smoothly and quietly. Heavy bracing assures rigidity and a new type of face grooving gives this new door a smoother, more distinctive appearance in addition to greater strength. Shipping weight, crated, 170 pounds.
AB2823—For the first time since World War II, a wide range of the eight new exclusive colors is available in Duo-Laps double-course red cedar stained shingles, according to an announcement by the American Stained Shingle Co. of Columbus, Ohio. A six-page, full-color folder that describes Duo-Laps and shows the color range is available to persons who write and request one from the company, Spruce and Dennison, Columbus, Ohio.

AB2811—By adding this Black & Decker Quick-Saw Arm to your equipment, you have the dual advantage of a portable saw and a versatile radial saw. All three Black & Decker portable electric Quick-Saws fit the adjustable saw carriage. The entire unit can be clamped to an ordinary carpenter's saw horse or mounted on a table. For all types of bench cuts, the Arm makes possible more accurate cuts, increased speed, and reduces fatigue.

AB2823—Hasco block flooring is a prefabricated, pre-finished flooring of balanced construction that has little or no expansion or contraction. Product of the Haskelite Manufacturing Co., Grand Rapids, Mich., it can be laid in mastic right on a concrete sub floor or laid in any modern home. The 12-inch by 12-inch size fits architectural specifications and achieves a pattern of pleasing appearance. Red Oak is the material used for construction.

AB2833—Take the white enameled exterior shell off a new General Electric water heater and here’s what you see. Heating is done by two or three ribbons of Calrod that encircle the tank and are held tightly against its surface by stainless steel channels. Thus, the tank itself is used to conduct heat to the water. Eliminates scaling.

AB2836—A new water inlet, simplified operating controls and improved cabinet design characterize the new line of General Electric dishwashers. Changes facilitate installation of drop-in model in custom-built installations. New faucet assembly permits addition of spray attachment later, or a third water supply if desired.

Products Review is continued on page 142. Please use the coupon there to obtain further information about the products in which you are interested.
How to Make a Bench Vise

THE entire vise is cut from %-
inch plywood. Pieces “A” and “C” are nailed or screwed to bench, with outside edges parallel, so that point “D” of piece “B” will just clear point “E.”

CHAS. O. WATER

YANKOVICH, Meadville, Pa.

How to Make a Linoleum Cutter

HERBERT E. FEY, New Braunfels, Texas, submits the above suggestion. Take an ordinary carpenter’s knife and file a small notch in the inner edge near the tip. The notch must be filed sharp and clean. The notch prevents the knife from slipping when cutting linoleum. Circular cuts can also be made in this manner.

How to Keep Putty Pliable in Cold Weather

GEORGE M. CLARK, Chicago, Ill., offers the above suggestion. Remove tops from a gallon tin can and an ordinary tomato can. Fill gallon can with water to height indicated and place over “canned-heat burner.” Put putty in tomato can, and place can in water. Heat will keep putty pliable. Warming putty knife in hot water will aid in applying putty.

How to Make Nail Holder With Clothes Pin

COMMON practice when building forms is to place stakes around building and drive nails in them for levels. Here is an extra hand for rodman who has to hold level, hammer and nail at same time. Cut off one side of ordinary wooden spring clothes pin. Screw it to a rod 48 inches long. All rodman does is snap nail into holder, slide rod down stake to level, drive nail and move along to next stake. J. G. CALDWELL, San Mateo, Calif.

How to Make A Hinge Pin

A set of special pins as shown can be made to fit standard door hinge. These are made with a finger loop to aid in its removal while fitting door. HERBERT E. FEY, New Braunfels, Texas.

Hinges

How to Do It Pointers

HOUSES that are designed to meet the requirements of present day living are apt to be simple, streamlined and filled with built-in conveniences, particularly the rambling one story type without basement. Excessive woodwork and moldings, and all ornamentation have been eliminated, and instead simple, unadorned surfaces are used. Emphasis is placed on certain portions of the rooms through the use of contrasting and bold colors.

The living room wall shown in detail on the opposite page, indicates built-in features extending from floor to ceiling and from fireplace over to the end wall. This type of arrangement meets with present day requirements. Open shelves are provided for the display of books, small art objects or flowers. A writing desk with ample space for correspondence supplies and household accounts can be hidden behind the hinged door that opens out to form the counter for the desk.

A desk telephone could very conveniently be placed in one of the open compartments adjoining the desk. Storage space for card tables and magazines are also provided. Requirements of individual members of the family would determine the exact design and arrangement of the cabinets.

Convenient space for the storage of children’s toys should be a “must” requirement in every household. To accommodate the toys, the bottom section could be made deeper by extending into the wall or projecting in front of the face of the wall, thereby forming a counter effect. A radio or record player could be built-in.

Natural-finished wood is suggested for the mantel, the woodwork around the fireplace, and the cabinet doors. The open shelf work, cornice and base can be painted in bold colors for contrast. To further emphasize the simplicity of line, the recessed over-mantel and mantel shelf may be omitted, leaving the area above the fireplace opening, a plain flat wall surface.

The area devoted to cabinet work, location of fireplace, and door opening would of necessity be governed by conditions of the entire floor plan. The features as detailed on the opposite page can be incorporated in the design of any average size living room.
Note: Cabinet doors, Mantel shelf and woodwork around fireplace to have natural waxed finish. Open shelves, cornice and base to be painted.
AB28122—This self-priming, centrifugal pump is Homelite's Model 2382. Weighing only 85 pounds, its capacity is 10,000 gallons per hour. An automatic self-priming feature keeps seepage water ring down to strainer level, providing dry footing for workmen in excavations. It is a non-clogging and self-scouring unit with an engine that will not freeze or overheat. Easily set up, it operates in any position. Homelite Corp., Port Chester, N. Y.

AB28125—Type 7 building panels made by Detroit Steel Products Co., 2250 East Grand Blvd., Detroit, Mich., were laid in this floor. Each panel is a box beam formed of two steel sections welded together, side laps interlock to form a continuous flat surface. These panels take the place of joists, bridging and subflooring combined, and when installed are ready for finished flooring. Their large size, 12 feet by 16 inches, speeds installation.

AB28184—Heatform made by In-Fireplace Co., Los Angeles, Calif. Double metal walls with air heating chambers surround the lower firebox and the upper throat. Cool air is drawn from the floor into the lower portion of the heating chambers, heated and discharged at the top.

AB28195—Hotpoint, Inc., announces a two-zone refrigerator freezer model with a 52 pound freezer compartment and a large, high humidity refrigeration storage space. Each compartment has a separate door. Overall capacity is 8.2 cubic feet, 6.7 for the refrigerator and 1.5 for freezer compartment. Model is known as EG-8.

For further information about Products on Review, write serial numbers of products on lines below and mail coupon to:

American Builder, Readers' Service Dept.
105 W. Adams St., Chicago 3, Ill.

NAME
ADDRESS
CITY
STATE

AB2803—The Trip-L-Grip framing anchor, made by Timber Engineering Co., develops double strength over customary toe-nailing of rafter-to-plate joints. Applied to the plate before installation of rafters and trusses, they automatically space roof members at required distances. The framing anchor may be used at all critical joint points.

AB2810—The Waste King wall-model circulating fireplace units are made by the Superior Fireplace Co., Los Angeles, Calif. Double metal walls with air heating chambers surround the lower firebox and the upper throat. Cool air is drawn from the floor into the lower portion of the heating chambers, heated and discharged at the top.
When it comes to styles in overhead type doors, there's no argument about Ro-Way's smart good looks. Those clean, simple lines are designed and tailored to blend with any style of architecture, period or modern.


All of which is why Ro-Way has—and keeps—the new look that means owner satisfaction down through the years. Specify Ro-Way—and be sure of it. ROWE MANUFACTURING COMPANY, 732 Holton Street, Galesburg, Illinois, U. S. A.

Ro-Way distributors in all principal cities. Consult your classified telephone directory, or write for distributor's name. See our catalog in Sweet's.

There's a Ro-Way for every Doorway!
THE SIMPLEST and SOFTEST CLOSING VALVE KNOWN IS NOW FEATURED IN THE NEW SALTER PRESTIGE FEATHER TOUCH FIXTURE LINE

Salter advanced design and engineering is again "out-in-front" with today's simplest and most foolproof plumbing fixture valve. Just remove the streamlined cap—and there's the works! Two patented "O" rings replace conventional metal seats, washers, and packing. These wear-resistant rings slide on a precision-machined, polished and chrome plated one-piece stem. A minimum of friction makes possible fingertip, soft Feather-Touch closing which cannot be found in any other valve. The stem wipes clean as it closes to provide unprecedented dripproof service. Laboratory tests have opened and closed faucets equal to 20 years' service and they're still operating perfectly. See this new Salter Prestige Feather-Touch line of Masterpiece fixtures at your wholesaler without delay.

H. B. SALLER MFG. CO., MARYSVILLE, OHIO

and Division THE GLAUBER BRASS MFG. CO., KINSMAN, OHIO

PATENT PENDING

NAHB In 1947
(Continued from page 69)

NAHB campaigned vigorously for decontrol of rents; sought to bring FHA and VA appraisals more into line with each other; successfully supported the bill authorizing an additional $400,000,000 authorization under Title VI; worked with VA toward ending of complaints of bad construction practices; consistently urged adoption of a long-range housing finance program; urged the need of a secondary mortgage market; asked for stabilization of wage rates and costs of building materials; reduction of income taxes and the modernizing of building codes.

It was a busy year for the NAHB Legislative department. Through it, NAHB made representations at Congressional hearings in favor of at least a dozen bills on housing. Among these were the Wolcott construction decontrol and rent bill, which became law; the Knutson bill permitting the home owner to deduct depreciation for income tax purposes; the Wolcott bill providing for disposal of permanent Lanham Act housing; the Jen- sen bill providing an increased FHA appropriation, which became law; the Cain-Russell bill to dispose of federal public housing; the Buck bill authorizing $400,000,000 additional FHA insurance, and others.

NAHB opposed the T-E-W bill; the McCarthy bill eliminating the limitation on costs for USHA capital grants, which became law; the Taylor bill, providing a subsidy for veterans rental housing, now pending in committee; the Donohoe and Douglas bills providing similar veterans rental subsidies.

In conclusion, NAHB knows that 1947 supplied indisputable proof that private enterprise and not public housing is the answer to America's shelter problem. If the private home builders are given the same opportunities to serve throughout 1948 as they were in 1947, and barring an economic upset, there is no reason why more than 1,000,000 homes should not be constructed this year. This would house an estimated 4,000,000 people in livable, comfortable, permanent homes, and strike a further blow for that other freedom that our people crave—freedom to own a home at a decent price.

PRESTILE COMPANY EXPANDS ADVERTISING PROGRAM

BEN POLIKOFF, president of the Prestile Manufacturing Co., Chicago, has announced an expanded program of advertising and promotion for their product—Prestile wall tileboard. Larger advertisements in color in an impressive list of trade magazines and consumer publications will spearhead the campaign. The ads will be geared to do an outstanding selling job for dealers in the field.
No matter what materials you're using, versatile Black & Decker Electric "Quick-Saws" save you time, money, muscle and manpower... by turning out work ten times faster than hand sawing! And "Quick-Saws" give you such outstanding features as: 1. Quick adjustments for angle or depth of cut, easy blades and disc changes for a wide variety of cuts; 2. Handy operation from any standard power line or portable generator; 3. Black & Decker Heavy-Duty Universal Motor, specially built for tough sawing operations; 4. Full guard protection for safe use.

There are three "Quick-Saw" models from which to choose: 7" "Quick-Saw," $115, cuts to 2 3/8" depth, the most popular size for construction, maintenance and repair jobs; 8" "Quick-Saw," $135, cuts to 2 5/8" depth, a compact unit that's ideal for one-hand operation; 9" "Quick-Saw," $150, cuts to 3 1/8" depth, for heaviest construction sawing. For more information, see your nearby Black & Decker Distributor. For free catalog, write to: The Black & Decker Mfg. Co., 666 Penna. Ave., Towson 4, Md.
Mr. Builder!

SAVE MONEY WITH THIS SALES FEATURE

Here is the double-hung sash equipment that combines spring balance and weatherstripping in one unit of obvious economy... Use it on new or old windows... It eliminates weights, pulleys and cord... It prevents binding and sticking... It gives sash "finger-tip" control.

TIME TESTED...PRACTICAL...ECONOMICAL

This equipment acts as a perfect weatherstrip for both sides of the window. As shown on the left we recommend Master Metal cross strips for meeting rail and top and bottom rails. Properly tempered springs give upper and lower sash perfect balance. Self-adjusting metal housing provides for swelling and shrinking of wood and furnishes metal runways for sash that never need painting.

Write today for complete information about this modern window combination equipment that saves you time and money and gives your customers complete satisfaction on plank or box frame windows, old or new of any size. Use the coupon below.

STARTING NOW

MASTER METAL STRIP SERVICE
1720 N. Kilbourn Ave.
Chicago 39, Ill.

Name ____________________________
Address ____________________________
City ____________________________ State ____________

MASTER NO-DRAFT SASH BALANCE
Please send me, without obligation, complete information about Master No-Draft Sash Balance.

A Reply to Nathan Straus
(Continued from page 101)

Apparently, Mr. Straus has not thought the situation through. He had he would realize that the increase in population is due principally to the birth of babies in the United States, and that it will be a matter of 20 or more years before they will be seeking dwellings apart from their parents. The fundamental factor in analyzing the housing situation is not the increase in population, but the increase in family formations. The following data taken from studies by the Bureau of the Census and the Bureau of Labor Statistics, and showing the number of dwelling units started and the number of families in recent years is indicative of the real situation regarding housing deficiencies or housing need.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Units Started</th>
<th>Number of Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>1940</td>
<td>36,832,000</td>
<td></td>
</tr>
<tr>
<td>1941</td>
<td>35,462,000</td>
<td></td>
</tr>
<tr>
<td>1942</td>
<td>36,111,000</td>
<td>639,000</td>
</tr>
<tr>
<td>1943</td>
<td>36,610,000</td>
<td>649,000</td>
</tr>
<tr>
<td>1944</td>
<td>36,544,000</td>
<td>656,000</td>
</tr>
<tr>
<td>1945</td>
<td>36,783,000</td>
<td>676,000</td>
</tr>
<tr>
<td>1946</td>
<td>37,616,000</td>
<td>833,000</td>
</tr>
<tr>
<td>1947</td>
<td>36,609,000</td>
<td>790,000</td>
</tr>
<tr>
<td>1948</td>
<td>37,083,000</td>
<td>860,000</td>
</tr>
</tbody>
</table>

Total: 3,786,000

Difference between columns 2 and 3: Deficiency in housing units as of 1948 = 576,500.

From this data it is ascertained that a shortage of 576,500 dwelling units presently exists because of the inability of the building industry to keep pace with the increase in families during the war and during the last two years of peak marriage rates. The balance of any shortage above 576,500 is due to the fact that families and individuals have availed themselves of the bargains in frozen-rental dwelling units.

According to Bureau of the Census data, the increase in family formations in 1947 (993,000) was at its peak. In 1948 it is expected to drop to 503,000, and in 1949 and 1950, to about 330,000.

If the building industry continues in present rate of building (1,000,000 units a year) the real shortage, due to the increase in family formations, will be over early in 1949. It will take two or three more years to end the shortage occasioned by the influx into bargain rental units. In the 1950's, family formation is expected to average no more than 400,000 a year. Then, if production is continued at the rate of 1,000,000 a year, the building industry is likely to face the same problem it had in the thirties. Mr. Straus cannot possibly want a repetition of that experience in this country. It is clear that Mr. Straus disregarded all of the available facts, and simply made a sweeping and unsupported statement that the shortages are getting worse.

Then Mr. Straus says that a third of the married veterans are forced to live in rented rooms or double up with it-laws, and that hundreds of thousands of our citizens are unable to accept better jobs in other towns because they

(Continued to page 148)
Today The Kitchen Is The Measure Of Value

30 Million People Know
Hotpoint Means the Finest In Electric Kitchens

To-day, the kitchen is the yardstick of value among home builders and buyers. That's because the tremendous impact of powerful advertising has made Americans thoroughly kitchen conscious. In fact, the kitchen is now the most talked about room in the modern home!

Within the past three years more than 2,000,000 persons have written to Hotpoint about All-Electric Kitchens. Pioneer of the electric kitchen, Hotpoint is recognized as the leader in modern kitchen planning.

Alert architects and builders are finding good reason to invest enough extra in the kitchen to make it a real showplace. Also, they're learning that Hotpoint All-Electric Kitchens create confidence in the quality of the whole house and make today's building costs a little easier for prospective owners to take in their stride.


Copr. 1948, Hotpoint Inc., Chicago, Ill.
SAVE LABOR

SAWS
New Portable Electric Saw. Big power... ease handling... cuts any angle. 8” blade.

FLOOR SANDERS
Four models including 8 and 12 inch drum widths. Smooth, uniform sanding.

EDGERS
American Spinner disc-type sander finishes right up to edges of floors, stairs, closets. 5 1/4” and 7” discs.

SMALL SANDERS
Many uses for the Sandersplane, a belt sander... and Speddy Spinner semi-flexible disc sander.

MAINTENANCE
Labor-saving machines for polishing, disc sanding, steel wooling and scrubbing floors. Many models... brush spread of 13, 15 or 17 inches.

Here’s the right line-up of power machines for the building industry... American-built to save time and labor on the job and cut costs! You’ll find American machines out-front in features for easy handling and accurate workmanship. Precision-built for top dependability. Send coupon for details.

American Builder, February 1948

(Continued from page 146)

are unable to find decent shelter for their families.

Solution Not Always More Houses

Like his 20,000,000 figure, Mr. Straus’ figure regarding married veterans requires analysis. The implication is that even if a third of married veterans (a very questionable figure) are required to live in rented rooms or doubled up with in-laws, the sole reason is the housing shortage. The facts are that in practically every city in the country the veteran who can afford to support a family and pay rent, earns enough to buy a new home, and there are homes for him to buy. The young veteran without business or professional experience of any kind prior to the war, in nearly every case does not earn enough to afford more than limited rental shelter or a double-up arrangement with in-laws. He could not afford more even if there were a surplus of purchase and rental units. His plight has much less to do with housing shortages than with his own limited earning power due to inexperience that forces him to start as a low-wage earner.

Neither Mr. Straus nor anyone else knows whether there are hundreds of thousands, just thousands, or merely a few men unable to move to other towns to accept better jobs. A year ago the statement might have been true, at least to some extent. Today, it is not true. It is not always easy to find rental or purchase properties in other towns, because there has not been time since the government restrictions against building were removed to build to a normal vacancy ratio. But finding good houses for rent or sale is far from impossible. There are no figures on the number of men transferred from one city to another, and either satisfactorily or unsatisfactorily housed, but American Builder editors who have been transferred have, with a little hunting, been able to choose between several reasonably priced houses in both New York and Chicago. It should be added that while business magazine editors are not in low salary brackets, neither do they receive salaries that permit them to be careless about their investments in housing or anything else. It might be said from the experience of these editors that hundreds of thousands of men are moving from one city to another, and finding satisfactory housing, but that would be just as meaningless as Mr. Straus’ statement which, since no figures are available, must be based on a few isolated cases about which he knows.

When Mr. Straus says that the nation is practically immobilized by a housing shortage, he unwittingly confesses just how far he is behind the current home building situation.

A categorical misstatement in Mr. Straus’ article is worth note. He says, “The only hope for getting moderately-priced homes in abundance, it is generally agreed, lies in the Taft-Elender-Wagner bill, the only long-range plan on the horizon.”

