

OCTOBER, 1941 - 25 CENTS

AMERICAN BUILDER

AND
BUILDING
AGE

THE WORLD'S GREATEST BUILDING PAPER

HOME BUILDING- *Its Part in* DEFENSE



HOW TO GET A HOME BUILDING PRIORITY RATING

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BUILD WITH A NAME WHICH MEANS "Quality" to all America!



There's More than Good Value in CELOTEX ROOFING PRODUCTS

WHEN you give your new houses the beauty and protection of Celotex Asphalt Shingles, you are providing *more than good value*. You are giving yourself, as well as future owners, the added selling power of a brand name which is world-famous for quality!

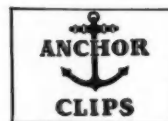
Styled to modern demands and manufactured to highest quality standards, Celotex Asphalt Roofing Products represent the peak of dollar value in fine appearance and lasting weather resistance. Add to that the *plus value of the Celotex quality reputation*, and you have a combination that really helps to move property!

... Celotex Rock Wool Batts and Blankets

There is a Celotex Rock Wool Product for every requirement—all fire-proof, all vaporproofed, all moisture proofed—*meeting the most rigid specifications* for efficient, economical non-structural insulation. And the Celotex quality reputation is a plus value in each case!

... and Celotex Gypsum Products

In Celotex Anchor Plasters, Anchor Gypsum Lath, and the new Anchor Clip System, you can have a sales-building answer to *every plastered wall demand*. Use these products together to provide crack-resisting walls of permanent beauty, backed by a name which means QUALITY to all America!



CELOTEX

REG. U. S. PAT. OFF.

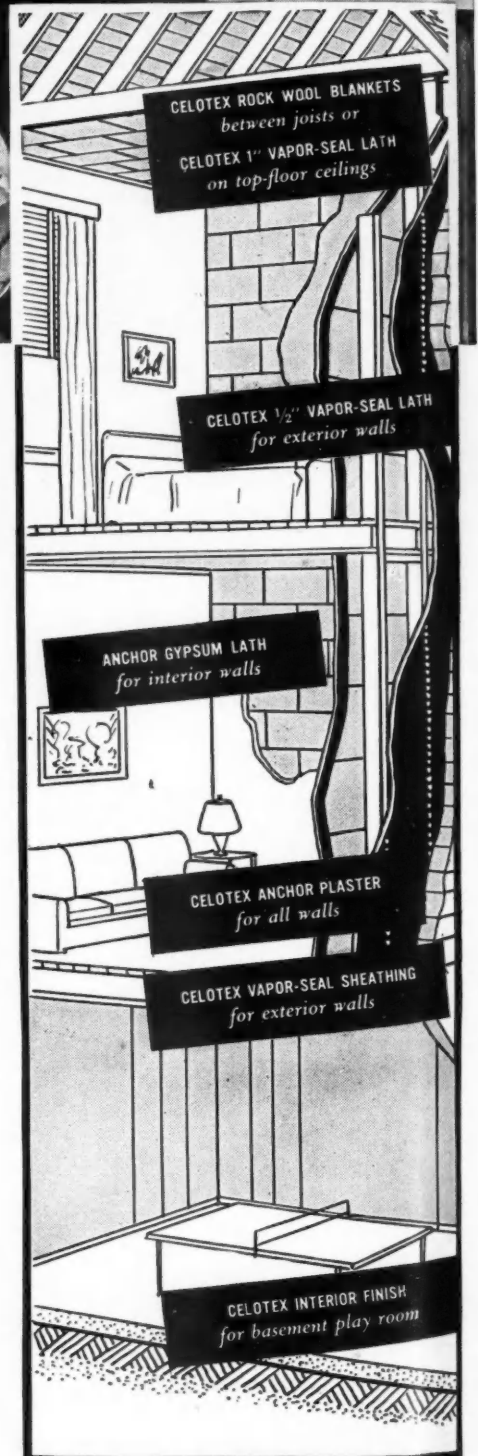
BUILDING PRODUCTS

INSULATING SHEATHING, LATH, INTERIOR FINISHES
ASPHALT SHINGLES, SIDING, ROLL ROOFING
HARD BOARDS, ROCK WOOL BATTS, BLANKETS
GYPSUM PLASTERS and LATH and WALL BOARDS

Sales Distributors Throughout the World

THE CELOTEX CORPORATION • 919 NORTH MICHIGAN AVENUE • CHICAGO, ILLINOIS

Published monthly by Simmons-Boardman Publishing Corporation, 105 W. Adams St., Chicago, Ill. Subscription price, United States, Possessions, and Canada 1 year \$2.00; 2 years, \$3.00; foreign countries: 1 year, \$4.00; 2 years, \$7.00. Single copies, 25 cents. Entered as second-class matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second-class matter at Mount Morris, Ill. Address communications to 105 W. Adams St., Chicago, Ill.



HOW FENESTRA HELPS SELL MORE HOUSES



EASY OPENING
NO STICKING



SAFE WASHING
FROM INSIDE



INSTALLED OUTSIDE
IN 5 MINUTES



BETTER LIGHT
LARGER GLASS AREAS



STORM SASH
COSTS LITTLE



INSTALLED INSIDE
IN 8 MINUTES

• "You'll save money on window upkeep, Mr. Homeowner, because both the *materials* and the *design* are *right*. The *movable* part of the Fenestra Package Window is solid steel, Bonderized (for rust prevention), prime-painted, oven-baked. It is wood cased and outside trimmed. The wood casing is *grooved* to receive flange of steel casement frame. Mastic seals the joint tight. The results are permanent weather-tightness and easy opening, with low upkeep."

Your customers, Mr. Builder, will thank you for giving them the great durability of Fenestra Package Windows, and for the many unique conveniences they provide (sketches at left picture a few) . . . You can install this window easily, completely, in a few minutes, using hammer and nails only. First cost is low, installation cost is lower, "call-back" cost is lowest. Get the facts—mail the coupon.

THE NEW LOW-COST
Fenestra
PACKAGE WINDOW

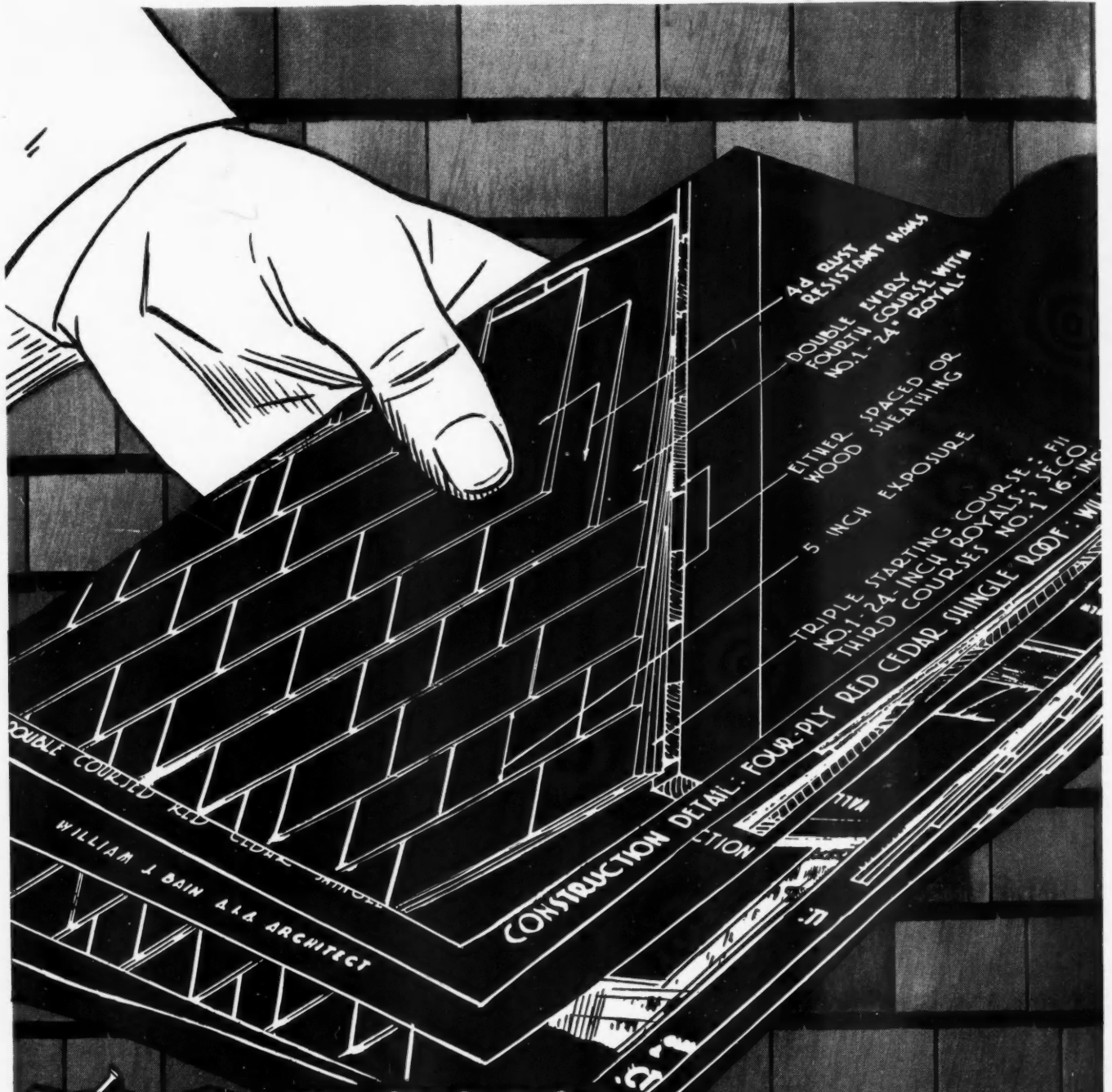
DETROIT STEEL PRODUCTS COMPANY
2260 East Grand Boulevard, Dept. AB-10,
Detroit, Michigan

Please send me the new Fenestra Package Window
Catalog and Price List.

Name _____

Address _____

City _____ State _____



Clip out this Coupon

RED CEDAR SHINGLE BUREAU AB1041
 5506 White Building, Seattle, Washington

Gentlemen: Without any charge to me whatsoever, you may send an assortment of Blueprints detailing different methods of applying Red Cedar Shingles to Roofs and Sidewalls, and also your 96-page Illustrated Certigrade Handbook.

NAME

ADDRESS

CITY STATE

RED CEDAR

A Helpful Service

FREE TO BUILDERS

BLUEPRINTS

for the Application of

**RED CEDAR
SHINGLES**

HERE is another real service that is being offered FREE to Builders, Contractors, Architects and Carpenters—a set of Architectural Blueprints covering a variety of Red Cedar Shingle applications. These detail not only the conservative roof and sidewall applications, but unique and unusual styles of construction.