(Continued to page 150)
Flat, Hipped or Pitched... Insulating Them is Simple with VERSATILE Balsam-Wool

- Flat-roofed, hip-roofed or pitched roofed homes—you can insulate them easily and effectively with versatile Balsam-Wool. You'll find scientific "pointers" on such applications in Balsam-Wool Data Sheets—a veritable library of useful data on correct application practice.

Balsam-Wool Data Sheets were prepared to give you ready information on a wide variety of insulation problems. Designed to fit your A.I.A. file, they help conserve your valuable time. Send today for your set—enclosed in an attractive file folder. There's no obligation, of course.

MAIL THE COUPON FOR YOUR BALSAM-WOOL DATA SHEETS

WOOD CONVERSION COMPANY
Dept. 119-28 First National Bank Building
St. Paul 1, Minnesota
Please send me a set of Balsam-Wool Application Data Sheets.

Name..................................................
Address...................................................
City.................................................. State
Increase
BUYER
APPEAL

INSTALL
Ventrola
VENTILATING
FANS
IN YOUR
HOMES

QUICK
TO INSTALL
FITS
ANY WALL

Here's an important
point to remember...

Ventrola Ventilating Fans add "buyer
appeal" to your homes—women want
them! You'll find their initial invest-
ment low—yet, their "salability in-
crease" is high. To make your homes
sell faster at better prices, equip the
kitchens and bathrooms with Ventrola
Fans.

It pays to standardize on Ventrola
Fans. They are smartly styled and
made of rust-proofed steel. Grille and
blades are removable for easier clean-
ing. They are finished in sparkling
chrome—front in gleaming white
baked-on porcelain-type enamel.

Available in two sizes—8 and 10
inch—Ventrola fans move the max-
imum of air (500° to 700 cubic foot
capacity) at the minimum of operating
cost. Fully enclosed motor is noiseless
—static free—dependable. Units are
easy to install—low in cost—Under-
writer's Laboratory Approved.

Write for
builder discounts
and name of nearest
dealer or distributor.

NATIONAL APPLIANCE CO.
4814-18 WEST VERNOR
DETROIT 9, MICHIGAN

Visiting Booth 142
NATIONAL ASSOCIATION
OF HOME BUILDERS EXPOSITION
STEVENS HOTEL
CHICAGO
FEBRUARY 22-26, 1948

American Builder, February 1948.

(Continued from page 148)

There are two things wrong with that
statement. The first is with regard to
general agreement about the bill. There
is no general agreement at all. The fact
is that there are two sharply divided
schools of thinking about the bill. Its
chief exponents, with the notable excep-
tion of Senator Taft, are the protagon-
ists of socialistic government control of
industry. Its antagonists are the ad-
vocates of free private enterprise. It
would be a concession to the protagonists
to say that they represent more than an
organized minority.

The other thing wrong with the state-
ment is that whether Mr. Straus denies
it or not, the bill is a long-range public
housing program in opposition to a
long-range private enterprise building
program which has been presented to
Congressional committees and others
many times, and which is being imple-
mented to the decided disadvantage of
the government's public housing bun-
gling during the war.

Industry Wants Building Volume

Mr. Straus then launches a vicious
attack on the "real estate lobby," accus-
ing it of smothering "all proposals that
would stimulate home building on a large
scale." The attack is in the best tradi-
tion of bureaucratic onslaughts against
all individuals or groups exercising the
American right to have and express an
honest difference of opinion. He chooses,
of course, to overlook the fact that of all
the groups in the country, the alleged
lobby has the greatest personal interest
in the development of a large building
program.

Attacked with the "real estate lobby"
are builders, suppliers and union lead-
ers, "worried because they all love their
notoriously inefficient 19th century meth-
ods of building homes one nail at a
time." Mr. Straus thus exposes an al-
most unbelievable ignorance of revolu-
tionary developments in home building
techniques in the past few years. The
statement has the familiar ring of one
frequently used by the public housing
lobby in lieu of facts.

Mr. Straus either plays fast and loose
with statistics, or again picks some fig-
ures out of the air when he attempts to
glorify the public housing record of
England. He accuses Frank Cortright
of dealing in half-truths in his report on
housing in England. All that should be
said to that is that if Mr. Straus chooses
not to believe Mr. Cortright, he should
consult any informed Englishman.

Among these, American Builder sug-
gests Mrs. Pleydell-Bouverie, a thor-
oughly informed, objective English
woman who recently visited the United
States. Any honest report Mr. Straus
would make after such a consultation
would be a complete corroboration of
everything Mr. Cortright said.

"Trickle-Down" System Always Works

The so-called trickle-down system is
attacked because "it has never worked."
The fact is that it has always worked.
Admittedly, it has never supplied every

(Continued to page 152)
CHECKED FROM EVERY ANGLE

GIVES EXTRA VALUE...

EXTRA VALUE in Proper Seasoning
EXTRA VALUE in Straight-Line Ripping
EXTRA VALUE in Precision Machine Work
EXTRA VALUE in Laying Up Without Forcing
EXTRA VALUE in 90° End Joints That Stay Put
EXTRA VALUE in Uniform Color and Texture
EXTRA VALUE in Factory-Applied Finish
EXTRA VALUE in Lasting, Lustrous Beauty
EXTRA VALUE in Customer Satisfaction

These extra values are the tangible results of continuous years of our determined effort to make a better flooring. They symbolize Bradley's purpose to give each user a premium with his investment in fine flooring. They are the reasons why contractors and floor layers swear by Bradley Pre-Finished, Straight-Line Hardwood Flooring. Available from your dealer in Oak, Beech & Pecan.
The Heatilator

Fireplace assures Correct Operation

When you build a fireplace around the Heatilator Fireplace unit, you save on labor and materials costs—yet get a fireplace that is certain to work. The successful use of Heatilator units for over twenty years proves its value, both in construction economy and in performance.

The Heatilator is a complete steel double-wall fireplace form that is installed simply by laying masonry around it and connecting with a chimney. Concealed behind the masonry front, the Heatilator can be used with any style of architecture or decoration. Movement of air through the space between the fireplace walls circulates heat all through the room and into adjoining space if desired.

For installation data, write:
HEATILATOR, INC.
812 E. Brighton Ave., Syracuse 5, N. Y.

*Heatilator is the registered trade mark of Heatilator, Inc.

American Builder, February 1948.

(Continued from page 150)

rew family with a new house. There is no economic or social reason why any system should. Nor is the trickle-down system confined to housing. If Mr. Straus is the economist he is supposed to be, he knows that the trickle-down system in varying forms, depending on the commodity involved, is the accepted system for the distribution of all goods in any economy. If it is wrong for housing, and no one has proved that it is, it is wrong for everything. It works well in this country, because in a free economy every man has an opportunity to establish a living standard consistent only with what he is able to earn. It does not work well in Russia and other socialist states, because the wealth is divided equally among all, regardless of what the individual earning power may be. The only exception is that the lion’s share is withheld to divide for luxury living among the members of the ruling class. Senators and Congressmen who have voted against socialized housing measures are charged with being the tools of the “real estate lobby” and its fellow conspirators. Throughout, Mr. Straus employs the standard tactics of left-wing bureaucrats by impugning the motives of all who have an honest disagreement with him.

Attacks Veterans Groups

Even the American Legion Housing Committee is not spared. Mr. Straus charges that “the real policy-making of the Legion is still controlled by gray-haired, conservative veterans of World War I, who, in many cases, are prosperous operators in the real estate and building business.” The implication here is that anyone who is prosperous, gray-haired and conservative is mentally atrophied, callously selfish or blind to the welfare of the nation, even if he did demonstrate love of country by fighting a war 30 years ago. It is a favorite slur frequently thrown at anyone who balks the attempts of malcontents who want dictatorial powers through government control of business. Even if there were something evil about being gray-haired, prosperous and conservative, Mr. Straus might begin a badly needed education in what is happening in the home building industry by attending a few post or district meetings of the American Legion. He would be amazed, if he believes what he said, to see just what influence the young veterans of World War II have.

He goes on to say that “the smaller veterans’ organizations are vigorously calling for effective action on housing.” That seems to be a tacit admission that public housing is the wish of only an organized minority. But it is not entirely true. There are a few of the smaller veterans’ organizations who favor socialized housing. There are also a number of other smaller veterans’ organizations who are just as opposed to the T-E-W bill and other proposed housing legislation as the American Legion.

Social Planners Estimate Need

Mr. Straus states that “the United States needs at least 1,500,000 new homes” (Continued to page 154)
Use UNI-FORMS...

cut your form costs in $\frac{1}{2}$

Because they are faster to erect, easier to strip and require alignment on one side only, UNI-FORMS can cut your forming costs at least 50%.

UNI-FORMS are strong, lightweight, steel-framed, plywood faced panels which have all the advantages of a steel form plus the important advantage of a nailing surface.
a year for the next ten years. That is a minimum necessity." Other social planners have set the same goal which, if it made any economic sense, might be desirable, but is not a minimum necessity, inasmuch as it contemplates the replacement of 10,000,000 "sub-standard" homes, about one out of four existing dwelling units. This is the equivalent of tearing down and replacing all dwelling units built prior to 1905, many of which have been excellently maintained, and are eminently serviceable in spite of the fact that some were built as long ago as early colonial days.

Mr. Straus concludes by saying that "it is just possible that if enough voters express emphatically enough their yearnings for a decent new place to live, their Congressmen will take heed, spurn the advice of lobbyists, and give us a real homebuilding program."

In answer to this it can be said that if enough voters listen carefully to both sides of the controversy, it is probable that they will ask their Congressmen to spurn the advice of the lobbyists entrenched in powerful government bureaus, as well as the advice of ex-bureaucrats and do-gooders, and insist that their Congressmen vote against any form of socialized housing.

It is urgently suggested that before Mr. Straus writes another article on housing he learn something about his subject, and then stick to facts.

Cortright's Report

(Continued from page 128)

ized because he did his job too quickly, and those in Great Britain who condemned the private home builders as a band of rogues and robbers failed to realize that man works for something more than a Utopian idea. It's just a case of no incentive—no work.

What kind of houses are the British building? Their houses are comparable to those we built thirty years ago. Their plumbing and heating is old-fashioned. The houses have very poor plaster jobs, with miserable hardware and millwork. The doors are very light, cheap and badly built. Usually they have softwood flooring. The living rooms are decently sized, but the kitchens have equipment that is not even a near approach to our minimum standards. The bathroom, of course, has only a toilet, and rather than a lavatory they have a sink in which to wash clothes or dishes. Most of them have two bedrooms on the second floor. And for this the British worker pays from $6,000 to $8,000.

France Suffers But Has Four Year Housing Plan

France's four year housing plan—1947 through 1950—offers the single ray of hope in what is otherwise a drab home construction picture. Like American veterans and their families, the French have a housing shortage.

However, the difficulties of the French family in trying to find a place to live (Continued to page 156)
The New

DOLE

THERMO-MATIC

(see u.s. pat. 607)

REGISTER

for Forced Warm Air Heating Systems

DOLE manufactures AIR and VACUUM VALVES for heating systems and WATER MIXERS for domestic use

The Dole Valve Company
1923N. Carroll Avenue
Chicago 12, Illinois

Please send me facts about the new DOLE THERMO-MATIC Register for forced warm air heating systems.

NAME ____________________________ Classification ____________________________

FIRM ____________________________ [ ] Dealer [ ] Jobber [ ] Architect
[ ] Builder

ADDRESS ____________________________

CITY ____________________________ ZONE ______ STATE ______

Operates thermostatically from room air.

Very sensitive: Modulating effect. Output is regulated to meet heat losses.

Completely self-contained; no wires to run—no bulbs to locate—very simple to install.

Simple setting of the thermo-dial assures room temperature control—as desired—corrects many unsatisfactory heating installations: Materially improves any forced warm air system.

A zone control for every room.

Individual Room Temperature Control—AUTOMATICALLY

The Dole Valve Company
1923N. Carroll Avenue
Chicago 12, Illinois
First on-the-job portable saw

Cutting Wet or Dry
USING Diamond and Abrasive wheels

Eliminate excessive wheel breakage with this MOST POWERFUL PORTABLE ELECTRIC GUIDED SAW

ON-THE-JOB Cutting of Blue Stone at 2 feet per min.

CUT 7 to 10 Times FASTER

Using Three Types of Wheels Cut:

BRICK • TILE • TERRAZZO
MARBLE • SLATE • GRANITE
ASBESTOS PRODUCTS • REFRACTORIES
CONCRETE and CONCRETE PRODUCTS
LIGHT STRUCTURAL STEEL and PIPE

SEE IT AT

CHICAGO
HOME
BUILDERS
SHOW
CONGRESS HOTEL

Write us today for further information.

STONE MACHINERY CO., INC.
Dept. A-2 Box 1363 Syracuse, N. Y.

HIGHER SPEED CUTTING MACHINERY

(Continued from page 154)

are appalling. Physical destruction was both greater and for more widespread in France during World War II than during its predecessor. On my recent inspection tour through France, I was told that in all some 260,000 urban and about 70,000 farm dwellings were totally destroyed, while severely damaged dwellings totalled 1,200,000. To date, the socialized government has rebuilt only an estimated 7,000 homes.

But making the situation far worse is the startling fact that in the last 20 years only one-fourth of the homes actually needed have been built. Thus, the French find themselves even worse off than the British, with almost identical factors contributing to the housing dilemma in both countries: the ravages of war, the necessity for licensing construction and extension of rent controls. Compared to the plight of these two countries, the record of the United States with a rate of better than a million housing starts in 1947 is magnificent.

The aim of the French four-year plan—1947 to 1950, is to improve the efficiency of production of building materials that by 1950, sufficient materials will be available to carry out reconstruction, to maintain and modernize existing buildings, to replace obsolescent buildings and to permit some exportation.

The “program” for 1947 calls for from 50,000 to 60,000 permanent dwellings, but recent estimates by the French Ministry of Reconstruction now indicate that no more than 75 per cent of this extremely modest program can be completed within the year. Of this number, some 17,000 units were to have been built by the Ministry; 16,000 to 25,000 by the coal mining, electrical, steel and other industries; and the rest by individuals who are entitled to war-damage payments, which may amount to 90 per cent of the 1939 tax value of the property. Under the present law, limited dividend corporations erecting rental housing may receive loans from the Society for Low Cost Housing, amounting to 90 per cent of the value of the property for a period of 40 years at an interest rate of 2 per cent.

The few new houses going up in France today fall sadly below American standards. The houses being built there are larger and better than those in England, but they lack central heat and have only elementary plumbing. They represent good design, and while they have high ceilings, most of the time only a space is left where a bath can be added later. The condition of French housing would shock American families. The remarkable total of 95 per cent of the homes in Paris urgently need roof repairs. Astonishing as it may seem, for 10 years there has been absolutely no painting or maintenance.

For instance, in Paris only 24 per cent of all dwellings have central heating; 16 per cent have bathtubs and 46 per cent have individual toilets. Thousands of dwellings should be demolished because they fall below minimum standards
**DOMESTIC HOT WATER COIL**

**It's News!**
Built-in domestic hot water coil optional. Same cast iron heating sections can be used with different sets of trim for hot water, steam or vapor heating systems. Eight sizes: from 95,000 Btu. to 325,000 Btu. input.

**3 NEW LINES!**

**It's News!**
Designed especially for small, low cost homes, this horizontal OIL burning unit comes completely assembled. Jacket finished in durable, heavy white enamel. Low pilot fire—as little heat as a gas pilot flame. Capacity: 75,000 Btu. Other oil units to be announced soon.

**It's News!**
Completely assembled when delivered, saves installation time. Jacketed in beautiful, heavy white enamel. Available in 8 capacities, from 90,000 Btu. to 420,000 Btu. input. Horizontal construction allows ample head room for low basements and ductwork.

**RICHMOND RADIATOR COMPANY**

**AFFILIATE OF REYNOLDS METALS COMPANY**

Enamel Cast Iron Ware • Vitreous China • Perma-Gloss • Gas Boilers • Oil and Gas Winter Air Conditioners • Gas Gravity Furnaces • Radiators
of hygiene set by existing legislation. They are now allowed to remain standing only because of the housing emergency. With maintenance at a standstill during the war years, it is estimated that in Paris alone, 4,000 buildings, accommodating 60,000 persons, will have to be evacuated within two years unless urgent repairs are undertaken.

Awaiting a flow of materials for reconstruction, France has been busy clearing up the debris, repairing as much as the damage as possible, providing temporary shelter and making plans so her cities and towns may be better places in which to live. So far a million acres and 616 towns have been cleared. Then wreckage had to be cleaned up. So far, 63,000,000 cubic yards have been moved, 51,000,000 yards of bomb craters filled.

To accomplish their "program," these economic controls will be necessary:

1. Allocation of scarce materials, particularly coal and steel; 2. A system of building licenses; 3. Control of employment, prices, foreign exchange and the distribution of credit and some rationing schemes. Since coal, electricity, iron and steel, cement, agricultural machinery and transport are regarded as basic industries, they will receive priority in the allocation of scarce materials and of labor. Next in importance comes development of agricultural production, and then, housing.

France today has no private home building industry. Builders are merely repair men. Rigid and continuous rent control since 1916 has meant that landlords have been given only a four-to-one increase since 1914, in spite of the 30-to-1 rise in building costs. As a result there has been no incentive to build.

**Milcor Changes Name to Inland Steel Products Co.**

MILCOR STEEL CO., nationally known fabricator of sheet metal building products and specialty items, has changed its name to Inland Steel Products Co. The change was effective January 1.

In making the announcement, the firm gave two reasons for the change. The new name not only gives a clearer picture of the firm's business, which is fabrication of sheet metal products and not the production of steel, but the new names gives a formal expression of the firm's relationship as a subsidiary of Inland Steel Co.

**Fordyce-Crossett Sales Co. Dissolved January 1**

B. MAYHEW, president of the Fordyce-Crossett Sales Co., Fordyce, Ark., announced the dissolution of the sales company as of January 1.

It is understood that the principal suppliers of the sales company, Crossett Lumber Co. and Fordyce Lumber Co., will market their production in the future through their own sales offices located at the plants of the respective companies at Fordyce and Crossett, Ark.
American Builder, February 1948.

BARD

65,000 to 400,000 BTU — OIL
90,000 to 240,000 BTU — GAS

Bard's COMPLETE range of capacities provides you with greater opportunity for competitive selling with more profit and greater satisfaction to the customer.

BARD FEATURES THAT YOU WILL APPRECIATE

- Electric welded, large area prime heating surfaces.
- Safe, approved controls for economical, automatic operation.
- Quiet, low velocity, large volume air circulation.
- Oversize dust filters of easily replaced standard sizes.
- High efficiency burners for maximum fuel economy.
- Beautfully finished duotone cabinets in furniture-finish enamels.

TO 240,000 BTU/HR. INPUT

Bard's gas heating units provide economy of operation beyond expectations. The simple, clean design of large prime heating surfaces provides longer travel for hot gases, extracts more usable heat. (Customer's fuel bills prove this. Every Bard gas unit is carefully tested and inspected, and shipped with all controls, ready for installation. Bard furnaces are designed by experienced "furnace men" who respect installation problems.

BARD MFG. CO., BRYAN, OHIO

Please rush complete catalog and prices on oil and gas units.

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Chicago Office: 1157 Merchandise Mart, Chicago 54, Illinois

A Complete Line in Many Capacities for Profit-Wise Dealers

Designed and Built by BARD MANUFACTURING CO. — BRYAN, OHIO
Do Your Doors Offer E.E.?  