The flexibility of application is stressed in the Blueprints. Without the necessity of multiple stocks of various types and designs, not always available in other roofing materials, Red Cedar Shingles in any grade or length can be laid in many different ways to create an effect that will suit the builder's, architect's or home owner's individual taste. Cedar Shingles fit any architectural or period design.

There seems almost no limit to the many different styles and designs with which Certigrade Red Cedar Shingles can be applied. The same type and size of shingle can be used for all these pattern variations.

Send for these Blueprints TODAY—they're FREE for the asking. They will be found both Helpful and Interesting. Fill out coupon and mail to

RED CEDAR SHINGLE BUREAU

5508-9-10 WHITE BUILDING, SEATTLE, WASHINGTON

Canadian Office—811 METROPOLITAN BUILDING, VANCOUVER, B. C.

SHINGLES

Right!



Black & Decker Electric Saws

have the rest Beat a Mile!

"I'VE TRIED 'EM ALL, but haven't met anything that can equal Black & Decker Saws! They're a cinch to handle, never tire you out, and keep going when you push hard to beat schedules. Take it from me—it pays to standardize on Black & Decker Electric Saws!"—that's what experienced carpenters and builders all over the map will tell you. Built by the world's largest maker of portable electric tools, Black & Decker Saws are engineered with plenty of power, extra speed and a longer life that mean more value for your money.

The four Black & Decker Saw models have safe, ball-bearing telescoping blade guards, and quick adjustments for depth and angle of cut. Phone your jobber to demonstrate the Black & Decker Saw you need—or write The Black & Decker Mfg. Co., 766 Penna. Ave., Towson, Md.



Send For This **FREE**
"SAW HANDBOOK"

New and Revised edition is packed with pictures and facts, showing how Black & Decker Saws speed up operations and make more money for builders by cutting time and costs on every type job.

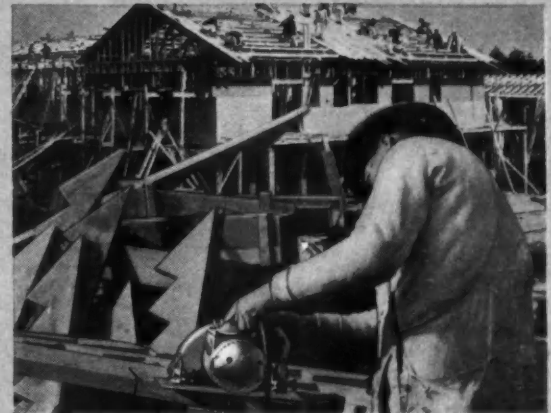
LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker

PORTABLE ELECTRIC SAWS



INSULATION MATERIAL being cut to size right on the job, with Black & Decker No. 85 Quick Saw. These fast saws cut lumber, compositions, tile and stone.



SAWING STAIR STRINGERS at a fraction of usual time with B & D Electric Saws—a fast, accurate operation that enables contractors to push construction jobs.



CUTTING TOUGH MATERIAL is easy for Black & Decker Saws—shown here with abrasive disc cutting corrugated asbestos-cement speedily, smoothly and accurately.



WHAT TAKES PAINTS
OUT OF THE
"Fair Weather"
CLASS ?



SKILLED
PAINTERS TELL
US IT'S THE
LEAD WE MIN-
ERS DIG THAT
MAKES PAINT
WEATHERPROOF

TO give your work the benefit of long-lasting paint protection, it's important to check the white lead content of the paint you specify.

Among good painters it has always been axiomatic: *the more white lead, the better the paint.* For example, they know you can't get a more weather-resistant paint than a 100% white lead paint—the kind they mix from lead-in-oil.

You see, white lead is made from lead—a metal which bows to none in its ability to stand up to weather. White lead, too, can take everything from burning sun to roaring blizzard without cracking and scaling.

And don't be deceived by the name. *White* lead paint can be tinted to almost any color you desire.

A white-lead-painted surface is the crowning touch to a good job—its beauty and long life give your achievement added appeal to prospective



buyers. Yet white lead costs no more than regular quality paints. In short, "the best is cheapest," as usual.

LEAD INDUSTRIES ASSOCIATION
420 Lexington Avenue, New York, N. Y.

COLORS AND WHAT TO DO
WITH THEM—You'll find a lot
of interesting information on
popular white lead tints in a
free booklet, "WHAT TO
EXPECT FROM
WHITE LEAD
PAINT." Send for
your copy today.



You're money ahead when you paint with
White Lead



CONVENIENT WAY TO ORDER. In addition to the familiar lead-in-oil paste form, pure white lead is now obtainable as a ready-to-brush paint in popular-size containers, at paint dealers' everywhere.



Kawneer SERVICE
WILL BE MAINTAINED
to the very best of our ability!

In these unusual times, The Kawneer Company is fulfilling its obligations to the national defense program, as well as those to architects, builders, and sales representatives.

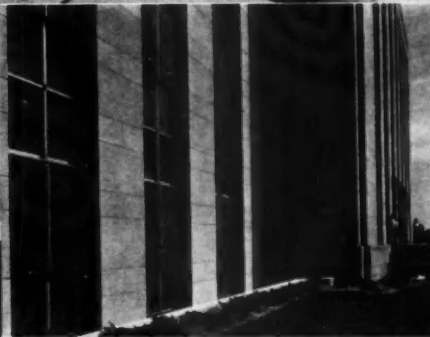
Kawneer is making vital parts for bombers, pursuit planes, and army trucks. Shortages are developing in certain metals. But, in spite of these limitations, Kawneer service will be maintained—your requirements will receive the best attention we can possibly give them.