ELECTRIFIED EFFICIENCY

With the "electrified efficiency" of Motor Operated Kinnear Rolling Doors, you can speed up deliveries, keep door traffic moving faster, save time and labor, cut heating and air-conditioning costs by making it easy to close doors promptly. Push-button controls for each door can be placed at any point, with additional remote control switches if needed. And you get many other advantages from these rugged, all-steel, upward-acting doors. They save usable floor and wall space... coil out of the way overhead, safe from wind or vehicles... add to fire and theft protection... stand up longer, with less care, under hardest use. Built to fit any opening in old or new buildings. Write.

The KINNEAR MANUFACTURING CO.
FACTORIES
1560-80 Fields Ave. • Columbus 16, Ohio
1742 Yosemite Ave. • San Francisco 24, Calif.
Offices and Agents in Principal Cities

Asbestos Cement Association Moves Offices to New York
CHESTER C. KELSEY has been named manager of the Asbestos Cement Products Association, Stuart H. Ralph, association president, has announced. Association offices are being moved from Philadelphia to New York City.

Mr. Kelsey comes to his new position from the National Association of Wholesalers, where he was vice president. He succeeds Donald Tulloch, Jr., manager of the association since its inception in 1927. Mr. Tulloch will expand his personal enterprises in the asbestos and allied fields, in which he has been active for the past twenty-five years.

Mr. Kelsey also succeeds Mr. Tulloch as association secretary. The position of treasurer, formerly held by Mr. Tulloch, has been taken over by Samuel P. Moott, executive vice president of the Ruberoid Company, who will serve until June.

Headquarters for Mr. Tulloch's enterprises will be maintained at Chadds Ford, Pa. He has been licensed to manufacture and market a new asbestos board cutter which recently was developed in the industry. This cutter, which operates on the shearing jig principle, has the endorsement of a number of leading producers of asbestos cement materials. In addition, Mr. Tulloch will manufacture and sell asbestos shingle cutters and other tools. He also will act as consultant to firms outside the asbestos industry.

The Asbestos Cement Products Association's New York offices will be located at 509 Madison Avenue.

Bohannon Uses Novel Ad to Draw Sightseers to Project
DAVID BOHANNON, San Mateo, Calif., well-known builder recently used a novel advertising stunt to stimulate homeseekers to visit his project. During the football season he ran a large advertisement suggesting that people drive through one of his projects on their way to the game at Stanford football field near the development. To make it easy for everyone, he included a map for them to use on the way, showing location of his project in relation to the football field.
NO SPRINGS!
No Adjustments Necessary!
RUGGED AND STRONG
SIMPLE AND EASY TO OPERATE

MADE OF HIGHEST QUALITY MATERIALS
SHIPPED IN ONE PACKAGE
REQUIRES VERY LITTLE
INSTALLATION EXPENSE

Visit Booth No. 16 Congress Hotel, Chicago, February 22 through 26, National Association of Home Builders.

PRECISION PARTS CORP.
NASHVILLE 7, TENN.

NAME
ADDRESS

SAFETY TREADS

GRADUATIONS ON RUNNERS FACILITATE CUTTING OFF FOR DIFFERENT CEILING HEIGHTS

TWO STANDARD SIZES
8' 9" and 9' 9"
FLOOR TO CEILING
WARM FLOORS for BASEMENTLESS HOMES

with the NEW INTERNATIONAL

Warm Air OIL FURNACE

Compact...Easily installed in a niche, closet or utility room PROVIDES WARMTH AT THE FLOOR —WHERE IT'S NEEDED MOST...

Especially designed for wood floors, cement slab or terrazzo floor basementless homes. Warm air is conducted underneath the floors and delivered at the base of walls to eliminate cold air washing down walls and windows. No condensation.

Maintain uniform temperatures from floor to ceilings...all the advantages of radiant heating without the lag. Complete quietness of operation with International's exclusive patented "floating blower"—entirely cradled in resilient springs. Fully automatic.

SEND FOR BULLETIN and SPECIFICATIONS.

INTERNATIONAL OIL BURNER CO., ST. LOUIS, MO.

Higgins Builds New Thermo-Con Cellulor Concrete House

ANDREW J. HIGGINS, industrialist, of New Orleans, La., has developed a revolutionary material for constructing low cost houses on the site. A radically new type of expanded concrete constitutes the shell of the house. Called "Thermo-Con," it departs from the principle of expanded concrete in basic respects. The expansion is gaseous and adds 125 per cent to the bulk after it rises like a mass of beer foam and sets in a few hours like a rock of coral filled with pinhead sized holes. From there on it cures for a year or more.

Two houses have been built, one with an Ingersoll utility unit providing plumbing and heating. The new method of building is a transitional climax of long and expensive research for Higgins. His first research job consisted of an enameled steel house with expanded concrete inside the walls. The present house not only has a different substance in the walls, but especially designed for wood eliminates the shell altogether. The pouring, or in reality, hosing, is done into heavy plywood sectional forms which are removed when the job is done. Another Higgins product called Thermo-Seal is applied outside and supplies the finished texture.

The design of the two houses built for public display was supplied by Rene F. Gelpi, architect. The current design calls for flat roofs with eave overhangs of nearly a yard width. Adding to the external detail is horizontal scoring of lines about a foot apart. The scoring was done with hand motors and abrasive wheels to which the "Thermo-Con" yielded easily.

"Thermo-Con offers an almost unlimited range of architectural designs," says Mr. Higgins, "Construction follows generally the conventional structural procedure of almost any other house. The high speed erection forms are made in panels that are removable, interchangeable, and adjustable to accommodate virtually any (Continued on page 164)
Here’s our formula for making Bruce Hardwood Floors the finest

**GOOD LUMBER**
The quality of hardwood flooring starts with the selection of the lumber. Certain species of oak, for example, are far better than others for flooring. Through long experience Bruce inspectors know just about all there is to know about the species and grades of lumber for flooring. They can look at a board and judge the kind of flooring it will produce. There’s no guesswork here.

**PAINSTAKING DRYING**
This is a hidden quality in flooring that is often overlooked, but so very important. The lumber for Bruce Flooring is first air dried for several months. It is then placed in dry kilns where moisture is further reduced to exactly the right content, neither too much nor too little. Every step in this process is carefully and scientifically checked by kiln drying experts.

**PRECISION MACHINING**
It takes both modern machines and skilled workmen to produce high quality flooring. The many different operations involved (ripping, surfacing, sidematching, end-matching, grading) all must be accurate within very fine limits. At the Bruce Plants a constant check is maintained on machine alignment, dimensions of flooring, fit of tongue and groove, and other details.

**"SCRATCH-TEST" FINISHING**
Even the finest flooring requires the right kind of finish to look and wear its best. Whether the flooring is finished at the factory or on the job, the Bruce penetrating seal method gives best results. This famous finish does not scratch, chip or peel like a surface coating—and will remain in perfect condition for years with little maintenance. It makes floors more beautiful, too.

**E. L. BRUCE CO., MEMPHIS, TENN.**
World's Largest Maker of Hardwood Floors
This Flush Catch Makes a Home More Desirable

Housewives like this gleaming, chrome-plated latch because their manicured nails don't suffer from contact with it... its opening action is so easy yet closure remains positive under all conditions. Specify and install the Adams-Rite No. 16 Catch for cabinets where sleek appearance, easy operation and lasting quality must combine. Many requests for a smaller version of our famous patented Rite Ball Latch No. 234 have resulted in the No. 434... the finest latch of its kind in its size... small enough to fit ¾" doors. Become better acquainted with all three of these latch favorites... Order today... discover for yourself how the modern beauty, smart styling and inherent quality of Adams-Rite solid brass hardware adds sales appeal to a home and increased value in the eyes of its future owners.

FLUSH CATCH No. 16—Chrome plated. (Other finishes optional.) Installs quickly and easily... no mortising necessary. Mount on the surface with one simple cut-out for mechanism. Face size 1½"x1½". List Price per Dozen, $10.32

BALL LATCH No. 234 face size 2½"x2½". Spring compression and ball projection adjustable. List Price per Dozen, $10.32

BALL LATCH No. 434 measures-1½"x3/8". Spring compression pre-set. Adjustable ball projection. List Price per Doz. $6.96

QUALITY HARDWARE FOR NEARLY HALF A CENTURY.

ADAMS-RITE MANUFACTURING CO.
540 WEST CHEVY CHASE DRIVE, GLENDALE 4, CALIFORNIA, U.S.A.

American Builder, February 1948.

(Continued from page 162)

desired plan.

Wall thickness is regulated by means of "Thermo-Con" spacers held in place by ¾-inch compression bolts to absorb without distortion the terrific pressures set up when the new material begins its 125 per cent expansion cycle, a process which takes place during a period of 29 minutes.

The weight and consistency of "Thermo-Con" can also be accurately controlled in mixing the material. Weights may range from 25 pounds to 60 pounds per cubic foot, as compared with hard rock concrete which averages 154 pounds per cubic foot. Higgins engineers find the most efficient type for house construction is 45 pounds per cubic foot of Thermo-Con with six-inch walls. Because of the particularly tenacious adhesive qualities of the material, the bonded molds are treated with a plastic paint, also developed in the Higgins laboratories, which permits easy removal of the forms after the material has set for a prescribed period of 12 to 24 hours.

Windows and door frames in the Thermo-Con house are provided by means of a patented type of framing which is implaced within the mold and becomes a part of it. When the mold is removed, the window frames are in place, ready for hanging of the sash. The new Thermo-Con will neither absorb nor transmit moisture and has very high insulation qualities. Careful records have been maintained on an earlier research structure constructed near the Higgins plant. It was found that temperature in the warm New Orleans area could be con- (Continued to page 166)
Incorporating the newest type smooth running, precision-mated gears, this exclusive geared motor drive brings blade teeth closer to the drive shaft for greater driving power...smoother, cleaner cuts...delivers 5 H.P. blade performance with 3 H.P. constant-speed motor.

Increased blade-reach beyond motor housing makes deeper, more powerful cuts possible with smaller blades. End results are savings on blade costs, saving on power costs, and faster, cleaner cutting.

Three more reasons why it pays to choose the Walker-Turner Radial Saw:

- Gliding ram provides full work visibility...freedom from obstruction...accuracy. Eight ball bearings act over ram travel of 213/4".
- Two positive anti-kick-backs hold the work on both sides of the cutting tool...for double safety in every operation.
- Universal head sways, tilts, locks...in any position for all woodworking operations possible with rotating cutting tool—cross cuts, compound miters, rips, dadoes, routs, shapes, tenons, etc.

MAKE EXTRA PROFITS WITH THESE, TOO.

Before selecting any woodworking equipment, consider the possibilities of the Walker-Turner Band Saw, and the Bench Model Drill Press. They’re fast, safe, sure and SAVING...in a few months extra profits mark off initial costs. For complete catalog write to Walker-Turner Co., Inc., Plainfield, New Jersey.
In the homes you plan or build make the kitchens warm and friendly by specifying these new Kitchen Maid Cabinets of wood. Cozy, comfortable, convenient, they are in pleasant contrast to the cold, laboratory-like kitchens of recent years.

Moreover, these cabinets are smartly styled with gently sweeping contours. They harmonize with any modern appliance, and permit the purchaser to choose the range or refrigerator he prefers without regard to make.

In Kitchen Maid too, you have all the advantages of Composite Construction—the warmth and flexibility of hardwood—the stability and durability of new compositions—the quiet, easy action of sanitary aluminum drawers—the beauty and permanence of factory-applied finishes. Finest furniture construction throughout.

Send coupon for new planning booklet.

A FEW ARCHITECTS AND BUILDERS WHOSE PROJECTS HAVE INCLUDED KITCHEN MAID CABINETRY:


NEW! Aluminum Drawers. Operate smoothly on oil impregnated hardwood guides, silent. No rust, no chipping, no noise.

THE KITCHEN MAID CORPORATION
582 Snowden St., Andrews, Ind.

Please send free copy of colorful new booklet containing 10 practical kitchens with floor plans and working details. I am an Architect, Builder, Dealer.

Name:
Street:
City: State:

(Continued from page 164)

trolled with agitated ventilation only, while the requirements of heating the building in winter have been 25 per cent less than the load required by a similar frame and plaster building adjoining it.

Cost of constructing the demonstration house with the Ingersoll utility unit was $7 per square foot, or a total of $7,600, of which $1,285 was for the utility unit.

New Colored Concrete Adds Appeal, Cuts Costs

RUSCON Laboratories, Detroit, Mich., has a new product which can be used for coloring concrete floor surfaces.

The product, Art-Roc Aggregate, hardens and protects concrete surfaces as well as adding color. The main feature is that the color available in Spanish green or tile red, is "built into" the concrete rather than applied as a purely surface coating. Art-Roc topping is harder than concrete itself.

The finishing operation with Art-Roc Aggregate is very simple. The aggregate is merely sprinkled over concrete at the finishing stage, then troweled and leveled off the same as any cement floor finish.

The Art-Roc processed surface is very hard. On the Moh scale of hardness, it tests 7.

In outdoor applications — terrace floors, service station aprons, walkways and tennis courts — an advantage is the fact that being chemically inert, Art-Roc does not rust.

Nichols Wire & Aluminum Co.
Is New Firm Name

FRANK R. NICHOLS, president of the Nichols Wire & Steel Co., has announced a change in the firm name to Nichols Wire & Aluminum Co. The new name conforms more closely with the present operations of the company, which, Mr. Nichols announced, is now devoting its facilities to the production of products made of aluminum formerly manufactured from steel, along with a number of products which are new to the company, also made of aluminum.
This ad appearing in the March 22 issue of Life and the March issues of "American Home" and "Better Homes and Gardens" can be yours... this ad reaching over 5½ million people, will pull thousands of dollars in sales for you PROVIDED you’re stocked with Firestone Velon screening. There’s no time to lose... the Spring screening season is short. Protect yourself by ordering now—and ordering enough—to cash in when this ad starts working for you. Check your jobber or write Firestone, Akron, for full information and free merchandising aids: instruction folders, window streamers, counter cards, newspaper mats and Velon screening samples.
HOT WATER at High Temperature for Kitchen and Laundry

3 way Service from one unit

HOT WATER at Moderate Temperature for Shower and Lavatory

YOU get three separate supplies of hot water... each at the right and desired temperature... from a single Janitrol unit.

For Comfort Heating: The Janitrol system is a complete factory tested package. When used with modern convectors, the temperature of each room is individually controlled. Janitrol's advanced design is equally well adapted for radiant panel heating installations in floors or ceilings. Extreme compactness makes its use in utility room, closet, adjoining garage or attic, just as practical as a conventional basement installation.

Domestic Hot Water Supplies: The single Janitrol unit also provides a plentiful supply of high temperature water for laundry and dishwashing... and a more temperate hot water for the family's use.

This proven Janitrol system, oil or gas-fired, offers you a wonderful opportunity to reduce building costs... by giving your clients what they need with extra advantages... giving them modern house heating and a hot water heater in one efficient unit, complete, ready for quick, economical installation.

Write today for complete specification data and information on typical installations.
Make All These 10 Cuts faster, better, easier, with a Radial SKIL Saw

These are the 10 cuts you make most often on any residential or commercial building job...they mean profit if done quickly, efficiently with a Radial SKIL Saw:

Radial SKIL Saw's retractable arm is never in your way; cuts set-up time in half, makes day-long cutting easier and faster, has simpler adjustments and gives you cutting accuracy to within 1/100 inch for the life of the machine. Let your SKIL Tool Distributor demonstrate the many other advantages of this outstanding radial saw.

SKILSAW, INC.
5033 Elston Ave., Chicago 30, Ill.
Factory Branches in Principal Cities

In Canada: SKILTOOLS, LTD., 56 Patrick St., Toronto, Ont.

"SKIL Saw is made only by SKILSAW, INC."
You deliver a package of comfortable living whenever you include EMERSON-ELECTRIC Ventilating Equipment in your plans and specifications. For years these sturdy fans have helped architects and builders please hard-to-please clients. On your next assignment, make sure the air you “package” within roof and walls is fan-conditioned for comfort.

For installation data, refer to Emerson-Electric Catalog in 1948 Sweets Architectural File, or write for Folder No. B33 today. The EMERSON ELECTRIC MFG. CO., St. Louis 21, Mo.

PLYWOOD, WHAT IT IS—WHAT IT DOES by Louis H. Meyer. Publisher: McGraw-Hill Book Co., 330 West 42nd St., New York 18, N.Y. Price: $3.50—Covering the composition, structure, and mechanical characteristics of plywood and kindred laminates, this manual provides a complete, concise picture of why, when, where and how to use plywood to best advantage. Valuable data on wood species and a comprehensive analysis of various bonding agents used in the manufacture of plywood and allied products are included. Recommended reading for industrial designers, architects, builders, woodworkers, engineers, purchasing agents and others.

RESIDENTIAL LIGHTING by Myrtle Fahnodesk. Publisher, D. Van Nostrand Co., Inc., 250 Fourth Ave., New York 3, N.Y. Price: $10.00.—This is a comprehensive book on all aspects of residential lighting. It explains in understandable language the "whys and wherefores" as well as the "ways and means" of providing lighting for utility and decoration in the home. Full information is given about incandescent and fluorescent lighting.

CONSTRUCTION ESTIMATES AND COSTS by H. E. Pulver. Publisher, McGraw-Hill Co., 330 West 42nd St., New York 18, N.Y. Price: $6.00.—Here is a practical manual which takes up each element of construction work separately and describes and illustrates simple, arithmetical methods of accurately estimating its cost, taking into account the rise in wages and prices. The book covers both estimating with tables and with diagrams. The various kinds of construction work covered include excavations, structural steel, and material transportation.

HOME GUIDE TO REPAIR, UPKEEP AND REMODELING by William H. Crouse. Publisher, McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 18, N.Y.—Here is a practical aid on home maintenance. In simple language it tells of the various materials, constructions, and systems that make up all parts of the house from roofing and plumbing to linoleum and paint work. Craft techniques and specific repair methods are described in a manner that is easy to follow regardless of experience.
HERE'S A REAL TIME-SAVER
FOR YOUR STANLEY SAFETY SAW!

YOUR PORTABLE SAW becomes a bench saw quickly and easily with this new Stanley No. 158 Saw Track. Made for use with the W7, W8 or W9 Stanley Safety Saw, the Stanley Saw Track is a real time-saver as a guide in making square, bevel and bevel mitre cuts, or cutting lumber to exact sizes. You no longer have to lay out and mark each piece of lumber. Hours of lost time become real productive time. And when abrasive wheels are used, you can cut slate, marble and other hard materials. Get the full details on the labor-saving Stanley No. 158 Saw Track now. Ask your distributor, or write Stanley Electric Tools, 492 Myrtle Street, New Britain, Connecticut.

STANLEY SAFETY SAWS

W 7 Capacity 2 1/2"
W 8 Capacity 2 3/4"
W 9 Capacity 3 1/4"

Glues Give Strength to Factory-Built Houses

THE tons of glue going into factory-made houses are adding strength and durability to those structures. Robert G. Maginnis, of General Industries, Inc., prefabricated builders of Fort Wayne, Ind., reports that Purdue University materials testing laboratory ran some tests on panels produced by his company. The Purdue report shows that glued joints remained firm and intact, with no structural damage, following pressure loading tests on window panel, wall and roof panel sections of the house.

In the roof loading test of the firm's standard house, the report pointed out that the glued joints sustained a live load of 29.9 pounds per square foot, or about one and one-half times the usual 20 pounds per square foot value used in designing many permanent structures for that part of the United States.

The glues being used by General Industries, Inc., are manufactured by the Plaskon Division of Libbey-Owens-Ford Glass Company. About 120 pounds of this synthetic resin glue is used for each of the Indiana company's houses. The glue is used to join plywood to fir studs, rafters and joists to create integral panels or sections of the houses. General Industries builds but one basic house, a four-room two-bedroom unit, designed to conform with conventional structural requirements of the Federal Housing Administration and other governmental agencies. One of the features of their product is the rapidity with which the various sections and panels can be assembled into a completed house.

ROOFERS putting finishing touches on factory-built house held intact with glue
NEW LIGHTWEIGHT GUTTERS THAT CANNOT RUST OR STAIN... LAST A LIFETIME WITHOUT PAINTING!

REYNOLDS Lifetime ALUMINUM EAVES TROUGH, CONDUCTOR PIPE AND FITTINGS

REYNOLDS, the biggest name in aluminum building products, brings you the ideal rain-carrying equipment...at about one-half the price of the only previous rust-proof (but not stain-proof!) material.

Trough is single bead, 5" diameter, in 10' lengths, with slip-joint "S" connectors—no soldering. Weighs less than 3¾ lbs. per length! 3" conductor pipe comes in either corrugated or plain round, 10' lengths. Fittings include inside and outside mitres, trough section with drop, end caps, hangers, conductor elbows.

It's what you've wanted...what your customers will demand. See your supplier now for immediate delivery. Full description in Sweets catalog, or write for literature.

Reynolds Metals Company, Building Products Division, Louisville, Kentucky.

REYNOLDS Embossed ALUMINUM BUILT-UP ROOFING

.004" aluminum that rolls in as easy as felt—reflects sun heat, seals out air, light, moisture—preserves the life and elasticity of asphalt. Rolls 36" wide, contain 10 squares, weigh about 60 lbs. Ideal for re-caps—a world of new business. Write for specifications on 2- and 3-ply new roofs and re-caps.

IMMEDIATE DELIVERY
for the fourth consecutive year

House Beautiful

led all home magazines

in total advertising volume

49,576 lines more
than Better Homes & Gardens

171,341 lines more
than House & Garden

433,212 lines more
than American Home

Better your home... Better your living

Source: "Printer's tak"
Machine Tool Construction
No Other Can Compare

The WILSON will do more work... high precision work... on heavier stock than any other saw of comparable rating.

It is fast... accurate... safe. Fast on ripping or crosscutting at any angle, and able to cut and notch rafters 8 or more at a time.

It may be set by scale, quickly and accurately, for any angle, vertical or horizontal.

The WILSON is precision engineered and ruggedly built for long life and low maintenance costs... on the job... in the yard or in the shop.

Model 3A 3 HP-3PH . . . $495.00 FOB Providence
Model 5A 5 HP-3PH . . . $665.00 FOB Providence
Other Models for All Popular Voltages

FRANKLIN MACHINE COMPANY
Established 1798
EAST PROVIDENCE • RHODE ISLAND

Attention... Distributors and Dealers. There are still some choice territories available. We urge you to write today.
New

**ACME TWIN**

**Offers Most Important Improvement**
**Ever Made in Flat Type Sash Balances!**

Patented

Embossed Face Plate

Provides Protective

"Nest" for Cable Drum,

Eliminating Possibility of Cable Jamming Between

Face Plate and Cable Drum!

Provides

Greater Strength — Longer Life!

- The following additional features made this new ACME TWIN the most practical and efficient sash balances ever designed.
- Tension Governor maintains uniform spring action and balancing.
- Spring Hubs riveted in at both ends, assuring two solid bearing points.
- For single or double installation on double-hung wooden or metal windows.
- Unconditionally guaranteed against imperfections in workmanship and materials.

- Only 3/4” Thick. Fits Flush in Pulley Stile.
- Special Oil-Impregnated Fibre Washer between Cable Drum and Face Plate insures quiet, friction-free operation.

See your hardware or building supply dealer or write direct for literature.

**ACME**
**SASH BALANCE COMPANY**
1626 Long Beach Ave., Los Angeles 21, Calif.

(Continued from page 174)

Realty Co., Des Moines, is chairman of the committee on arrangements, which includes Thomas E. Colleton, president, Clinton Title and Mortgage Guaranty Company, Newark, N.J.; Edgar N. Greenebaum, president, Greenebaum Investment Company, Chicago; and J. Wilson Swan, vice president, Braniff Investment Company, Oklahoma City.

The programs at all three clinics will be somewhat different from those at previous meetings in that they will consist almost entirely of discussions of direct interest to the mortgage lender and investor with few outside speakers.

"This is being done," Thompson said, "because the association is convinced that the immediate years ahead will constitute one of the most active periods ever seen in the mortgage industry. An unprecedented volume of new construction is ahead, which means a heavy volume of financing. The association is turning its meetings into national forums for complete discussion of the problems affecting the industry so that mortgage banking can render maximum service to the public."

**A.I.A. Recommends 4-Point Program for Housing**

A FOUR-POINT program designed to alleviate the nation’s housing situation was adopted by the board of directors of the American Institute of Architects at a meeting in Charleston, S.C., in December. The program calls for an intensive program of apprentice training, gradual elimination of rent control, a conversion program to increase the number of rental units in existing structures and a two-year publicly financed housing program.

Regarding the A.I.A. public housing program, the board, in a formal statement, said: “Under the present FHA Title VI procedure and the veteran’s housing program, the federal government takes most of the risks of present construction costs. But these programs have provided practically no housing for families of low income. Dwelling units vacated by families that are able to afford the cost of new housing have in the past been relied upon to supply the needs of low-income families. This system of "filtering down" fails in the face of the housing shortage. The "filtering down" process will not really begin to operate as an indirect producer of housing for low-income families until the vacancy rate reaches at least five per cent.

"For the specific purpose of meeting the needs of low-income families during the present housing emergency, therefore, we make the following recommendation: In addition to the encouragement of private enterprise in home construction, an immediate resumption of public housing in local areas where there is a critical housing shortage."

American Builder, February 1948.
Highlights for Halls

This six-panel Ponderosa Pine door is "at home" in any room of a house. Like all Ponderosa Pine doors, it is made with machine accuracy and precision. Yet, thanks to volume stock production, costs can be held down. When sliding doors are desired, remember that sliding doors of Ponderosa Pine are available in a variety of styles.

More beauty for halls—more scope for your planning—and more economy for the owner! You get these three advantages when you specify stock design paneled doors of Ponderosa Pine. With their delicate shadow lines and correct proportions, Ponderosa Pine doors add a note of warmth and friendliness to any interior. A wide variety of designs enables you to choose doors which are architecturally appropriate. And the well-known durability of Ponderosa Pine—its ability to sand smoothly, to take paint or other finishes easily and to hold nails or screws firmly—assures economy through long years of use.

"Today's Idea House," 32-page Ponderosa Pine Woodwork booklet, contains illustrations of Ponderosa Pine stock design doors and windows, as well as many photographs. A copy will prove a valuable addition to your files—mail the coupon for it.

For Friendly Living...

Ponderosa Pine
WOODWORK

American Builder, February 1948.
ONE-BORE LATCH

For screen or storm doors. Requires no mortising. Just bore one hole and insert 6 screws. Latching action is in the strike.

STORM SASH ADJUSTER

Opens and closes easily with one hand. Locks shut securely with arms swinging upward. Easy to change over, as arms remain on frame.

BARN DOOR LATCH

Gravity type—won’t freeze or bind. Holds doors open or closed. No pins, nuts or springs to work loose or break. For doors up to two inches thick.

SNAP-ON SASH LIFT

Quick to install—just drill two holes for special screws. Lift snaps over screw heads to give a smooth, streamlined appearance.

HINGES AND BUTTS

Includes special features for storm and screen doors. May also be used on casement sash. Button tip, loose pin type. 3"x23/4".

Holmer Heads Industrial Mineral Wool Institute

N. A. "AL" HOLMER, vice president and sales manager of the Carney Co., Inc., Mankato, Minn., was re-elected president of the Industrial Mineral Wool Institute, an international organization representing manufacturers of industrial insulation at the group’s recent annual meeting in New York.

T. C. Carter, vice president of Eagle Picher Sales Co., Cincinnati, was named vice president. Elected to the board of directors were Mr. Holmer, Mr. Carter, E. T. Detgen, sales manager, Owens-Corning Co., Toledo, and W. H. Hill, president, Baldwin-Hill Co., Trenton, N.J.

N. A. HOLMER

HOW TO GET A Smooth HAND FINISH WITHOUT Costly HAND LABOR

- CABINETS
- DOORS
- MANTELS
- TREADS
- TRIM

EASY cuts no swirls or other abrasive marks. Straight-line action produces "hand sanding" results on white wood, filler and final coats in 1/3 the time. For CURVED or flat, WET or dry work. EASY is not a disc, belt or orbital sander.

Write for literature.

DETROIT SURFACING MACHINE CO.

7458 West Davison  Detroit 4, Michigan

FASTER CUTTING WET or DRY with the NEW HD 48 CLIPPER Masonry Saw

You’ll be amazed how quickly and easily you can cut virtually any special length or shape from the hardest masonry materials. Clippers save time — save material, assure better workmanship on every job.

With the exclusive Clipper design, proven throughout the world and guaranteed to provide the fastest cutting speed and the lowest cutting costs.

DETROIT SURFACING MACHINE CO.

7458 West Davison  Detroit 4, Michigan

American Builder, February 1948.
Let Me Give You Free Proof
That ZONOLITE Insulating Plaster
IS 4 WAYS BETTER!

1 Lighter and Spreads Better.
2 Easier to Mix . . . Can't Freeze.
3 Insulates Against Cold, Heat and Fire.
4 Customer Better Satisfied—Resists Cracking and Chipping.

PLASTERERS AMAZED WHEN SEEING ZONOLITE IN ACTUAL DEMONSTRATION

Even old-line plasterers are amazed by the ease of plastering ... and the marvelous results obtained ... with Zonolite Insulating Plaster! It's so lightweight (only 1/10th as heavy as sand), spreads so smoothly and easily, that it's no problem at all to keep men on the job all the time. Plasterers find that—with Zonolite brand Vermiculite Plaster Aggregate instead of sand—men are less tired at the end of a day's work.

Learn all the facts about Zonolite Plaster Aggregate by asking your lumber and building material dealer for a demonstration now! See for yourself how this sensational plaster aggregate saves and better satisfies customers by resisting cracks and chips.

ZONOLITE COMPANY
Dept. AB-28
135 S. LaSalle Street
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Please send me free all the facts about Zonolite Plaster Aggregate.

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*Zonolite is the registered trademark of Universal Zonolite Insulation Co.
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AT LOWER COST

AMERICAN-
BOWSTRING
WOOD TRUSSES

• American Roof Trusses are
• economical for your building,
• custom built for your require-
ments. Increase your floor
• space by eliminating center
• walls and posts. Made by the
• oldest, largest, exclusive manu-
facturer of wood trusses in
• America. Immediate delivery.
• Write for free catalog today.

Harris New President of
Oak Flooring Group

ALLEN HARRIS, JR., Johnson City,
A Tenn., a former Navy lieutenant
commander, was elected president of
the National Oak Flooring Manufac-
turers’ Association at the association’s
recent annual meeting in Memphis,
Tenn. Henry H. Willins of Memphis
was re-elected secretary.
Mr. Harris, who is vice president in
charge of sales of the Harris Manu-
facturing Company, Johnson City,
succeeds William G. Whitman, who
had asked to be relieved of his duties.
Son of the founder of the 50-year-
old Harris Co., the president-elect is
a veteran of 14 years in the hardwood
flooring industry, most of which were
spent in the firm’s New York office.

ALLEN HARRIS, JR.

TACK FASTER

with

DUO-FAST

Featuring

FOLLOW-THRU DRIVE

There’s nothing more helpful than
an efficient, quality tool. DUO-
FAST Tackers have helped build-
ers all over the country accom-
plish a quick, neat tacking job.
For a true test, try a DUO-FAST
Tacker the next time you install
insulation.

Ask about our free service and parts
policy.

FASTENER CORPORATION
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• Bird Neponset Black Vapor
Barrier applied on the warm side
of insulation prevents “in-wall”
moisture damage—it repels vapor,
keeps insulation at peak efficiency
and stops other condensation evils.

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Barrier costs only about $20.00 to
protect a $10,000 house. Consult
Sweet’s Architectural File, 9b-2.
For sample write Bird & Son, inc.,
175 Washington Street, East
Walpole, Mass.

Specsifications — Roll width:
36”; square feet: 500; approxi-
mate weight: 50 lbs. Asphalt
saturated. Coated both sides
with glossy asphalt surface.
Meets Federal Specifications
UU-P-336 Grade B.

BIRD NEPONSET BLACK
VAPOR BARRIER
BIRD & SON, inc., East Walpole, Mass.
Chicago - New York - Shreveport
Your profits grow two ways when you build with Alwintite Aluminum Windows. You save valuable construction time. You add sales appeal to your houses.

**ALWINTITE** is a completely pre-assembled high-quality window that is very moderately priced. It is delivered ready for one man to install in a matter of minutes—without painting, adjusting or adding expensive "extras."

There's a dividend in sales value, too, because Alwintite is a nationally advertised window home buyers want—it gives any home a smart, "quality" look. Alwintite has built-in, stainless steel weatherstripping and is absolutely weather-tight. The window operates easily throughout its long life and never needs painting.

The sound design and sturdy construction of Alwintite is based on more than 35 years' experience in fine window manufacture. It is fully tested and approved by the independent Pittsburgh Testing Laboratories.

Alwintite offers a complete line of double-hung windows in 12 stock sizes, four styles with screens and storm sash to fit, also mullions, panorama and basement windows. Alwintite is suitable for any style of architecture or any building material. They are available at your local building supply dealer without delay.

If your local supplier does not have **ALWINTITE**, send us his name and address. For literature write Dept. AB-2.

**THE ALUMINUM WINDOW CORPORATION**  
A subsidiary of General Bronze Corporation  
602 STEWART AVENUE, GARDEN CITY, N.Y.  
See us at Booth 86-87, National Home Builders Exposition

**ALWINTITE**  
'aluminum WINDOWS  
**increase sales values!**  
**decrease building costs!**  
...AND ARE AVAILABLE!
NEW stock sizes at new lower prices

ARTCRAFT newest stock railings No. 395

Note the alternately twisted 1/2" sq. spindles and gracefully forged finials that give added beauty to ARTCRAFT stock rails. 1" sq. terminal posts. Drilled lugs attached. FOUR LENGTHS all standard 32" high. PRICED LOW!

2' 6" long... $12.00
3' 0" long... $13.00
3' 6" long... $14.00
4' 0" long... $15.00

STOCK Corner & Single-panel PORCH COLUMNS

Height corners 12" panels:
7' 0" $25.00 ea.
7' 6" $27.00 ea.
8' 0" $29.00 ea.
IMMEDIATE DELIVERY on all ARTCRAFT stock items. Prices net F.O.B. Columbus, Ohio. Terms: Payment with order or C.O.D.

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Send me FREE by return mail my copy of your new 36 page catalogue titled "ART in IRON."

NAME
ADDRESS
CITY
STATE
OCCUPATION

New Division To Handle Ingersoll Utility Unit

EXPANSION of Borg-Warner Corporation's divisional structure to intensify manufacturing and selling of the Ingersoll Utility Unit is in progress. Organization of a new division is in the hands of Roy C. Ingersoll, vice president of the new Ingersoll Utility Unit division which will constitute the seventh Ingersoll-managed division in the Borg-Warner group.

The newly created division will be fully implemented to carry on manufacturing, sales and service operations for Ingersoll-controlled products classified as consumer goods, while the parent division will retain its contract manufacturing business.

The separation of activities was decided upon as the result of a year of experience in the home building field where the Ingersoll Utility Unit is pioneering a factory assembly of household utilities, fixtures and appliances engineered for mass production.

The effect of the change will be to permit the management of the Utility Unit to concentrate on the problems of that product exclusively and effectuate policies which will strengthen its competitive position.

Direct management will be in the hands of Robert S. Ingersoll, a vice president of Ingersoll Steel. All the key personnel in the handling of the Utility Unit and other consumer goods will be changed to the new division.

VIKRE SASH HOLDER

For Windows Everywhere

Worried over high construction costs? Save dollars per opening and time on the job with Vikre New Economy Sash Holders.

No weights—no cords—no mortising. Just drill one hole, that's all. No drafty weight pockets to give you insulation headaches.

For oversize windows, or where prolonged hard usage is expected, Viwire Heavy Duty Sash Holders do the job. Easy to install.

Once adjusted, they require no more attention. Use them wherever there are windows and for windows everywhere.

Tested and proved for years on thousands of construction jobs, Vike New Economy Sash Holders are available through your building supply dealer. For full details write:

J. N. VIKRE CO.
3016 14th Ave. S. • Minneapolis, Minn.
When top wages are buying 30% to 35% less manpower productivity, it pays to use equipment that will set your men a faster pace, take over work that used to be hand labor and help you get costs down before they affect your profit. Here are the latest type machines, engineered by Jaeger for fast mixing and hoisting, operating labor-saving air tools and handling your drainage problems in 1948.

Jaeger offers 4 ways to build faster, cut costs, insure profit.

Power-Loading 65, 115 and 165 Trailers Jaeger-designed to produce big daily yardage with famous “Skip Shaker” loader and the fastest known discharge action. Jaeger-engineered with direct drive through automotive-type transmission, true machined steel drum tracks and bigger engines in specially designed enclosures; gives you heavy duty service with least upkeep and no costly breakdowns on your jobs.

Self-Raising Tower...cuts material handling costs, eliminates hodders, saves time and materials lost in assembling wooden towers. Assembles on the job. Its own hoist raises it. Handles up to 1 ton loads—37 ft. high—67 ft. high with extra sections. Cage takes large cart or 2 barrows. Moves about job on its skids.

Jaeger Hoister...operates self-raising tower. A 17-hp single drum unit. Easily carried on a truck. For larger work, Jaeger “Hydro-Heists” with 2-speed automotive transmission and hydraulic finger-tip control now make all other hoists obsolete.

3½ Speedy—Tops All Tilters. Tows with loading end at rear. Back up to pile and go to work. No turning. And no support legs on discharge side to interfere with wheelers. Barrows can come straight in, or approach from either side and leave without reversing. Exclusive “V”-bottom drum gives double the mixing action of other tilters plus faster, cleaner discharge of concrete, plaster, mortar or bituminous material. Wide axle, springs and Timken bearing wheels insure fast, safe trailing, easy moving around job.

“Bantam” Pumps 3000 Gallons an Hour—other easily portable models handle 7000 to 40,000 gallons: Jaeger “Sure Prime” centrifugals are recognized world leaders for dependable, low cost pumping.

“Air-Plus” Compressors, in portable 60 and 105 ft. sizes, do the work of a crew of men—ditching, spading, driving sheeting, backfill tamping, pavement and rock breaking, slushing foundations, spraying paint, cement, stucco, roofing and waterproofing materials, operating air chisels, hammers, saws, drills, etc.

Send Today for Latest Catalog, Prices and Name of Your Jaeger Dealer (Address Our Nearest Office).
New Booklet on Proper House Nailing Technique

To fill a gap in the technical literature on homebuilding, the Housing and Home Finance Agency has announced the issuance of a new publication, "Technique of House Nailing."

The 54-page illustrated booklet deals with one of the oldest and most basic phases of the homebuilding process, but one on which little published instruction is available.

The study was prepared by the Forest Products Laboratory at Madison, Wis., a part of the Forest Service in the U.S. Department of Agriculture, in collaboration with the Technical Staff of the HHFA.

The booklet contains more than 50 illustrations of correct nailing techniques covering practically everything from double sills and drop-siding to subflooring and shingling, together with the size of nails to be used. The booklet shows the most economical use of nails for effective construction, a factor of particular importance at the present time when the nail supply is short.