E. Musson Sharpe, Arch.

STORE FRONTS

Practically all stainless steel and aluminum is now being used for defense work. The best possibility lies in the use of bronze—the original store front metal, beautiful and durable. The use of rolled construction is also suggested, not only because it is the most efficient, but also because extruded shapes are not available.



United Benefit Life Insurance Co., Omaha.
 Tinsley McBroon & Higgins, Arch.

ALUMINUM WINDOWS

Because of priorities on extruded aluminum, Kawneer has discontinued the manufacture of Sealair All-Aluminum Windows. The fact remains that this type of window, pioneered by Kawneer, earned tremendous acceptance in a few years' time—will again become a major factor in both residential and other types of buildings.

FREE STORE FRONT MAGAZINE. If you are not receiving "The Kawneer Front" write us today.

THE
Kawneer
 COMPANY



Builder's Quiz!

How many of these questions can you answer?

1. *In what type of house is condensation of moisture most apt to occur?*

2. *Is it possible for moisture condensation to take place in an uninsulated wall?*

3. *What scientific method of construction solves the condensation problem?*

THESE ARE THE ANSWERS:

1. "Condensation problems are most frequent in houses of modern tight construction, with weatherstripping, storm sash, insulation, and the newer types of heating systems that provide . . . humidification."*
Nat. Bureau of Standards BMS 63

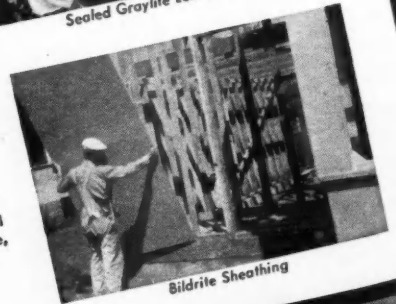
2. "Uninsulated walls accumulate moisture as well as insulated walls."*
Iowa State College Research Bulletin No. 271

3. The Insulite Approved Wall of Protection—because Sealed Graylite Lok-Joint Lath, with an asphalt vapor barrier on the stud side, effectively retards vapor travel; and Bildrite Insulating Sheathing outside permits whatever vapor may escape the vapor barrier to pass on to the outside air.*

*A transcription of these and other experts' opinions on the condensation problem will be sent you on request. Address Insulite, Department AB-101, Minneapolis, Minn.



Sealed Graylite Lok-Joint Lath



Bildrite Sheathing

INSULITE



MINNEAPOLIS
MINNESOTA

Division of Minnesota and Ontario Paper Company

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD



AHEAD OF THE DRAFT

Long before the boys came streaming into Army camps months of work and planning by Army engineers and contractors was needed to convert the millions of board feet of lumber to finished barracks, mess halls, hospitals, etc.

Lumber, custom-cut by the DeWalt method, was stacked in piles, representing a complete building. Jigs were made . . . the custom-cut lumber was laid in place and nailed together, then raised into place in one big section, one side at a time. All four sides were then nailed together.

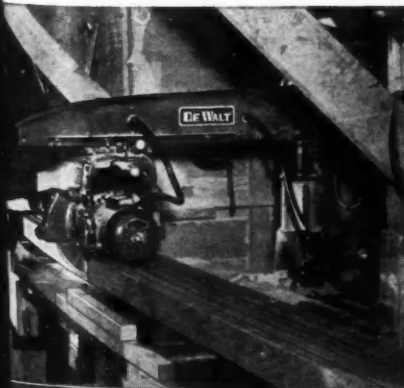
Complete barracks were cut in ninety minutes, and in some instances were erected at the rate of one every fifteen minutes.

This mass housing production, never before

equaled in this or any other country, can be attributed largely to the DeWalt method of custom-cutting the lumber. We are proud of the part DeWalt engineers played in helping to plan this custom-cutting and the performance of DeWalt saws in the mass custom-cutting of this material.

Wherever you go today, whether it be to Army camps — defense housing projects — Navy yards — arsenals — aircraft plants — shipbuilding yards or any defense project, you will find DeWalt saws on the job.

If you have wood to cut and want it cut fast and accurately, DeWalt engineers can make startling recommendations on how this can be done for you by custom-cutting. Just write, wire or 'phone us today.



DEWALT PRODUCTS CORPORATION
LANCASTER, PENNSYLVANIA

Help Defend America - - - buy Defense Savings Bonds

CANADIAN REPRESENTATIVE: C. E. DISHER, P. O. MINING BUILDING, VANCOUVER, CANADA

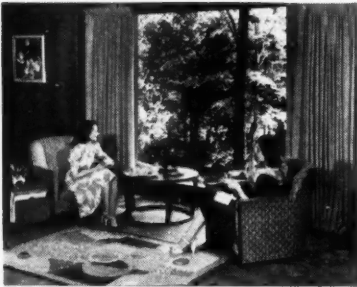
USE THESE 13 WORDS TO SELL HOUSES FASTER

"This Home is Equipped with
Libbey-Owens-Ford Glass Features
Designed for Happiness"



Chances are you won't even need to run "for sale" advertisements when you install Libbey-Owens-Ford Glass Designed for Happiness in your houses. Word will get around fast, and you'll have plenty of prospects eager to take a look—quick buyers among them.

It's remarkable how prospective home owners have become so glass conscious. They want built-in mirrors, the fuel-saving storm windows, the attractive partitions and other glass features shown in Libbey-Owens-Ford national advertising. And surprisingly, most of these features which add much to resale value are so inexpensive you can put them into homes in all price classes.