No particular design of framing is favored in the booklet and nailing instructions are limited largely to structural details necessary for rigidity and strength, without any consideration as to the trim or other decorative parts.


We're Lucky to Have REZNOR Heaters

Where in-rushes of winter make heating a problem, Reznor gas fired unit heaters serve best. The special "heat exchanger" and BIG QUIET FAN of Reznor "automatic" gas fired heaters quickly and economically provide abundant heat.

Distributing more heat per BTU input, Reznor floor or suspended types with thermostatic control are unequalled for bringing economic comfort to homes, apartments, offices, factories, warehouses, garages, stores, restaurants and auditoriums. Write today for details.

REZNOR
Gas fired unit heaters

Suspected or floor model

A size for every need

REZNOR Co.
MERCER17, PENNA.

Gas Heaters Since 1888

NO BOILERS - NO STEAM LINES
NO FUEL STORAGE - NO FIRE TENDING

Write for price list and catalog...today!

VENTO STEEL PRODUCTS
COMPANY, INC.
247 Colorado Avenue
BUFFALO 15, N.Y.

"USE YOUR ATTIC"

For free information, see your building material dealer or write—

MARCO STAIRWAYS
BOX 7A, LUCCA, N. DAK.

USE YOUR ATTIC! For free information, see your building material dealer or write—

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Where in-rushes of winter make heating a problem, REZNOR gas fired unit heaters serve best. The special "heat exchanger" and BIG QUIET FAN of Reznor "automatic" gas fired heaters quickly and economically provide abundant heat.

Distributing more heat per BTU input, Reznor floor or suspended types with thermostatic control are unequalled for bringing economic comfort to homes, apartments, offices, factories, warehouses, garages, stores, restaurants and auditoriums. Write today for details.

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Suspected or floor model

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NO BOILERS - NO STEAM LINES
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247 Colorado Avenue
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Besides Being Fireproof

not affected by heat—Alumitile is waterproof, chip-proof, impervious to alkali, resists stain and won't crack or peel. Light as a feather, Alumitile is unbelievably economical—costs much less than conventional tile.

There is no end to the advantages of Hastings Alumitile—the amazing ceramic-like tile which is so easy to apply and lasts the lifetime of the home.
With it
You Help Owners
to Decide
on the design and materials for their
fireplaces. Covers the entire field — from classical to ultramodern — in a
wide variety of materials.

Any of these designs lends itself to
the use of a heat-circulating fireplace — built around the

**Fyro-Place**

**Cuts**
**Your**
**Costs**
**Makes**
**Friends**

**Fyro-Place**, the improved Steel Form, saves up to 36 hours labor, plus damper, firebrick, etc. — more than offsetting its cost.

The owner gets a warm-air-circulating fireplace instead of a smoky, draughty, old-fashioned one — at no greater cost. He becomes a satisfied booster for you.

**Send today for this Valuable Book**

**"100 Fireplace Ideas"**

---

**P. H. Olwell Establishes New Lumber, Shingle Firm**

P. H. OLiWELL, for more than 30 years vice president and general manager of the Jamison Lumber and Shingle Co., Everett, Wash., established his own business January 1. The new firm will be known as the P. H. Olwell Lumber & Shingle Co., Everett, Wash. Mr. Olwell is well known in the lumber and shingle industry for his constructive activities for the betterment of the business, especially the shingle business. For two years he served as president of the Red Cedar Shingle Bureau and has been on its board of directors for more than 20 years.

**Aluminum Conduit Goes to South America**

INCREASING application of aluminum conduit for the many electrification projects of Latin American countries has been reported by the Aluminum Import Corporation of New York City. Orders for approximately 2,000,000 pounds of Alconduit have been received during the autumn months.

Barbados, Bolivia, Colombia, Jamaica, Mexico, Panama and Peru are among the countries where important quantities are on order.

Aluminum Import Corporation is distributor in the Western Hemisphere for all of the products of the Aluminum Company of Canada, Ltd., and other manufacturing units in the Aluminum Limited group of companies.

---

**Stainless Steel Sinkbowls**

Legion sinkbowls are seamless drawn from one piece of solid or single clad stainless steel...No welds, rough edges, ridges or grooves to cause leaks, corrosion or cracks where dirt may lodge...Light in weight, yet rigid and long-wearing... Oblong, square, round or oval shapes.

*Write for catalog sheet.*

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**Cabot's Creosote Stains**

FOR DEVELOPMENT BUILDERS

**VARIETY**

- Cabot’s Stains come in a wide color range... clear brilliant hues to weathering browns and grays. You’ll find a pleasing variety of colors for any number or types of houses.

**PRACTICALITY**

- Cabot’s Stains are made with a high proportion of undiluted creosote oil, the best wood preservative known. This means that shingles, clapboards, or siding treated with Cabot’s Stains will have long lasting protection from decay.

**ECONOMY**

- Cabot’s Stains cost less than half as much as good paint... are quick and easy to apply... won’t peel or blister, even on green lumber!

Write Today for color cards and complete information.

**Cabot's**

**Creosote**

**Stains**

**Samuel Cabot, Inc.**

2221 Oliver Building
Boston 9, Mass.
"We use the service of the Adequate Wiring Bureau because the convenience and adequacy of electric outlets and service are . . . an absolute must . . ." says Mr. N. V. Bussmann, builder.

Proof Adequate—
another home-building project featuring Certified Adequate Wiring—in Clayton, Missouri.

What It Means To You: Certified Adequate Wiring makes today’s home buyers tomorrow’s boosters. It helps you build houses that stay modern for years. It helps you sell houses easier and quicker because: (1) it overcomes today’s buyer resistance; (2) it assures promotional support from your electrical industry.

What It Means To The Home Buyer: Adequate Wiring makes even a moderate-cost house, or a remodeled home, modern. It provides not only for today’s electrical needs but for those of tomorrow—including such things as kitchen and laundry appliances which can be covered by a “packaged mortgage.”

What “Adequate Wiring” Means: An adequate electric service entrance; enough circuits; enough convenience outlets; permanent lights and switches.

Here’s What You Can Do About It:
1. Use the services of your local Adequate Wiring Bureau in preparing complete wiring layout for every floor plan.
2. Install Adequate Wiring in accordance with this layout.
3. Obtain your “Proof Adequate”—a certificate for each deed.
4. If there is no Adequate Wiring Bureau in your area, write us for details of how to use “Adequate Wiring” as a sales feature.

Visit us in Booths 64 and 65 at NAHB Exposition, Stevens Hotel, Chicago, February 22nd through 26th.

CLIP AND MAIL TODAY for free information and material!
NATIONAL ADEQUATE WIRING BUREAU, Dept. AB-2
135 E. 44th Street, New York 17, N. Y.
Please send me, without charge, information on how to take advantage of Adequate Wiring as a sales feature.
NAME: 
TITLE: 
ADDRESS: 
CITY: 
STATE: 

Taxes Constitute Home Building Cost Factor Generally Overlooked

A cost factor in new home construction not generally considered in computations is made up of taxes imposed at various points in the manufacture, delivery and installation of materials going into a home today. In commenting on this, Martin C. Huggett, executive vice president of the Chicago Metropolitan Home Builders Association, wrote in a recent bulletin:

"Admittedly prices of homes have advanced in the Chicago area during the period from 1940 before our entry into war. According to the best obtainable figures, the advance is around 80 per cent, squaring closely with advances in many other materials and services but lying in a bracket somewhat below a considerable number."

"Everyone of intelligence admits that the depreciation of the dollar is one of the causes that have contributed largely to these inflationary tendencies and this factor of depreciation has forced, to a considerable degree, advances in labor and materials and built up costs on the books of every home builder.

"Labor has asked for and received more pay—on the building site; in the lumber yards, mills and forests; in the steel mills and the iron mines; and in the factories and other raw material sources of all the constituents of housing construction. These labor costs consti-

(Continued to page 190)
How it Works! Cutaway view shows how Coleman Floor Furnace produces the modern automatic, warm-floor heat that helps sell homes! Note how floor-level air is drawn through cool-air-chamber (A); how air is heated in warm-air chamber (B); how 78% open register (C) lets warm air flow into house fast. Patented streamlined bottom (D) speeds up warm air flow 35%.

"Clean, Automatic Heat"—3 Golden selling words for you! "No fuel-carrying nor fire-building; no ashes or fuel-dirt; less dirt in furniture, clothing, curtains and drapes"—this is powerful selling ammunition, to convince women they want your houses. Coleman Floor Furnaces, gas or oil or LP Gas models, help you make good this promise of a cleaner, easier-to-keep house.

Easy, economical installation. This photo shows a Coleman Floor Furnace in place—in the floor, not on it and not in the basement. No basement is needed, so often you can save the cost of excavation; and you save much costly duct work. Easy to connect with chimney and fuel line. Models from 25,000 to 70,000 BTU input or equivalent; single or multiple installations.

tute in themselves a large portion of the increased cost of materials and the ultimate structures.

"One important factor however, that has followed the constituents of construction from inception to fruition, has not been given full attention in the computations that propose to account for prices that are keeping veterans out of the home buying market. That factor is governmental taxes."

"So thoroughly have taxes spread their tentacles over the industry—in forests, mines, and fields; in mills, factories and shops; in selling, in shipping; on the construction site, in building and handling; in selling the finished product and delivering it to the consumer—that wherever pay or profit is in anyway produced or industry activated, these authorities, through excise and income taxes, sales taxes, real property taxes, license fees, permits and "what have you," take their toll until the aggregate has reached approximately 25 per cent of the price of every home, with proportion running about two to one in favor of the United States Government. When the $10,000 home is sold Uncle Sam and the other tax boys take their $2,500.

"Before the war a different picture appeared. The same house then sold at around $5,500 and our munificent and thoughtful taxes took their 12 per cent with division running about 50-50, amounting in all to some $560, a far cry from today's take."

(Continued to page 192)
“TEXACO Shingles are part of the plans.” Years of weather protection, fire resistance and real economy—plus beauty of pattern and color to fit the architectural design of the house.

“It’s TEXACO for me—right over my old roof.” Home owners in need of new roofs recognize the economy and protection of Texaco shingles laid right over the old roof—plus the added attractiveness of color.

“All my flat roof contracts call for TEXACO Solid Roofing Asphalt.” Texaco is clean asphalt—99.9% pure. It keeps kettles cleaner longer. It strips easily; saves time and labor on the job; mops on easily; spreads evenly; leaves a uniform, long-lasting coating.

“My home and farm buildings are protected with TEXACO.” Today farmers are enjoying a greater prosperity than ever before. Their increased production means increased needs for new farm buildings—new roofs, re-roofing, repair and maintenance. Here is a big market—and there is a Texaco asphalt product for every essential roofing need.
"If Congress and our City and State Administrators are looking for a scape- goat upon which to load responsibility for high housing prices, it might be well to examine their own legislative records, for in them will be found tax and other measures that have gone far to produce present conditions."

Clapp Heads Allied Building Credits Eastern Operations

ALLIED Building Credits, Inc., has assigned A. W. Clapp, vice president, as special representative in charge of eastern operations. With headquarters in St. Paul, Mr. Clapp, who is a senior officer and director of the company, will have direct supervision over all activities of the company in the middle western and eastern states. Allied Building Credits, Inc., is the largest finance company specializing in light construction mortgages and installment notes exclusively. The company works entirely with dealers and contractors.

Blaw-Knox Engineers New National Gypsum Facilities

BLAW-KNOX Company has received a contract for the engineering and construction of new facilities included in an expansion of the Mobile, Ala., plant of the National Gypsum Company. The amount of the contract is approximately $500,000 and covers new equipment, improvements in processing and modernization of buildings.

Show this big, new "Home-Of-The-Week" Design Book to customers. It helps them select their home; helps YOU sell your services! Book shows 150, tested designs of low-cost homes of 4, 5, and 6 rooms. Shows elevations and floor plans. Priced at only $5.

FREE! Unique CONTRACTOR’S "KIT" is sent FREE with design book. Kit has Material and Labor specifications, Bid, Contract, Change of Contract and Release forms. Makes it easy to figure jobs right, avoid disputes; saves you time and money.

PLANS and full specs available from us for all homes shown in our Design Book. Comply with all FHA, VA and local codes. SPECIAL PRICE OFFER; to show you quality and detail of our plans; plans (1 set) for one home, only $3 (list $12.50).

**only $5**

for Design Book, with Contractor’s Kit FREE. Or $1 for Kit alone.

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Architects

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89 Elm Grove Avenue Providence 6, R. I.

AVAILABLE NOW!

**PORCELAIN ENAMELED CAST IRON BATHROOM ACCESSORIES**

A complete line of recessed and screw-on type accessories now available in quantities in standard colors—White, Black and Green.

Display board, shown above, No. D-995 furnished at net cost of applied fixtures only, with stock order.

SOLD THROUGH JOBBERS ONLY.

ASK FOR CATALOG NO. 9.

ILLINOIS PORCELAIN ENAMEL CO.

422 SO. WINCHESTER AVE., CHICAGO 12, ILL.

**MONEY-MAKING NEW Book of 150 Low-Cost Home Designs**

Show this big, new "Home-Of-The-Week" Design Book to customers. It helps them select their home; helps YOU sell your services! Book shows 150, tested designs of low-cost homes of 4, 5, and 6 rooms. Shows elevations and floor plans. Priced at only $5.

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PLANS and full specs available from us for all homes shown in our Design Book. Comply with all FHA, VA and local codes. SPECIAL PRICE OFFER; to show you quality and detail of our plans; plans (1 set) for one home, only $3 (list $12.50).

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**MONEY SAVING "CONTRACTOR’S KIT"**

**AVAILABLE NOW!**

**MONEY-MAKING NEW Book of 150 Low-Cost Home Designs**

Show this big, new "Home-Of-The-Week" Design Book to customers. It helps them select their home; helps YOU sell your services! Book shows 150, tested designs of low-cost homes of 4, 5, and 6 rooms. Shows elevations and floor plans. Priced at only $5.

FREE! Unique CONTRACTOR’S "KIT" is sent FREE with design book. Kit has Material and Labor specifications, Bid, Contract, Change of Contract and Release forms. Makes it easy to figure jobs right, avoid disputes; saves you time and money.

PLANS and full specs available from us for all homes shown in our Design Book. Comply with all FHA, VA and local codes. SPECIAL PRICE OFFER; to show you quality and detail of our plans; plans (1 set) for one home, only $3 (list $12.50).

**only $5**

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89 Elm Grove Avenue Providence 6, R. I.
Integrity of design means the same to the engineers who manufacture Norge appliances and to the architects who build America's most modern apartments... Utilizing all available space efficiently, designing a unit having all the beauty that symmetry demands, compactly arranging all functional parts for greatest convenience—these attributes are shared in common. NORGE DIVISION, Borg-Warner Corporation, Detroit 26, Mich. In Canada: Addison Industries, Ltd., Toronto, Ontario.
The INGERSOLL UNIT
One Package, One Purchase, One Installation

The INGERSOLL UTILITY UNIT is a single, engineered assembly of the fixtures, appliances, controls and fittings of Kitchen, Bathroom and Heating Plant plus all interior plumbing and electrical connections.

THE INGERSOLL UNIT

BATH
Includes tub, combination shower, lavatory, water closet, medicine cabinet, all necessary fixtures and connections.

MECHANICAL CORE
Gas or oil furnace, water heater, complete electrical system, smoke stacks and vents.

KITCHEN
Electric refrigerator, garbage-disposal dish, gas range, and wall cabinets and drawers, fluorescent light, and all fixtures.

INCREASED FACILITIES IN 1948 WILL MAKE UNIT MORE...

Established with Success in 211 Cities from Coast to Coast.
Expansion, and consolidation of facilities, now make it possible to produce the Ingersoll Utility Unit more efficiently and to furnish it so that it is more adaptable to individual plans and needs. The improvements in manufacture allow the architect or builder to furnish expanded kitchens, to offer a choice of heating units and to better meet local building requirements.

Only a little over a year ago the Ingersoll unit was new and untried. Proved practical and economical in 211 cities during 1947, it has demonstrated its value in housing projects of every description. It is adaptable to a wide variety of plans in single home and multiple dwellings.

The Ingersoll Utility Unit is compact, requires less than 80 square feet of floor space and provides more living space for less money. Complete, it eliminates time-consuming specifications — everything comes with one purchase, from one source, right when it's needed. It cuts building time from three to four weeks and can be installed before, during or after construction of building framework.

It will pay you to check the many time and money saving features of the Ingersoll Utility Unit. Send for illustrated brochure and see for yourself how the Ingersoll Utility Unit can fit into your plans for better homes in every housing project.
Facts you should know about

WRIGHT RUBBER TILE

UNMATCHED BEAUTY, COLOR AND QUALITY

Wright Rubber Tile is absolutely the finest flooring tile you can buy! The color goes clear through — that means truly permanent beauty. The wide variety of colors means that floor design and floor style are limited only by imagination. It fits in any surrounding — home, office, church or store.

EXCEPTIONAL DURABILITY AND PERMANENCE

Wright Rubber Tile has super-smooth, non-porous top — resists wear and scuffing. Rubber content dehes dents, chipping, cracking, or depressions. Two types available: Wrightex for greater resiliency and quiet—Wrightflor for harder surface to absorb more punishment with less upkeep.

LOW COST, EASY UPKEEP

Low-cost, easy care goes with every Wright Rubber Tile Floor. Its super-smooth, non-porous top keeps all dirt and stains right on top accessible to light cleaning. Gentle mopping, occasional light dry buffing and once-in-a-while scrubbing keeps it brilliantly clean and glowingly beautiful.

There's nothing that bespeaks more quality and permanence; nothing that lends itself more readily to conventional and dignified, or startling colorful room atmospheres than Wright Rubber Tile. A fifty-year floor, with long-run economy and simple upkeep that make it a truly modern aid to finer building. Send for illustrated leaflet and information to TAYLOR MANUFACTURING CO., 3050 W. Meinecke Avenue, Milwaukee 10, Wisconsin.

American Institute of
Draftsmen Offers Many
Services to the Industry

THE American Institute of Draftsmen is an organization comprised exclusively of draftsmen in the architectural engineering fields. It was started by a group of draftsmen about five years ago who had the foresight to realize that an organization exclusively for draftsmen was needed for educational and professional purposes.

The American Institute of Draftsmen was first organized as a national body with its membership reaching into many states of the union and consisted of educators in architecture and engineering, architects, engineers and draftsmen in all technical fields. Because its membership is widely scattered, it became cumbrous to meet and conduct the necessary business of the A.I.D. It was therefore necessary to organize a chapter of the A.I.D. which now operates as New York Chapter No. 1 and meets monthly to exchange views on the present trend in the drafting field and gain knowledge of the many manufactured products which confront the average draftsmen by means of sound films and representative speakers who are always ready to answer perplexing questions of the "screened" subject.

The aims of the A.I.D. are to help the draftsmen in an educational manner and to keep the drafting profession on a high plane. The A.I.D. also offers assistance to the employer of draftsmen, be he an architect, engineer or an industry, by selecting for his or their requirements qualified draftsmen without any charge or fee.

The A.I.D. is not an employment agency nor is it associated with any labor organization, but offers assistance to the employer as a liaison agency to promote a mutual assistance for them.

The A.I.D. offers other special services to its members without any charges, such as:

The free use of its technical library.

The benefit of purchasing of technical supplies and equipment at reasonable discounts.

A monthly periodical with drafting news and for the member to express his views and opinions.

Drafting information through the Technical Committee.