Ample windows like these captivate the prospective home buyer.

This is no experiment. In a test, more

than ten million dollars worth of homes from Miami to Denver, from Shreveport to Toledo were equipped with Glass Designed for Happiness. Most of them were sold before completion.

It's not difficult to make your own test. The distributor or dealer in your community will be glad to help you select glass features for both new homes and remodeling work. Put yourself in a position to use the thirteen words that sell houses for you! Every dollar invested in glass features is returned many times in extra sales appeal.



GAY VITROLITE, the colorful never-fading wall glass, makes a beautiful bathroom.

Libbey-Owens-Ford Glass Company, Dept. AB1041, Nicholas Building, Toledo, Ohio.



LIBBEY · OWENS · FORD

Glass Designed for Happiness



Studs are secured to bottom plate with self-threading screws. Notice that studs (and floor joists) are placed 24 inches o.c. This wide spacing is possible due to the great strength of Stran-Steel—results in savings of material.



Nailing corrugated sheets to Stran-Steel floor joists. This forms a working deck during the early stages of construction. Later, concrete will be poured over the metal sheets, forming a safe, silent, fireproof floor.

The patented Stran-Steel nailing groove—an exclusive feature—means faster construction. Carpenters apply collateral materials in exactly the same way as in ordinary wood construction. Nails are driven into the grooves of the steel studs and joists—held in a steel grip more firm than is possible with wood construction. A regular claw hammer extracts the nails without difficulty, when necessary.

Although the nailing groove is an outstanding feature of this modern framing material, it is only *one* of Stran-Steel's many advantages. Stran-Steel may be assembled with self-threading screws (requiring only an ordinary screw-driver), or it may be welded into complete sections. On big projects, where many duplicate wall panels and roof trusses are needed, this latter method saves time and money. In addition to these erection advantages of Stran-Steel which combine to speed up the job, Stran-Steel has all the advantages—fire-safety, permanence and low maintenance cost—of steel construction.

GET ALL THE FACTS ON STRAN-STEEL NOW!

Write for the new Stran-Steel building manual, "On The Job," today. It clearly shows the methods used in Stran-Steel construction, and contains technical data on the various standard members. Your copy will be sent free, and entails no obligation on your part. Address your request to Stran-Steel Division, Great Lakes Steel Corporation, 607 Shelby Street, Detroit, Michigan.



**STRAN
STEEL**

UNIT OF NATIONAL STEEL CORPORATION

Leading Architects Choose Janitrol for Winter Comfort and Good Health



LACKAWANNA DEFENSE HOUSING PROJECT
LACKAWANNA N.Y. - PROJECT 30033

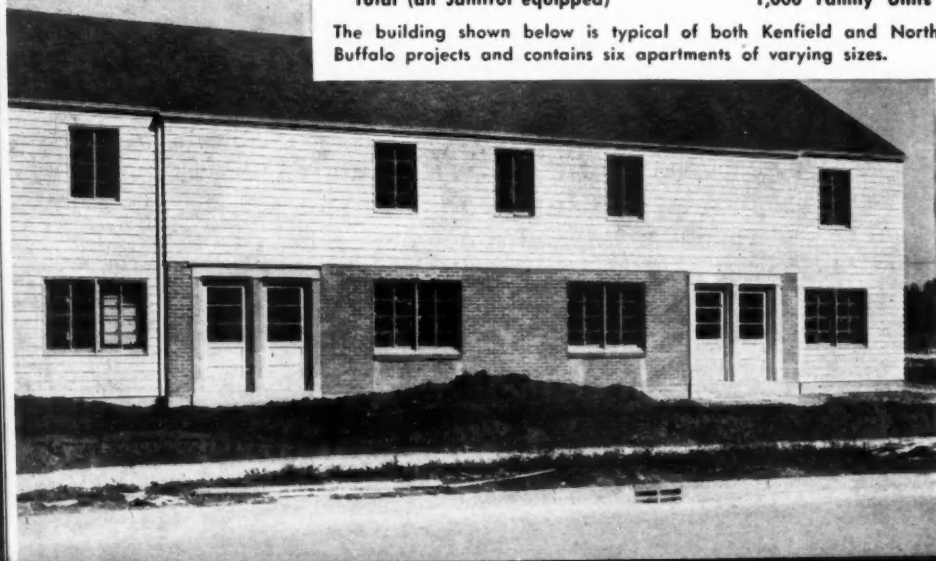
FEDERAL WORKS AGENCY
JOHN M. CARMODY - ADMINISTRATOR
UNITED STATES HOUSING AUTHORITY
NATHAN STEAUS - ADMINISTRATOR
IN COOPERATION WITH
HOUSING AUTHORITY OF THE CITY OF LACKAWANNA
HARRY F. HUDSON - ARCHITECT
JOSEPH E. FRONCZAK - ROSWELLE PFOHL - ASSOCIATES



- LACKAWANNA HOUSING PROJECT:** (Shown top of page)
Architect: Hudson & Hudson, Buffalo, N. Y.
Contractor: Delval Construction Co., Scarsdale, N. Y.
Heating: Coon & Fuchs, Buffalo, N. Y. 200 Units
- KENFIELD HOUSING PROJECT:** (Construction shown at left)
Architect: Green & James, Buffalo, N. Y.
Contractor: W. L. Crow Construction Co., New York, N. Y.
Heating: Ideal Heating Co., Buffalo, N. Y. 594 Units
- NORTH BUFFALO PROJECT:** (Note 6-apartment unit below)
Architect: Green & James, Buffalo, N. Y.
Contractor: Border Building Co., Buffalo, N. Y.
Heating: George Zolitsch & Son, Buffalo, N. Y. 206 Units

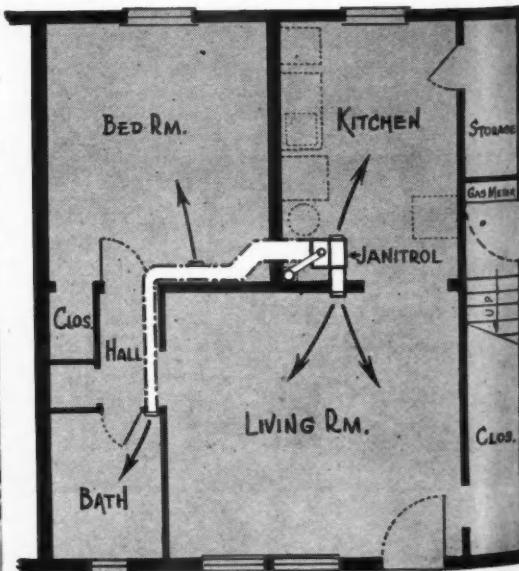
Total (all Janitrol equipped) 1,000 Family Units

The building shown below is typical of both Kenfield and North Buffalo projects and contains six apartments of varying sizes.



Not Just Heaters But Automatic Duct-Conveyed Heat

Note from diagram how ducts convey proportional heat to various rooms, as shown by arrows. This is true of all the Janitrol systems in all of the 1,000 units of these three Buffalo projects. Air is forced to far corners and returns to grill in the compact, space saving Janitrol heater located in the kitchen.



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SURF

Automatic Gas-Fired Heating Systems in a Thousand Buffalo Defense Homes

Defense Homes? Yes, and Others Too — Our Pledge to the Building Trades

Soon one thousand defense workers employed by Curtiss-Wright, Bell Aircraft, Bethlehem Steel and others in Buffalo will be able to house their families in these fine apartments.

Here will live a thousand families without any ashes to carry, no fuel to shovel or store, nor a minute's furnace tending in the whole 1,000 homes. Certainly winter colds will be reduced to a minimum by the automatic, uniform Janitrol heat. Thus the health of the defense worker is protected and his time and strength conserved for important defense work.

For Individual Homes and Stores in Buffalo — and Elsewhere

The satisfaction we get out of giving one thousand defense families the world's finest automatic heat is tempered somewhat by difficulty in supplying individual builders all the Janitrols they need. In Buffalo and many other cities, builders depend upon Janitrol for heating homes, stores and factories.

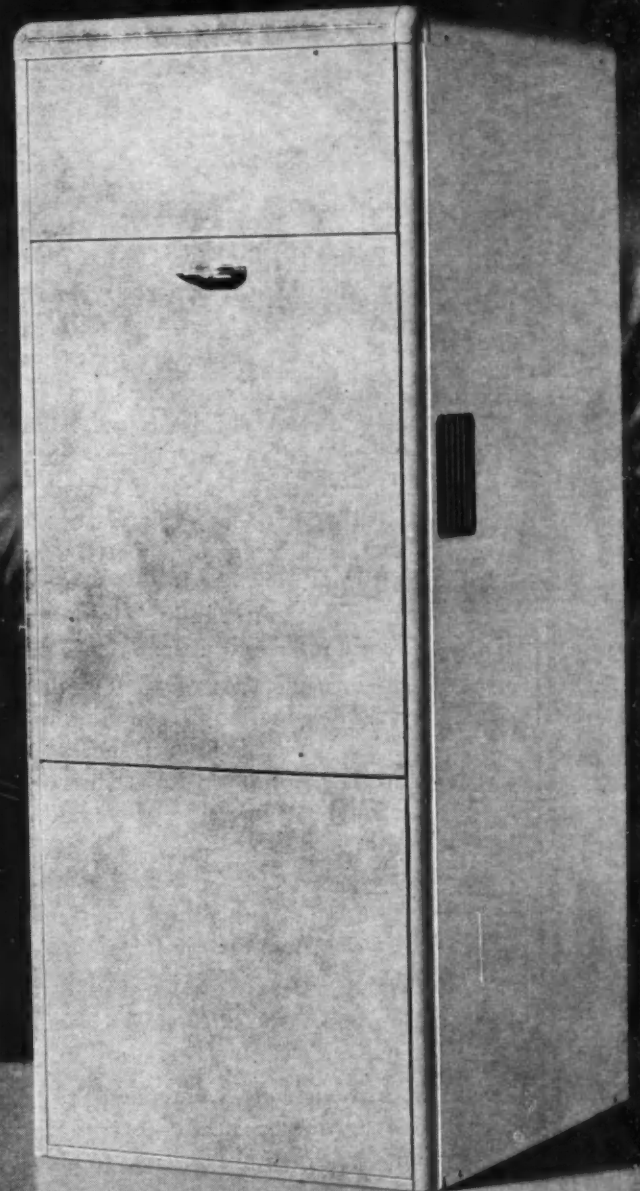
We're doing all we can — working full capacity 24 hours a day to see that every builder who depends upon us gets his Janitrol equipment just as fast as we can give it to him.

Defense work does, of course, throw schedules out of gear, but is not going to keep us from fighting every inch of the way to supply our friends the builders with gas-fired air conditioners and unit heaters. Somehow we have an optimistic feeling that the situation will clear and supplies will flow and that we may properly serve our dealer and builder friends from whom, in normal times, our business must come.