AGC Annual Convention in
Dallas February 9 to 12

APPROXIMATELY 1,200 delegates from more than 4,500 contracting firms throughout the nation are expected to meet in Dallas, Texas, February 9 to 12 for the 29th annual convention of the Associated General Contractors of America, Inc. Interest at the meeting will center around problems to be encountered in an expected 1948 construction volume exceeding $82,000,000.

F. W. Parrott, of the C. F. Lytle Co., Sioux City, Iowa, is president and H. E. Foreman, Washington, D. C., is managing director.
Can you afford NOT to have a STANLEY-CARTER LOCK MORTISER?

• If you mortised 75 doors last year, a Stanley-Carter Lock Mortiser would have paid for itself and from now on, for years to come, would put money in your pocket every time it cuts another mortise.

EASY TO USE — Weighs just 26½ lbs. — sets up on the job and operates from any light socket. After 10 minutes instruction, any carpenter can turn out neat, clean mortises in 30 seconds flat. Depth and length of the mortise are controlled by two simple adjustments while width of the cut is governed by the size of the cutter used. Two self-centering clamps insure that every mortise will be in the center of the door regardless of thickness. After the first mortise is cut, height rods can be inserted to insure that all succeeding doors have the mortise properly located.

WRITE TODAY for full information about Carter Door Sets. Perhaps you'd like to have a Stanley-Carter power tool expert call on you and examine your whole setup with you. Maybe you'll see ways to cut costs right down the line. Stanley Electric Tools, Stanley-Carter Sales Dept., 534 Myrtle St., New Britain, Conn.

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MR. DEALER: Here’s that EXTRA PROFIT LINE! ORNAMENTAL IRON ...Now available in stock sizes and designs.

No. 105 Porch Post (Flats and Corners), with No. 23B Canopy Brackets and No. 3 Screen Door Grille in harmonious combination add distinctive beauty to this home.

• You can sell Genuine HAND-WROUGHT ORNAMENTAL IRON like any other building material in stock sizes • COFFMAN ORNAMENTAL IRON is produced in a variety of graceful stock designs and sizes by modern methods which make it available at low cost—yet none of the beauty of the custom made product is lost • COFFMAN ORNAMENTAL IRON now at low cost means sales in a wider market

Send for catalogue of designs, sizes and prices—and name of your nearest Dealer

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• Screen Door Grilles
• Porch and Balcony Posts
• Silhouette House Numbers
• Foundation Access Doors
• Low Cost Entrance Rails
• Railings—Stoop, Porch and Balcony

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The R. T. Coffman Co., Inc.

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ORLANDO, FLORIDA

Bernard L. Johnson

It was with a deep sense of personal loss that the associates of Bernard L. Johnson, western editor of American Builder, received the news of his death at Seattle, Wash., on Dec. 22. Death was as sudden as it was unexpected. The immediate cause was an embolism which developed while he was confined in a hospital with what appeared to be a minor ailment from which he was expected to recover completely.

Confident that he would leave the hospital and return to his office in a few days, Mr. Johnson was engaged only a few hours before his death in the development of ideas for improving and expanding his contributions and services to the American Builder, to which he had devoted his entire business career, and most of his energies for many years.

High ideals of service, and an uncompromising sense of loyalty and responsibility characterized a long and distinguished editorial career that began in 1907.

Bernard Johnson was born and reared on a farm near Ypsilanti, Mich. His early boyhood was spent in a manner common to most farm youths of the time, attending country public school, helping with the chores during the school term, and doing the work of a farm hand during the long summers.

After completing high school, he enrolled at Kalamazoo College, Kalamazoo, Mich.; studied there for two years; then left to enter the University of Chicago, where he received the degree of Bachelor of Arts in 1907.

After spending a year as an architectural draftsman, Mr. Johnson joined the staff of American Builder, and in a short time became editor, a post which he held for 34 years until his retirement in 1942 to establish his home in Seattle, Wash and to take the position as the western editor.

He was an active, life-long member of the Baptist Church, and a deacon of the University Baptist Church of Chicago for many years.

He was a generous and regular contributor to numerous charities, particularly to institutions caring for orphaned and under-privileged children. His affection for Kalamazoo College continued throughout his life, and the college annually received a substantial donation from him.

He was a well-known figure in the building industry because of his notable achievements as an editor, and his frequent appearances as a speaker at industry meetings. He wrote and edited numerous books on home design, home building and construction techniques. In 1938, he received the Industrial Marketing award for the most valuable series of editorials submitted by any business magazine.

Mr. Johnson was a member of the Hoover Commission on Home Building and Home Ownership; a past president of the Chicago Association of Business Paper Editors, and winner of the Associated Business Papers prize for the best editorial written in 1931. He was active in the campaign for formulation and passage of the National Housing Act, conceived by the American Builder. He contributed much to the sound promotion of modernization and new home building under Titles I and II of the Act. He was recognized as an authority in his field, and frequently was sought for advice by manufacturers of building products. As western editor, his counsel was a valuable asset to the staff.

Mr. Johnson is survived by his wife, Ruth Wheaton Johnson, Seattle; a daughter, Mrs. Melinda Gutt, Redlands, Cal.; and two sons, Dr. Maxwell A. Johnson, LaCrosse, Wis., and Dexter W. Johnson, managing editor, Western Building, Portland, Ore.
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4. Prompt Delivery!...Your Order Shipped Without Delay!

STEELCRAFT STEEL CASEMENTS Lead the Field in Structural Strength and Precision Construction!

<table>
<thead>
<tr>
<th>Load (Pounds)</th>
<th>Casement 1</th>
<th>Casement 2</th>
<th>Casement 3</th>
<th>Steelcraft</th>
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Here is ... vivid, indisputable proof of the superiority of STEELCRAFT Steel Casements! When analyzed with the steel casements of three other leading manufacturers, STEELCRAFT showed 15% less pressure-induced deflection than the next strongest window, 34% less deflection than the weakest window tested. Results testify that STEELCRAFT is built to withstand from six to eight times the normal masonry load on openings of the width tested. To these advantages of engineered construction and durability add STEELCRAFT'S factor of prompt delivery...and you have the reasons why you should insist on STEELCRAFT Steel Casements—test-proved to satisfy you and the home owner.
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GABLE TYPE

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The Service will continue to move forward—keeping abreast of current developments in the home building field. It can be of very practical value to you now—and of increasing value as the public continues to demand more and more in home comforts, home convenience, and home economy.

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American Builder, February 1948.

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Stop Waste of Floor Space!
SPECIFY VANISHING DOORS

Floor plans above show the same bedroom, closet and bath arrangement with hinged doors and with vanishing doors. Note absence of "dead" areas in plan utilizing vanishing doors.

Designed for Use in 2 x 4 Studded Walls
Richards-Wilcox No. 719 Vanishing House Door Hanger and Wood Lined Track installation is ordinary 2 x 4 studded house partitions, showing application of hanger and track to header and door.

Whether it's a spacious mansion or the tiniest kitchenette apartment, wasted floor space is wasted money! And every hinged door wastes the floor space covered by its swinging arc. With vanishing doors there's no floor area lost . . . furniture, pictures and fixtures can be placed correctly and conveniently; rugs can be laid close to the wall line; color harmony is not disturbed by the "wrong side" of an open door. For all interior doors, it's smart and economical to install vanishing doors.

Specify R-W Vanishing Door Hangers and Wood Lined Track

For smooth, quiet vanishing doors, be sure to specify Richards-Wilcox Vanishing Door Hangers and Wood Lined Track. Compact and noiseless in operation, R-W Vanishing Door Hangers are equipped with Ollite self-lubricating bearings. Hanger wheel rolls in V-shaped groove in wood lining of steel track to keep wheel centered at all times—no metal-to-metal contact to cause noise or friction. Get complete details from your nearest Richards-Wilcox office—free consultation available without obligation.

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- Fire Resistant

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Areas exposed to unusually high winds can be protected further by applying roofing cement under the tabs.
One sure way to keep prospects from saying, "OUCH!" when they read your price tag is to offer more real value per dollar than your competitor does... and one of today's outstanding home equipment values is the...

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Safway structures are rigid and sturdy—distribute loads and strains evenly throughout the entire steel framework. Safway carries the approval of the Underwriters' Laboratories. The all steel construction eliminates fire hazards and other dangers inherent in wood scaffolding, and offers minimum wind resistance.

This tubular steel scaffolding comes in standard units of several types which are quickly assembled to fit the contours of any structure, and may be erected to any height required. Basic units include welded end frames, cross bracing, bridging members, guard rails, ladder sections, etc. No special tools are required—any man can easily handle the job, using the simple coupling pins and studs provided.

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With the new Bilt-Well Line you can supply the woodwork for a complete job including everything from Basement Windows to Attic Louvers, all with Bilt-Well Woodwork Products.

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American Builder, February 1948.

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TWO TYPES FOR A THOUSAND USES NOW AVAILABLE...

1. PLASTER BASE—Monolath. Prevents vapor and moisture condensation inside of outer walls. No more soggy, packed-down insulation—no more ice formations inside the walls. No chance of walls sweating—the cause of most plaster failures. Gives rigid support. Plaster clings better, is stronger—dries slower—from one side only. Comes in standard sizes. Priced competitively with ordinary sheet plaster base.

2. DRY WALL CONSTRUCTION—May be sealed and painted any color, or wallpapered. Filler or tape conceal joints perfectly. Use also as backerboard, as roofing base, as sheathing board, as flooring and linoleum underlayment, as a general utility construction board. Wonderful for basementless houses and concrete slab construction. Waterproof. Use on the farm for lining poultry houses, barns, silos, sheds. Stands all weathering. Easy to cut. Sizes to 4 x 8 ft. Costs less than ordinary building boards.

Also Kapco Board with knotty pine and light walnut wood grain finishes on one side now available!

See Kapco Board at the National Association of Home Builders Convention in Chicago, February 22-26
When you specify "Pyrofax" gas you solve three important appliance problems for homes beyond the gas mains. Your clients will enjoy the city conveniences of a Magic Chef range, a silent Servel refrigerator, and an automatic water heater—all operated by this economical and dependable gas.

"Pyrofax" gas gives instantaneous heat. The automatic above-ground system provides uninterrupted service. For complete information, see our catalog in Sweet’s File, or write to "Pyrofax" Gas Division, Dept. B-4, Carbide and Carbon Chemicals Corporation, 30 East 42nd Street, New York 17, N.Y.
Catalogs and HOW-TO-DO-IT INFORMATION

396—SILENT AUTOMATIC OIL BURNERS—are featured in several booklets prepared by the Timken Silent Automatic Div., The Timken-Detroit Axle Co., Jackson, Mich. One booklet titled "If Fuel Bills Were Painted On Roof Tops" gives reasons why scientific design of the Timken oil burner helps cut fuel bills; the other named "A Sensational New Timken Town" features an oil burner designed especially for the small home market.

397—COMFORT UNLIMITED WITH MODULFLOW—is title of an informative and highly readable 20-page booklet issued by the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. Modulflow is a principle of heat control, rather than a single device, achieved through the installation of instruments to heating systems. The booklet explains the theory as well as describes and illustrates various instruments available for hot water, warm air, steam and radiant panel heating units.

398—WEATHERSTRIP EQUIPMENT—The Master Metal Strip Service, 1720 N. Kilbourne, Chicago, Ill., has a new 72-page catalog on Weatherstrip Equipment and Master No-Draft sash balances available to the trade. Their Master No-Draft sash balance is designed to replace weight and pulleys used on double-hung windows as well as furnish complete weather-stripping.

399—METAL FRAME CONSTRUCTION—A book on Everwear metal frame construction is available from Southern States Iron Roofing Co., Savannah, Ga. Contents are largely pictorial showing typical installations and general construction details. What metal construction is, what it means to builders, and suggestions on how to adapt it to individual needs completes make-up of this book.

400—PRESERVATIVE-TREATED LUMBER—and fire-retardant lumber are covered in a four-page folder issued by the American Lumber and Treating Co., 332 S. Michigan Ave., Chicago, Ill. Besides describing properties and characteristics of forest products alloyed with wood preservative salts and fire-retardant salts, suggestions are offered on proper construction usage of treated wood and standard specifications for treatment.

401—BEAUTY IN THE KITCHEN—is the title of a brochure on the latest model Hardwick stove. This model, named The Challenger, features "upper level cooking" which means an oven and broiler sufficiently elevated to eliminate bending and lifting. The brochure illustrates how this feature incorporated into a stove of ultra-modern design adapts itself to any type kitchen. The Hardwick Stove Co., is at Cleveland, Tennessee.

402—PRESTILE WALL TILEBOARD—new low-cost wall covering for remodeling or new construction is graphically described in a handsome full-color folder "As Modern as Tomorrow" issued by Prestile Manufacturing Co., 2860 Lincoln Ave., Chicago, Ill. The beauty of Prestile patterns and colors, its ease of installation and its durability are fully illustrated.

403—STEEL GRAVITY FURNACE—featuring new methods of welding, new die formed radiator and other advanced features in steel furnace construction is the subject of a folder offered by the C. A. Olsen Manufacturing Co., Elyria, Ohio. Highlights and specifications of this new square-cased furnace named Luxaire are illustrated.

404—ATTIC VENTILATION CODE—published by the Propeller Fan Manufacturers' Association, 5-208 General Motors Building. Detroit, Mich., lists the basic requirements of satisfactory attic ventilation. Such items as variations in house structure, location of ventilating unit, air changes per n' aut, air velocities, discharge vents, and installation and operating suggestions are covered.

405—LEAK PROOF TUB HANGER—designed to keep bath tubs from settling and prevent cracks and leaks at tile or plaster line is the subject of Catalog G, A.I.A. File No. 29M, published by William B. Lucke, Inc., Wilmette, Ill. Complete specifications of the various type hangers are accompanied by pictures showing their application to every size and style of bath tub.

406—CONCRETE JOISTS—The Lith-I-Bar Co., Holland, Mich., has released a colorful booklet featuring their lightweight reinforced concrete joists. One section covers their application to home building. Some of the advantages of this type joist, illustrated and described, are the elimination of termite and vermin problems, and the elimination of squeaky floors. Concrete joists offer the utmost in fire protection and improve the acoustics of a room, the booklet points out.

407—THE STORY OF PENN PACKAGED HEAT—is the title of a booklet on a new gas-fired heater made on the unit principle (the principle used in automobile manufacture) by the Penn Boiler & Burner Manufacturing Co., Lancaster, Pa. It is the first and only heater delivered complete, or packaged, with all parts and controls enclosed, the booklet states. Different type models, their dimensions and specifications complete the contents of this 9-page booklet.

408—ALUMINUM WINDOWS—Catalog No. B48 released by the Aluminum Window Corp., Stewart Ave., Garden City, L.I., N.Y., deals principally with the installation of the Alwintite aluminum windows. Directions for installation are illustrated with regular working drawings. The Alwintite windows are designed to blend harmoniously with any style exterior.

409—RESIDENTIAL STEEL WINDOWS—title of a profusely illustrated 32-page book dealing with steel windows and other products made by Truscon Steel Co., Youngstown, Ohio. Specific information about Truscon windows are illustrated with typical installations. Line drawings of sizes, styles, and construction details accompany specifications. Truscon line includes double-hung windows, casements, storm sash and screens, basement and utility windows.

409—WEBSTER SYSTEM RADIATION—is described and illustrated in a handy 16-page working manual prepared by Warren Webster & Co., 17th and Federal Sts., Camden, N.J. In concise easy-to-read style the book tells story of convection heating, covers types of enclosures and features of mechanical construction, and gives tips on how to select correct size units. Pertinent technical data on design and installation are illustrated with mechanical drawings and charts.

SERVICE COUPON—CLIP and MAIL to CHICAGO

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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:

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*Please note that occupation must be stated if full service is to be given.
OMASOTE
gets a letter

Long Branch, New Jersey
October 22, 1947.

Dear Sir:

I am one of 56 men who constructed and then lived in the Byrd Expedition buildings (at Little America, Antarctica for over a year in 1934-35) which were assembled from Homasote lined sections left over from the establishment of the first Little America in 1929. These sections were already the veterans of five years' storage in damp New Zealand warehouses, but were still so strong and easy to saw, fit, and assemble that we were considerably surprised. But when we had dug down to the old camp and found also that the Homasote in the original buildings was in perfect condition after one year of soaking in melted snow (1929-30) and five years under the terrific pressure of 20 feet of ice, we were completely sold. When other wallboards would have pulped, cracked or dissolved, Homasote remained firm and trustworthy insulation against blizzards and temperatures to minus 75!

I am not in the habit of using my few leisure hours to throw bouquets, I have too much to do, but I feel that merit deserves reward, so here goes—believe it or not, the above remarks are paled into obscurity by my present opinion of your fine product. When, as a technical observer, on the recently concluded Navy "Operation Highjump," I was one of the few who were privileged to dig down 12 feet to our old home 10 miles from the newest camp-site. I found the 18 year old Homasote in the walls and ceilings of the "Messhall" and "Science Lab" (the only buildings we could reach) absolutely unharmed by time, water, or cold. Hundreds of tons of ice had forced up the wood floors and pushed down the ceilings until they met in the center of the rooms, and puddles of ice everywhere evidenced the repeated freezing and thawing of the many seasons, but the walls were straight, unbuckled and scarcely stained.

Later, when our Expedition was leaving for its return to the States (February, 1947) and I had occasion to make one last run to the old camp to mark the entrances against the future, I hacked out a piece of the messhall wall to send to you for analysis. I am mailing it to you for whatever purpose you may wish to use it, and if you ever want me to convince some doubting customer of yours, just lead me to him. At least I can assure you that when at last I build the home I've been planning throughout several years of roaming the world, the insulation will emphatically be Homasote.

Yours sincerely,

Amory H. Waite, Jr.
Radio Engineer
BAE II 1934-35 and 1946-47

P.S. I forgot one item. When I was carrying your specimen up the rope ladder from the whaleboat to the ship, it fell out of my pack and drifted away to sea. To my amazement its generation-old waterproofing qualities were still intact for it kept floating! Another boat speared it with a boat hook an hour later and returned it to me, punctured, but still definitely usable wallboard. The hole, therefore, is a badge of honor rather than a defect.

Weatherproof
HOMASOTE
gets a letter

Long Branch, New Jersey
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Like hundreds of other experienced heating dealers, this Indianapolis firm features Even-Temp Oil Floor Furnaces! Their reasons? Even-Temp is more efficient, better made, easier to install, and gives better performance than any floor furnace they ever sold! There are lots of other reasons, too, all of them to the advantage of Even-Temp dealers. Begin now enjoying the sales and profits that can be yours with Even-Temp. Write today for full information.

Even-Temp is a complete packaged unit, wired and assembled, ready to install. Requires minimum floor space, minimum installation time, minimum servicing. Even-Temp floor furnaces, as well as space heaters, are available in a complete range of sizes.
EVERYBODY TALKS ABOUT THE WEATHER
but
Certified INSL-COTTON does something about it!

Whether it's the chilling cold of winter or the sweltering heat of summer, Certified* Insl-Cotton insulation tames the elements the year 'round. It sets up a barrier to keep heat where it's wanted—helps keep homes up to 30% warmer in winter, with resulting fuel savings—lowers temperatures as much as 12° in summer.

No other type insulation available today can compare with Insl-Cotton in efficiency—it's heat transmission factor is the lowest of any available type of insulation material. It is lighter than any other type of insulation, putting less strain on the building it insulates. Insl-Cotton is easy to handle and install, unrolls like a blanket. It is flame-proof and fire-retarding—will not sustain combustion. Vermin and moisture resistant, Insl-Cotton is made of all-new materials—no second-hand material is used in its manufacture. It is an excellent sound-deadening material and exceeds government requirements in FHA, FPHA and HH-I-528 specifications.