We suggest that you plan your building program with a longer range viewpoint than in normal times and make it plain to your customers that delivery dates cannot be as immediate nor as certain as they would be if there were no defense needs, no priorities, nor the abnormal demand upon manufacturers which exists. Since the best products will be most difficult to get, forward planning is essential.

SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO
Offices and Engineers in Principal Cities

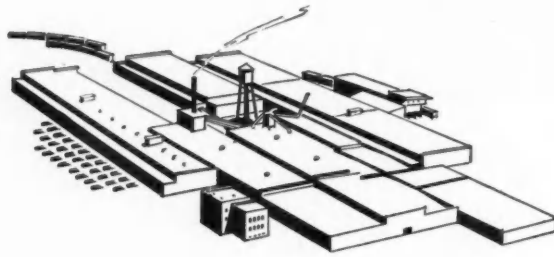
Janitrol Forced Air-Conditioner, an automatic gas-fired heating unit much used for heating individual apartments in group housing projects, also for individual homes.



JANITROL

SC

WINTER AIR CONDITIONERS • CONVERSION BURNERS • UNIT HEATERS • GRAVITY FURNACES



SOME CERTAIN FACTS IN AN UNCERTAIN WORLD

A Message to the Building Industry from the Makers of Andersen Lifetime Windows

● Today the building industry is busier than any time in more than a decade. You are doing your part in the great effort our America is making to defend its principles and ideals.

We, too, are busy. Our huge productive capacity is now strained to its limit. We are booked solidly for several months to come. We anticipate that this condition will continue for some time. By the thousands, our windows are going out to build new homes for defense workers who must have dwellings near their factories and plants, and to build new structures directly involved in the defense program.

Meanwhile the tremendous demand made by the production of the actual materials of defense is creating acute shortages of certain materials, notably metals. Thus we are met on one hand with increasing demand for windows, and on the other hand with certain material shortages.

But even in this uncertain building world, there are some certain facts:

1. The Andersen Corporation is now bending and will continue to bend every ounce of effort to maintain its high standard of quality.
2. Although delays are going to be unavoidable, we shall continue to give all the service that it is humanly possible to give.
3. The building of new homes in defense areas is of vital importance to the defense program. An increasingly large share of our windows is going into these areas.

4. Andersen's part in the conservation of essential defense materials is two-fold: first, we are making a window that is primarily of wood. Thus we make a minimum of demand upon the metals so urgently needed for the weapons of war. Second, even on those materials that are used in smaller quantities in our windows, our research personnel has been conducting an intelligent search for satisfactory materials on which there is no shortage of supply. We already have achieved gratifying results.

5. It is worth while defense economy to build homes with weatherstripped windows whose tightness assures positive fuel savings. A few pounds of weatherstrip metal in a house will conserve oil and coal for defense work. Lifetime construction, moreover, eliminates costly repairs and replacements.

6. For busy builders, whose time is now more precious than ever, the modern *pre-fabricated* window unit, as built in the Andersen factory by specialists who have maintained the highest of standards for 37 years, is the wise choice.

We all have the faith that we are building a new and better country. By perseverance, by industry, by traditional American ingenuity, we'll get the job done.

ANDERSEN CORPORATION
BAYPORT, MINNESOTA

Fred C. Andersen
PRESIDENT

MAKERS OF ANDERSEN NARROLINE (DOUBLE HUNG), CASEMENT, HORIZONTAL GLIDING AND BASEMENT WINDOW UNITS, AND ANDERSEN MASTER WINDOW FRAMES

FOR SIDING THAT DOESN'T BLEED THROUGH...

SPECIFY



Arkansas Soft Pine



Protect your paint jobs against this "time bomb" trouble, with Arkansas Soft Pine siding . . . the siding that can take it in Texas summers, Maine winters or corn-belt hot spells.

HERE'S WHY:

There's nothing in the wood to bleed through paint, because Arkansas Soft Pine is free from pitch. This minimizes paint deterioration and eliminates troublesome discoloration.

Primers penetrate the resin-free soft texture of Arkansas Soft Pine . . . primer and wood fibre become integral. Intermediate and finish coats are brushed on the wood itself . . . not merely carried on the surface of the primer.

Again, freedom from pitch spells soft texture that nails without splitting; clean cut, mitered joints at all corners; bevel siding with no unsightly splits; mouldings and cornice assemblies that stay put . . . still more protection for paint.

Arkansas Soft Pine siding comes in standard patterns of drop, bevel and colonial. See it at your lumber dealer's along with framing lumber and Satin-like Interior Trim of this soft textured, easy-to-work material . . . the tested, trade marked, all-purpose wood for building better homes.

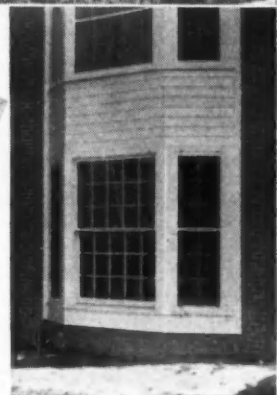
For painting and finishing instructions, how to specify, grades to use, stress tables, construction details, etc., get this useful Arkansas Soft Pine Handbook. Write today for your **FREE COPY.**



**FREE
HAND-
BOOK**



**for
BUILDERS**



ARKANSAS SOFT PINE BUREAU

1014 Boyle Building

Little Rock, Arkansas



DON'T USE "JACK-OF-ALL-TRADE" MATERIALS!