*Certified Insl-Cotton is manufactured under Federal supervision. Every lot is tested for weight, density, thickness, and flame-proof qualities. Insl-Cotton will permanently retain its flame-proof qualities... you are certain to get what you buy.

INSL-COTTON DIVISION
TAYLOR BEDDING MFG. CO. TAYLOR TEXAS
The Originaters of Flame-Proof, Fire-Retarding Cotton Insulation

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TRIBUTORS—Some

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and temporarily

serving Insl-Cotton.

Write for details.

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INSL-COTTON DIVISION
TAYLOR BEDDING MFG. CO. TAYLOR, TEXAS

Gentlemen:

Please send specifications and full information on INSL-COTTON.

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STAINLESS STEEL SINKS AND CABINET TOPS

They give you the beauty, permanence and sanitary excellence of Stainless Steel, plus the skill and experience of Just's specialized craftsmen. Important among the differences is our EXCLUSIVE Radiiluxe DESIGN...

...IN-BUILT SPLASH RIM on bowls prevents water from splashing on floor and clothing... DOUBLE-PITCH DRAINBOARDS give fast, perfect drainage, with no channels to clean...no grooves to endanger fine glassware. All joints are welded and polished; bowls have radius corners vertically and horizontally. These are just a few of the qualities that add extra value and distinction to Just Line products.

Custom-built or Standard Sizes

For home kitchens, hospitals, schools, hotels, restaurants, institutions, office buildings, as well as for marine and industrial installations...including SCULLERY SINKS in stainless steel, or hot-dip galvanized after fabrication.

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Stainless steel sink bowls—flat rim or ledge back

Just Manufacturing Co.

4610-30 W. 21st Street, Chicago 50, Illinois
"I Like
Supertreated Pol-mer-ik
because my customers like extra gloss!"

Master Painter, RAGNAR ERICKSON, is glad that Supertreated Pol-mer-ik is again available. For its better leveling, smoother brushing qualities result in the higher gloss so valued by all paint customers.

Supertreated Pol-mer-ik, with the special processing that toughens its molecular structure assures the painter of a more rugged, more beautiful paint film ... assures his customers of a thoroughly satisfactory paint job.

So, for better painting use Supertreated Pol-mer-ik — the finest linseed oil science has produced.
BENDIX automatic Home Laundry Equipment is installed in this Home LOOK-AHEAD BUILDER

UTILITY & LAUNDRY

IF YOU'RE A
"LOOK-AHEAD BUILDER?...

You'll make Bendix Home Laundry equipment part of the blueprint now!

What's it worth to your customers?
Certainly it's worth a great deal to a homebuyer to know that the house is planned for better, easier living—and that it includes a planned laundry!

A Bendix automatic Washer already installed is a powerful urge to rent or buy. This is particularly true when the customer discovers that any or all Bendix equipment installed in the home can be bought on a package mortgage plan with only a small increase in monthly payments!

And what's it worth to you?
Whether you build to rent or to sell—units are more desirable when Bendix-equipped. Any home that's planned for easier living makes a housewife's eyes light, up! And Bendix takes the curse off the toughest home-making job of all—the weekly wash!

Bendix Home Laundry equipment is equally practical—equally desirable—whether you are building horizontal, vertical, or garden units.

And a look through a list of the progressive builders who install a Bendix now—even in a seller's market—proves that the "big guns" of building look ahead. They know that anything sells or rents today that keeps the rain off the customer's head.

But tomorrow is the time when a reputation for giving more for the money—in quality, in design, and in work-saving features—will keep them—and you—building and selling when the advantage-seekers of today are just a memory!

At the Home Builders Show come to BOOTH 15 for the Bendix profit story!
See the Bendix exhibit—hear the Bendix story—see how Bendix boosts builders' sales and profits! Come to Booth 15 at the National Home Builders Show—Chicago's Hotel Stevens—Feb. 22 to 26!

Get your Architect's Handbook!
Get your copy at Booth 15—or write to Bendix. Because here's a little book that does a big, big job! Gives complete layouts of labor-saving, sales-making home laundries. It's invaluable to builders!

DISPLAY THE SIGN OF A "LOOK-AHEAD BUILDER"
It means profit today and tomorrow!

BENDIX HOME APPLIANCES, INC.
SOUTH BEND, INDIANA

Leave room for the new Dryer, too!
Fit companion to the Bendix automatic Washer—the amazing Bendix automatic Dryer! No more unsightly drying yards—no dependence on favorable weather conditions for drying! An essential part of modern home laundry planning!
HERE'S WHY...

1. **RECOGNIZED PUBLIC ACCEPTANCE**
   Completely invisible...known quality leadership...backed by nation-wide advertising, it's easier to sell.

2. **EASE OF OPERATION**
   Finger touch control with full opening of both upper and lower windows appeals to every customer.

3. **SIMPLIFIED INSTALLATION**
   Just drive in two fasteners...screw in one screw...10 sizes fit 95% of all new or old windows.

4. **LOWER COST**
   Eliminates weight boxes and mortises. No special frame preparation.

5. **NOTHING TO EXPLAIN AWAY**
   No tapes...no cables...no exposed tubes...no corrosion...no sticking...no squeaking.

**ADVERTISED TO 134,445,000 READERSHIP**
In such consumer magazines as—
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**FOR COMPLETE SPECIFICATIONS AND INSTRUCTIONS**
Write today for new fully illustrated, specification and installation catalog. See how Grand Rapids Invizibles fit into your next set of plans!

**GRAND RAPIDS HARDWARE COMPANY**
Grand Rapids, Michigan

**Quality Leaders in Sash Hardware for 50 Years**

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**WATERFILM BOILERS, Inc.**
A DIVISION OF L. O. KOVEN & BRO., INC.
154 Ogden Avenue, Jersey City 7, N.J.
Plants: Jersey City, N.J. • Dover, N.J.

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**ECONOMICAL, QUICK HEAT!**

From small homes to apartment houses and industrial plants, there's a KOVEN WATERFILM BOILER for every heating need! Incorporating all the latest scientific improvements, WATERFILM's patented construction insures even temperatures in every room and an abundant supply of domestic hot water at all times.

Attractively enclosed in modern jackets, WATERFILM BOILERS are available in many models and sizes made for automatic firing with oil, stoker or gas. For larger installations, the versatile Sectional Series can be taken through a 2-ft. door without expensive alteration or rigging costs and can be easily enlarged by adding sections. Write for a free copy of the illustrated booklet.

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**EVEN ROOM TEMPERATURE THROUGHOUT THE HOUSE!**

The WATERFILM boiler in this modern house is 20% below the parlor floor and 5 ft. from the ceiling...yet it is completely out of sight, hearing, and smell! It will not cause an odor...it will not cause a "hot spot..." nor a "cold spot..." on the floor of any room.
From basement to attic...

Curtis SILENTITE means

More Value!

The new Curtis Silentite double-hung window unit is 20% more weather-tight than the famous original Silentite introduced in 1932. New construction includes floating weather-strips that press snugly against moving parts of window, yet permit easy operation. And, of course, Silentite has no weights or pulleys. Photo shows Silentite double-hung units flanking a Curtis picture window.

Silentite casements combine better appearance, easier and more dependable operation and greater weather-tightness than ordinary casements. They were developed after years of research and testing. The Silentite casement is a complete unit with all parts machined and prefitted. It is wood, of course, for lasting satisfaction. This is an exterior view of the large illustration above.

This full circle Curtis window may be opened for ventilation to half its area. It is fully weather-stripped. Fits any architectural style. Unit consists of frame, prefit circle window, screen and operating hardware. Sash opens from inside without disturbing screen. Special combined lock and fastener holds sash securely in a closed, half open or fully opened position. Over-all diameter is 2'-0".

The popularity of the picture window is growing rapidly for both new work and remodeling. There are many possible combinations with Silentite windows flanking the stationary sash, or these sash are often used alone, as pictured above. This is Curtis Design C-2735 and is made in two sizes—5-0x4-6 and 6-0x4-6. This sash is shown on far left with double-hung Silentites on either side.

Silentite basement unit consists of frame, sash installed with all operating hardware and weatherstriped, and prefit screen. No hardware visible on outside. Window operates from inside only with full control of sash without disturbing screen —opens to any degree up to entire opening area. No rattling or vibration. Made in commonly used sizes for any wall construction.

Silentite WOOD windows are made by the manufacturers of Curtis Woodwork. Curtis has made windows and fine woodwork since 1866. When you specify or recommend "Curtis Silentite," you guarantee your clients and customers honest and lasting window satisfaction.

MAIL THE COUPON

CURTIS COMPANIES SERVICE BUREAU
All-25 Curtis Building, Clinton, Iowa

Gentlemen: Please send me booklet on Curtis Silentite Windows.

Name.................................................................
Address............................................................
City..............................................................State
I am ( ) Architect, ( ) Contractor, ( ) Prospective Home Builder, ( ) Student.
(Please check above)
Wherever exacting performance is required—in the shop or on the job—H & A Woodworking Tools can be used to advantage. Their up-to-date design and high quality workmanship make each tool a long term investment that pays off in increased efficiency...lower operating costs...and longer service.

Immediate Delivery on ALL Models

H & A 14" BAND SAW
Largest capacity of any 14" Band Saw on the market—cuts to center of 24" circle with full 11½" vertical clearance. Has large 20" x 23" table that tilts 45° right—5° left. Works a wide variety of materials including wood, plastics, aluminum, brass, copper and other light metals.

H & A WOODMASTER
Practically a complete woodworking shop...does all types of simple, compound, angle and miter cross-cutting, ripping, sanding, rebubbling, grooving and tenoning. Uses limited only by imagination of the operator. 31" x 35½" table provides large, practical working surface. Adjustments are easily made from exterior of frame in a matter of seconds. Ten or twelve inch blades for 2½" or 3½" capacity.

Write for further information on the complete H & A line of quality woodworking tools.

Heston & Anderson
Founded in 1921
608 W. Kirkwood St., Fairfield, Iowa

Westinghouse
NEW, IMPROVED
Poweraire
HOME VENTILATOR

A clean, attractive, well-ventilated home is easier to sell. Now alert builders are including the Westinghouse Poweraire Home Ventilator in their building and remodeling plans. This new Westinghouse Ventilator Fan, which operates on the new Air-Jet principle, can completely change the air in an average kitchen every TWO MINUTES. Attractively designed, easily cleaned, powerful, it has an insulated outside door which resists heat leakage when Fan is not operating.

CHECK THESE FEATURES
• Modern, streamlined design
• Easy to clean
• Easy to install in practically any wall thickness
• White, snap-on, Air-Jet grille
• Insulated outside door
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Try other saws. Then try a Comet. Watch other power saws perform in the field. Then watch a Comet. Quickly you will realize why Comets are blazing ahead in preference with builders and lumbermen. Today's Comets are the end result of engineering and know-how which have produced thousands of fine, dependable radial power saws, now serving owners throughout the world with matchless speed, power and accuracy. Order from your dealer or write direct.
AND THE MAGIC OF ELECTRONICS OPERATES GARAGE DOORS

- without wires
- without digging
- without lights, noise, disturbance

See it at the Builder's Show, booths 105 and 106. THE ELECTRONIC SERVICEMAN is the entirely new, entirely different garage door operator. It's swift push-button operation is positive, dependable, safe! A compact transmitter under the car hood... press the dash button... that's it! Installation is quick and easy on any overhead or canopy-type garage door. It can't jam because it's self-aligning!

Recently installed in Good Housekeeping Model Home at Milwaukee as referred to in this issue of American Builder. Write for information regarding choice distributor and dealer territories still open.

it's more than automatic... because it's ELECTRONIC!
COOKING CABBAGE IS A BUILDER'S PROBLEM

Purge Pungent Penetrating odors...Remove the cause with

BLO-FAN builds into the kitchen ceiling...directly over the range—where a fan belongs. Its patented blade whisks out greasy cooking fumes and odors as they rise, before they spread.

Sa-a-a-a-y! Let's go see those windows!

There's a New Look about Gate City Awning Windows that starts an amazing sales influence working. They look different; they are different! Just read this imposing list of advantages:

- Distinctive architectural design.
- Draft-free, safe ventilation in any weather.
- No danger of rain damaging interior or furnishings.
- Natural air circulation promoted by tilt of sash.
- Indoor installation of screens and storm sash...no rain-streaks on siding.
- Ease of cleaning from indoors.
- Safety. Children can't fall out.
- Positive worm and gear operation with the turn of a small handle. Nothing to lift or move aside.

Make a trial installation of Gate City Awning Windows. Furnished complete with hardware and glazing installed, and including screens. When their extra advantages are considered, Gate City Awning Windows cost little if any more than conventional sash.

Write today for sizes and prices. Gate City Sash & Door Co., Dept. B, Fort Lauderdale, Florida.

AWNING WINDOWS by Gate City

THE National HOMES WAY

- Standardized operations are solving problems for home builders. National Homes Corporation, pioneer in prefabrication, invites your inquiries. Our homes, advertised in national magazines and daily newspapers, and acceptable for FHA and GI Loans, are constructed with steel bar joists, aluminum hung windows and insulated exterior walls and ceilings. Financing available to authorized dealers through National Homes Acceptance Corporation.

Sold and erected by authorized dealers within 350 mile radius of factory.
An entirely new type of score line is the outstanding feature of Wal-lite — the new name in quality decorative wall boards. Seen in the above cross section is the new, smooth contour (beveled) score line with wide sloping shoulders which assure better coverage of the baked enamel finish. This feature gives greater film thickness at the point where greatest wear occurs ... providing greater ease of cleaning and a more beautiful appearance.

The stock size panels (4'x8', 4'x6' and 4'x4') are easily applied to any standard type of wall — in remodeling or new construction. Wal-lite panels can be easily cut to fit any area, using a fine-toothed saw and applied with Wallace Wallboard Adhesive No. 630. No special tools are required. The simple application methods are fully explained in instruction sheets on the back of Wal-lite panels. This assures complete application information for every job.

Wal-lite is made in the four patterns shown above. TILE PATTERN, PARALLEL-LINE and SMOOTH SURFACE colors are of pastel shade in Blue, Green, Apricot, Ivory and Yellow, with white score line. White Tile Pattern and Parallel-line have black or gray score lines with red line available on special order. MOROCCAN LEATHERBORD colors are Blue, Green, Red, Brown and Light Tan. Beautifully highlighted, this board has amazing decorative features.

**Big Demand — Variety of Uses**

**NEW CONSTRUCTION and REMODELING**

TILE PATTERN — PARALLEL-LINE — SMOOTH SURFACE

RESIDENTIAL ROOMS—Bath, Kitchen, Breakfast, Recreation, Laundry, Utility and Butler's Pantry and Sun Porches.

COMMERCIAL—Bath, Kitchen, Wash Rooms, Food Stores, Meat Markets, Hospitals, Schools, Barber and Beauty Shops, Industrial Cafeterias, Sandwich Shops, Store Fixtures, Service Stations.

**MOROCCAN LEATHERBORD**

RESIDENTIAL ROOMS—Dining, Breakfast, Sun, Recreation, Libraries, Dens, Hallways.

COMMERCIAL—Dining Rooms, Hotel and Motel Guest Rooms and Lobbies, Barber and Beauty Shops, Offices, Cocktail Lounges, Taverns, Night Clubs, Clothing Shops, Display Backgrounds, Store Fixtures, Church Recreation and Class Rooms, Club Rooms and many others. Colors in this pattern will match many leather and leatherette covered fixtures.
CUT RAFTERS ON PRODUCTION BASIS
—No Marking Needed—

WALLACE No. 1 RADIAL SAW

With the improved No. 1 WALLACE RADIAL SAW it is now possible to cut rafters on a mass production basis.

The new patented "angulator" (bolted to column as shown in circled portion above) is "made to order" for the contractor for sawing rafters. Uses carpenter's square to locate plate and plumb angles. Adjustable stops then relocate these angles as sawing is done. Simply swing from one angle stop to the other when sawing—no marking, no guesswork, no stacking and re-stocking of material. Rafters are sawed complete with just one handling.

In addition, these other important features make the WALLACE No. 1 RADIAL SAW the saw you need—

1—Spindle speed 4900 r.p.m. Faster, smoother sawing. Better shaping, routing, milling operations.

2—Gear drive offsets spindle—gives 2½" cut with 8" blade; 4" cut with 11" blade.

3—Close-coupled motor provides more compact design plus greater accuracy.

4—Full 360° rotation of arm, column, motor. Greater versatility. Any possible setting.

Plan to visit our plant when you attend the N.A.H.B. Show

WRITE FOR COMPLETE INFORMATION TODAY!

J. D. WALLACE & CO.
136 S. California Ave. Chicago 12, Ill.

American Builder, February 1948.

NATIONAL LOCK COMPANY
ROCKFORD, ILLINOIS

How to be Sure About Costs
When You Estimate a Building Job

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!

YOU MAY SAVE MANY TIMES ITS LOW COST IN ONE USE!
In order to get your share of profitable building contracts, you must be able to figure jobs fast and accurately. You must be sure your estimate is just right—low enough to get the job—high enough to give you a reasonable profit.

USED BY SUCCESSFUL CONTRACTORS FOR OVER 40 YEARS!
Many of the largest and most successful contractors in the United States and Canada—thousands of them—have used the Tamblyn System of estimating. It is tried and tested—it has been used for more than 25 years. Forty years of experience in construction and building is behind it. And you can study the system for 10 days without cost.

TEST THE TAMBLYN SYSTEM IN YOUR OWN OFFICE WITHOUT OBLIGATION
Send the coupon below for your complete Tamblyn System. Examine it in the privacy of your own home or office for 10 days. Try it on new jobs—check it against completed jobs. There is no obligation unless you keep it.

SEND NO MONEY—TRY IT FOR 10 DAYS FREE!
THE TAMBLYN SYSTEM, JOHNSON BLDG., A14, DENVER, COLO.
WRITE FOR your copy of this beautiful new booklet giving all the advantages of Forced Circulating Thrush Flow Control System. It is written to appeal to home owners and will help you sell more Thrush Systems. Installing this finest and most economical form of home heating will build your reputation and increase your business. Get all the facts now. See our catalog in Sweet's or address Dept. G-2.

H. A. THRUSH & COMPANY. PERU, INDIANA
For Every Application
"STREAMAIRE" CONVECTORS
by YOUNG

An increasing number of architects and contractors are specifying "Streamaire" Conectors because they give extras that spell heating satisfaction. "Streamaire" Units are highly efficient and truly economical. They respond instantly to modern thermostatic controls...are engineered to circulate warm air by controlled convection, to level off temperature peaks by natural radiation. "Streamaire" Conectors are easy to specify, easy to install because they're standardized in four types, packaged individually to prevent damage. To aid identification, cartons are marked with model number and size. "Streamaire" Cabinets enhance the beauty of modern interiors. Fronts are removable for cleaning. Write today.

Available Now
STEEL WALL TILE
ALUMINUM WALL TILE

STEEL Wall Tile and Aluminum Wall Tile provides a waterproof, spotless surface for kitchens, bathrooms, break-fast nooks, recreation rooms, stores, hospitals, industrial buildings, gas stations, garages, restaurants, bakeries, diners and taverns. Walls sparkle with this tough, high-gloss, baked on enamel finish that will not chip, crack, craze or buckle. Easily applied, the tile is laid piece by piece and can be installed over new surfaces or old. Each tile is imbedded in a mastic cement to provide a completely waterproof finish. Simply install over old plaster, new plaster, wall board, sheetrock, plywood or any smooth surfaced wall material. Few tools needed. A folding rule, a level, a notched trowel and a pair of snips are sufficient.

STEEL Wall Tile—Aluminum Wall Tile in stock. Available in various sizes and in 13 different standard colors.

SEND FOR DETAILS TODAY!
STEEL WALL TILE CO.
Factory and Main Offices
1706 W. North Ave., Chicago, Ill.
Retail Show Rooms
829 Milwaukee Ave., Chicago, Ill.

DUNTILE
World’s Most Beautiful Roof
Can be Your Outstanding
Manufacturing Opportunity

You can earn big money in the Duntile business—100% to 150% mark-up on basic costs. You can manufacture for a selective market—uncrowded and minus price-competition—because Duntile is exclusive and much-wanted. Duntile is the world’s most beautiful roof. With all the safety, endurance and economy of masonry at its best. Wide range of smart, fused-on colors. French or Spanish type. Truly the roof that every owner wants.

Swing into Duntile production NOW. You may already have some equipment that can be utilized. Manufacturing is easy, interesting, profitable. We supply all machinery necessary. Instruct you fully. Back you with aggressive cooperation. Write for Manufacturing Analysis which gives cost and profit data, etc.

W. E. DUNN MFG. CO.
430 W. 23rd Street
Holland, Mich.
NOW AVAILABLE

FOR IMMEDIATE SHIPMENT

COBURN
#500
SWING-OVER HARDWARE SET
for garage door remodeling

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 all 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.

PRODUCTION on the Coburn #500 Hardware Set has now reached the point where we can make immediate shipment. With this popular, fast-selling set it’s easy to remodel troublesome swinging doors to smooth operating overhead doors without sacrifice of usable floor space.

Coburn #500 Set offers the additional advantage of effortless operation and outstanding economy. Even though it is high in quality, its cost is in the lowest price field. Shipped in two parcels; the steel-sided weight box containing all small hardware, and a bundle containing the track and truss rods.

Write today for catalog containing full information on the Coburn #500 Set and on hardware for numerous types of sliding doors; garage, barn, wardrobe, cabinet.
Now that high quality white patent coated boxboard is again available, Duplex SASH BALANCES step out in brand new packages — beautiful packages for America's finest sash balances — lemon yellow and royal blue for the ADJUSTABLE — yellow and emerald green for the PRE-SET.

The first million boxes were delivered to us in January; they'll be on dealer's shelves as fast as we can make shipment.

Inside you'll find...

THE HIGHEST QUALITY IN DUPLEX HISTORY—Guaranteed against mechanical defects for the life of the building... AND AT LOWER PRICES THAN IN 1938 — Resulting from the mass production methods made possible by overwhelming product preference.

DUPLEX, INC.
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Los Angeles 46, Calif.

Please send information on Duplex Flat Sash Balances

Type of Business
Pittsburgh Steeltex Lath For Plaster
Gives you
All Enduring, Economy and Safety

The economy and safety of your buildings is permanent when Pittsburgh Steeltex lath is used as a backing for interior finishes. Your homes sell easier. Your reputation as a designer and builder is enhanced because owners quickly sense the value of fire-resistant construction and freedom from plaster cracks and stud marks provided by Steeltex. Many architects specify Steeltex and experienced builders prefer it because of its ease of installation and the savings in material. They both agree that Steeltex definitely makes possible the finest construction available in homes and other types of buildings.

It will pay you to write today for our illustrated technical booklet which shows how you can assure better construction at low cost with Pittsburgh Steeltex lath for plaster.

STEELTEX for Plaster, Floor Lath, Stucco, Masonry Veneer Available Now at your local dealer

Pittsburgh Steel Products Company
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The 100% Concealed Sash Balance

Plough the sash, attach two screws and Hidalift is installed...as easy as that! The self centering guide bushing maintains perfect balance, prevents jamming and eliminates the need for templates in installation. The tension spring is sealed inside the tubing to prevent wear caused by dust. Home owners appreciate the trim architectural lines made possible by the elimination of bulky, drafty sash weight boxes...approve Hidalift's "100% Concealed" feature.

Write for completely descriptive literature which includes installation details and lists sizes and specifications to fit all standard sash.

THE KITCHEN VENTILATING FAN THAT'S DIFFERENT—THE KITCHEN-AIRE!

Equipped with CENTRIFUGAL TYPE HEAVY DUTY ALUMINUM IMPELLER. Motor is out of air stream—insuring cleanliness. Operating unit housed entirely—fully protected in rustproof non-corrosive attractive aluminum housing.

- Simple inexpensive wall or ceiling installations. Standard 6" duct provides convenient duct connecting intake grill to exhaust unit. Intake grille is easily cleaned, easily replaced.
- Back draft balanced damper automatic in operation—no shutter to open—no chain to pull.
- Handsome 6" polished aluminum intake grill readily lends itself to any interior kitchen decor scheme—easily cleaned.

Write today for full details and free booklet "How and Why Kitchen-Aire is Different".
THE GARAGE DOOR
That Can't Be Matched For—

FINE APPEARANCE . . . .

Note the smooth face of a Milfamco Door—its sturdy appearance. Milfamco's new, exclusive roll grooving treatment eliminates warps and buckles, improves beauty, increases strength. Face panels are spot welded to a rigid "X" frame—they never sag.

QUALITY CONSTRUCTION . . . .

Look at the back of a Milfamco Door. Compare its welded all-aluminum construction—the quality and strength of its frame. Note how well it is assembled—the fine craftsmanship. Milfamco doors are built to "Stand the Gaff."

RELIABLE, SAFE OPERATION . . . .

Open and close a Milfamco Door. You'll like the way it floats up and down, on ball bearings, at a touch of the fingers. There's no heavy lifting—no excessive weight—easily adjusted for smooth operation. Its safety will appeal to every member of the family.

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Milfamco doors are shipped complete in one standard 8' x 7' panel. (New, simplified track hardware reduces expensive installation time.) Door can be installed by one man in less time.

Distributors and Dealers—Phone, write or wire for prices and literature.

WILFAMCO DELIVERS DOORS—FAST!
Looking ahead, Milfamco produces doors all year long—stock piling for the rush months. You can depend on Milfamco for immediate delivery of both Canopy and Track Doors from stock.

WILFAMCO
Easy Lift
GARAGE DOORS
America's FINEST...
at a price everyone can afford

YES ... even the most exacting price buyer is amazed at the beautiful line of low cost quality-built Alcasco All Aluminum Casement Windows.

AVAILABLE NOW ... Avoid disappointing delays and installation headaches. Recent plant expansion assures you of prompt delivery whether your order is large or small.

ORDER TODAY ... Plan your future with Alcasco. Write for illustrated literature and specification data.

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ALL ALUMINUM CASEMENTS

For Trouble-Free Bath Tub Edges

Specify LUCKE

Leak-Proof Bath-Tub Hangers

- No Leaks
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- No Repair Expense

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The Modern Way to Prevent Leaks

There is no excuse for cracks or leaks or repair expense in good building. Leading architects specify LUCKE to overcome this problem.

Sold by Leading Plumbing Supply Houses

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W. B. LUCKE, Inc.
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Rooms with a variety of uses! That's the modern trend ... and how well Modernfold fits in with today's emphasis on efficiency, convenience and flexibility. For instance, this accordion-type door can be used to divide large rooms into smaller ones, each one employed for its specific function. But when your needs dictate a large room ... merely fold these beautiful, fabric-covered, metal-framed closures to the wall. Write for full details on these efficient doors today ... see how they save space, eliminate the swing area of conventional doors.

Consult your Telephone Directory for the Names of our Installing Distributors

NEW CASTLE PRODUCTS • NEW CASTLE, IND.
Contractors who can build good structures quickly make more money—to cut and erect efficiently takes good tools. The David L. Green Construction Company knows the formula and that's why they are so "very sold on the Nall." Ripping 2" lumber eight hours a day...2 men cutting 670 completed rafters in 4 hours...all exterior framing cut in 2 hours, 20 minutes—that's performance! Yet it is only a small part of what a Nall can do...sawing, dadoing, shaping all are done faster, better and cheaper.

Rolling to the site is a time-saving and money-making natural for every contractor — The Nall Mobil-Shop is built for that service.

They're 'Profits on Wheels' for you Mr. Contractor—and the quicker you get the details the faster you can put Nall Mobil-Shops on your jobs.

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MARATHON
FOUNDRY AND MACHINE COMPANY
WAUSAU, WISCONSIN
MORE YARDS PER DAY
Concrete or Mortar

with the New
REX 3½-S TILTER!

Wider wheel spread, low center of gravity plus two sturdy legs assure stability while mixing... no "teetering" and shifting. Tows smoothly, too. 62-inch wheel spread assures a mixer that is tops for towing speed and safety.

NEW
4-POINT
SUSPENSION

EASY SHOVELING
Big 19-inch drum opening is low to the ground for faster, easier shoveling. 3 hoe-type mixing blades give you fast, thorough mixing action.

ONE-MAN SPOTTING
Here's the easiest handling tilter on the market. Rex Tele-pole towing tongue, easy-rolling pneumatic tires mounted with Timken bearings, plus accurate balance and light weight, make it easy for one man to spot the mixer... fast.

TWO-POSITION LOADING
You can bring a wheelbarrow straight to the drum, head-on or sideways. Big, easy-acting handwheel tilts the batch into the barrow in a hurry. ADD UP these features and you'll see why Rex gives you more batches per day... more profit for you.

CONSTRUCTION MACHINERY
CHAIN BELT COMPANY of Milwaukee

CIRCULATOR FIREPLACE
Popular fuel-saving home-heating unit

For extra profits NOW, rely on this ready seller. An all-inclusive, all-metal unit, the Majestic Circulator Fireplace is a strongly built core that fits any mantel structure. Sends smoke-free heat to all corners of the room. Can be used as sole source of heat for small homes in mild climates. Replaces high-cost furnace heat in chilly fall or spring weather in less temperate zones. It is complete in every way and priced within range of average pocketbooks. This fireplace package has all essential operating parts built in, including dome damper with patented, easy-to-use poker control. All standard sizes available now for prompt delivery. Send for descriptive bulletin today.

The Majestic Co.
834 Erie St., Huntington, Ind.

Majestic Building Products—nationally known and advertised for over 40 years

HOMES BEING BUILT
with
MODERN AIRE ATTIC FANS...

Homes and buildings now being planned and built with ModernAire Attic fans are investments in "Temperatures For Comfort" that will bring years of satisfaction and contentment to the owners.

ModernAire Attic Fans are famous for their expert engineering, fine construction and smooth, economical performance. Investigate now the advantages and costs of ModernAire Attic fans for builders. Write to...

NATIONAL GAS EQUIPMENT COMPANY, INC.
P.O. BOX 443 TERRELL, TEXAS

That's why...
complete.
It enjoys.
An Entirely New Principle
(See Sweets’ Catalogue)


These Features Sell Windows

1. Both sash are removable instantly—without removing stops or other parts.

2. Sash holds firmly in any position without cords.

3. Non-corrosive steel springs maintain even pressure against sash sides.

4. Minimum heat loss. Leakage 22.1% less than govern-ment specifications.


7. NO CORDS—NO WEIGHTS—NO PULLEYS.

ENDORSED BY HOME OWNERS

Meeting all FHA and building code requirements, this distinctly MODERN window can be sold to owners of modest, medium class or finer homes.

Two of the sash guides “float” on steel springs recessed providing a pressure firm enough to hold the window in any position, yet gentle enough to permit easy shifting of the window up or down.

Thus is removed one of the most exasperating annoyances of window utility—an improvement which home owners by the hundreds of thousands have already endorsed and which has been given nationwide publicity through the press. A needed convenience—a natural sales appeal.

The customer will listen to this story. It is exactly what he has been hoping for. Suggest R.O.W. Windows and the sale is made.

For complete information and prices write to the following licensed manufacturers and jobbers. If none is located in your territory write direct to R.O.W. Sales Co. regarding sales and manufacturing rights.

The R. O. W. SALES COMPANY
Licensed R.O.W. Window Dealers:

NEW ENGLAND STATES

SOUTHEASTERN STATES
Alabama Wholesale Lumber Co., 111 E. Snow St., Birmingham, Ala.

MIDWESTERN STATES
North Dakota Lumber Co., P.O. Box 150, Fargo, N.D.

SOUTHWESTERN STATES
Albuquerque, New Mexico, Utah, Arizona, New Mexico, Millwork Co., Coles, Ariz., Idaho, Nevada.

CALIFORNIA

DELWARE
145 W. Orange St., Princeton, N.J.

FLORIDA
Florida Solar & Door Co., P.O. Box 627, Naples, Fla.; Florida Millwork Co., Cape Coral, Fla.; Florida Millwork Co., South Jacksonville, Fla.

IDAHO
Owen Millwork & Door Co., 411 S. 8th St., Boise, Idaho.

INdIANA
Forty-Fifth Millwork, Inc., 1239 E. 8th St., Fort Wayne, Ind.

KANSAS

KENTUCKY
Martin Millwork Co., Frankfort, Ky.

MICHIGAN
Reed Millwork Co., 11001 Westlake Ave., Detroit, Mich.

MISSOURI
C记者了解 & Door Co., 710 South 14th St., Kansas City, Mo.

MINNESOTA

MISSISSIPPI
Mr. & Mrs. W. A. Coventry, Inc., 405 N. 7th St., Oxford, Miss.

MONTANA
Johnson Millwork Co., 11001 Westlake Ave., Detroit, Mich.

NEBRASKA
Johnson Millwork Co., 11001 Westlake Ave., Detroit, Mich.

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NEW JERSEY
General Woodcraft Co., New Jersey, N.J.

NEW YORK
General Woodcraft Co., New York, N.Y.

NORTH DAKOTA
Royal Oak, N.D.

NORTH KEYBER
Adelman Lumber Co., 319 East Lake St., Minneapolis, Minn.

OHIO
Johnson & Wimsatt, Inc., Westville, Ohio.

OKLAHOMA
Goodridge Co., Muskogee, Okla.

OREGON

Pennsylvania
James Millwork Co., P.O. Box 150, Altoona, Pa.

Rhode Island
Ralph L. Smith, Millwork Div., 367 Rock Ave., St. Louis, Mo.

SOUTH DAKOTA
Whitemore Millwork Co., Rapid City, S.D.

TENNESSEE
Johnson Millwork Co., 11001 Westlake Ave., Detroit, Mich.

TEXAS
Adelman Lumber Co., 319 East Lake St., Minneapolis, Minn.

WASHINGTON
Hodges Millwork Co., Seattle, Wash.

WISCONSIN
Wisconsin Window Unit Co., Milwaukee, Wis.

WYOMING
Wyoming Window Unit Co., Casper, Wyo.

ONTARIO, CANADA
Belton Lumber Co., Sarnia, Ontario, Canada.

ROYAL OAK, MICHIGAN

1. Many a strictly modern home into whose construction every new thought and idea has been incorporated, nevertheless, still depends upon the old-fashioned cord and weight type of windows. There can be no question about the home owner's temper when windows stick or his complete annoyance when a sash cord breaks. When that happens the owner usually wonders "why somebody hasn't invented a window that works without attention or care."
but TODAY!

your local bank

For unusual homes of character and distinction... for
typical western homes of rustic beauty. Materials
available NOW... not 30 days...not next week... but TODAY!

Effects substantial savings in construction costs. No
studding required. Meets FHA construction require-
ments and is easily financed through FHA loans or
your local bank

Conventional or rustic interior finish and modern
arrangements adaptable to any floor plan. Solid
wood walls provide best insulation against heat and
cold. Average home can be completed in 30 days ready
to move in! Chemically treated to resist
discoloration, dry rot, and termites

Consultation

Available

A U — _ —

ENGINEERS: Uy INISHED FLOOR — Vij $U8-FLOOR CONSULTANTS

DOORS -
on your shaper with our
high speed steel—patterns
ground — shaper knives
1 1/8", 1 3/8" and 1 3/4" for O.
G. Cover and bead doors.
4 knives; 2 coping and 2

SOLVE ROOF PROBLEMS INSTANTLY — SAVE MATERIALS

IN 10 SECONDS!!! All 11 lengths and cuts
for any size and shape of simple or hip,
roof. Just set dial to "pitch" and "run," and
the figures appear in windows at pro-
per places on diagram of roof. Unlike the
usual rafter tables, this instrument enables
you to set "run" directly in feet and inches
—not just in even feet. Takes thickness of
ridge board into account from the start
and avoids troublesome adjustments later.
Angles are given both in degrees and
square readings. Eight standard pitches
and all other pitches in degrees from 10°
to 57°. Perfect also for estimating lumber
needs. Indispensable to the carpenter,
builder, architect, draftsman, contractor,
and lumberman. Worth many times cost.

Order from: E. Weyer, Dept. F, P.O. Box 153,
Planetarium Station, New York 24, N. Y.
Inexpensive! Beautiful! Enduring! Here's reason why Prestile is the popular tileboard for remodeling or new construction. It's panel-size — easy to install — easy to clean. Wide range of glistening pastel colors are baked-in by a special process for permanency — offers customers unlimited decorating effects! Write today for details and prices.

Quickly Installed Over New and Old Walls

9 Color Combinations
- WHITE with black or red score lines
- PEACH with white score lines
- BLUE with white score lines
- GREEN with white score lines
- IVORY with white or black score lines
- YELLOW with white or black score lines
- ORCHID with white score lines
- RED with white score lines
- BLACK with red score lines
- PLAIN — unscored in all colors.

5 Popular Patterns
- 4-inch square — Regular tileboard
- 8-inch square — Large tileboard
- 4-inch Streamline — parallel lines
- 8-inch Streamline — parallel lines
- Plain — unscored colored panels

Prestile line also includes: Black Cap and Base Mouldings, Stainless Metal Mouldings, Prestile Waterproof Cement.

Prestile is the Known Brand of National Prestige!
Now the Best Costs No More!

**RUBBER-GARD**

Skid-Check

Only this FULL RUBBER BASE Concrete Floor Enamel provides ALL of these sales advantages:

**1. FULL RUBBER BASE . . . What is meant by "Full Rubber Base"?**

Over 50% of the vehicle solids is Rubber. That is why your SKID-CHECK customers get the endurance and protection that only rubber in this high content can give.

- Impervious to ruinous lime action in concrete.
- Resistant to water, chemicals, oils.
- Resistant to caustics, alcohol, fats, etc.
- Weak adhesion to rough or smooth surfaces.
- Quick drying . . . ONE HOUR.

**2. ECONOMY . . . Costs less than 1/4¢ per sq. ft.**

Sell the most enduring enamel ever put on a floor, for less than 1/4¢ per sq. foot. And that is not the whole story, because the much longer life of SKID-CHECK makes it actually less costly in terms of wear. This revolutionary new formula by the pioneer producer of rubber base paints puts SKID-CHECK up front into the class of quick profit sellers.

**3. NEW SEMI-GLOSS FINISH . . . minimizes skidding dangers**

This exclusive new development minimizes such dangers without sacrificing the good looks of the finished floor. The velvety sheen is most attractive and there is an obvious difference in the traction—a safety factor in the home that provides you with an exclusive sales feature.

Write today for information about your RUBBER-GARD Dealer Franchise. Territories are still open for the RUBBER-GARD LINE of full rubber base paints.

---

"PAINTS THAT ARE DIFFERENT"

Why Is the Holly Stubby So Popular?

- Extra shallow design—water-tight within 19" of floor—requires no pit—reduces installation costs.
- "All-air" operating parts are in the easily removable watertight pan. A patented feature.
- New, efficient, quiet heating element moves more air—produces soft, no-draft heat—overwhelming user preference. Write for details.

Holly Manufacturing Co., 683 S. Arroyo Parkway, Pasadena 2, California

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