**CHOOSE THE SPECIAL TYPE OF
Pittsburgh Steeltex FOR EACH
CEMENT OR GYPSUM NEED!**

FOR MASONRY VENEER



Steeltex for Masonry Veneer is not just a substitute for wood or composition sheathing. It is an "engineered" product that applies modern, scientific building principles to veneer practices.

It imparts to veneer most of the advantages of *solid* wall construction, yet eliminates the old faults of excessive thickness, prohibitive cost, dampness, sweating, etc. It applies the proved strengthening principles of *reinforced* concrete. *Steeltex* makes the brick, stone or other masonry veneer wall an *integral* part of the structure—not a free-standing *shell* with limited strength and definite fire hazard. It adds an air and water repellent "moisture seal" backing that provides additional protection and enhances effectiveness of inner wall insulation. Every builder should learn about this improved method of applying masonry veneer. Write for full particulars!

Pittsburgh Welded Reinforcement Fabric for concrete basement floors, foundations, retaining walls, garage aprons, etc., is available in many sizes, gauges and meshes.

FOR PLASTER



Steeltex for Plaster is designed with full consideration of plastering problems. It is the *only* plaster base that *binds* plaster into fully monolithic surfaces by the *complete* embedment of its network of welded wires. *Steeltex* reinforces—minimizes cracking—eliminates lath and stud marks—adds structure strength—helps plaster cure. Investigate!

FOR CONCRETE FLOORS



Pittsburgh Steeltex for floors is a combined *reinforcement* and form for concrete over light steel joists. It is an electrically welded steel wire reinforcing fabric securely attached to the "form" element—a strong, fibrous, cord-reinforced, water-resistant backing. Advantages include greater strength, economy and speed of application; elimination of additional reinforcing or other forms; inhibition of progressive cracking, etc. Send for information.

FOR STUCCO



Stucco on *Steeltex* has survived hurricanes and earthquakes! Reinforcement "like concrete" by embedment of a rigidly welded network of steel wires imparts this remarkable strength, assures a crack-free building medium as permanent as any. Resistance to corrosion through galvanized copper bearing steel and protection against dampness by moisture-proof backing are other advantages. Write.

PITTSBURGH STEEL COMPANY • CONSTRUCTION PRODUCTS DIVISION • 1665 GRANT BUILDING, PITTSBURGH, PA.



Pittsburgh Steeltex

THE MODERN REINFORCEMENT FOR CEMENT AND GYPSUM APPLICATIONS

SHORT-HANDED?

KEEP UP WITH YOUR BUILDING SCHEDULES BY USING TIME-SAVING **dri-bilt** WITH PLYWOOD CONSTRUCTION

Douglas Fir Plywood requires less man hours per job, produces more rigid, more durable structures.

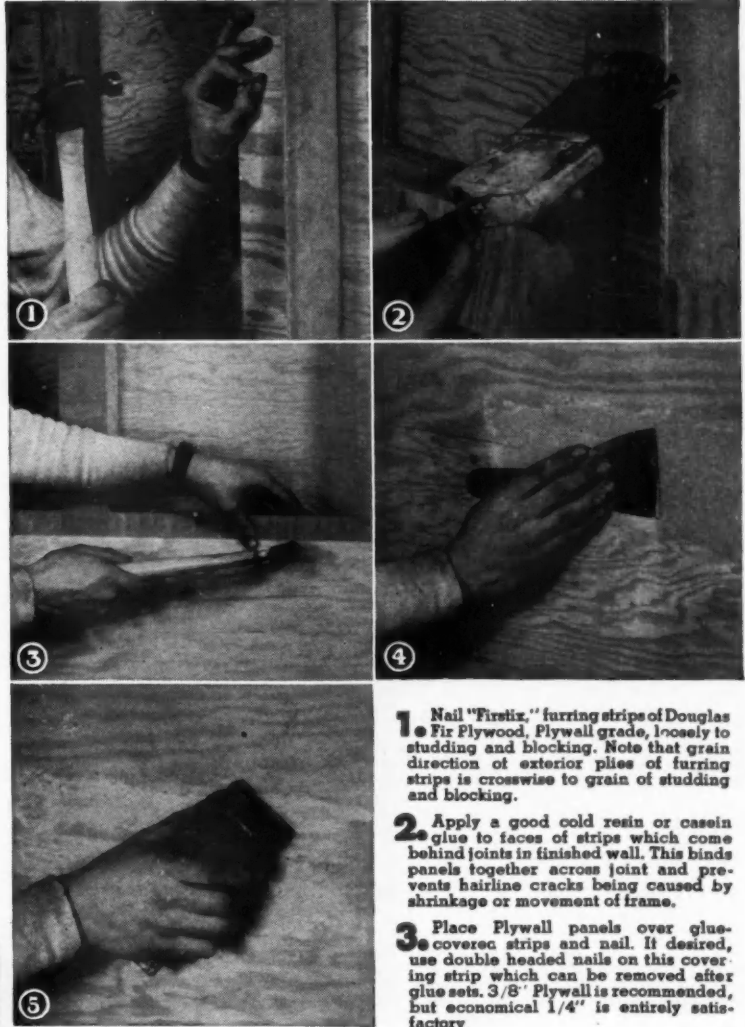
● If you're finding carpenters and other craftsmen hard to get because of defense construction, here's the answer to your problem. Use the proper grades of Douglas Fir Plywood for concrete forms, sub-flooring, wall and roof sheathing, interior walls and ceilings, built-ins and exterior finish.

The big Plywood panels require a minimum of handling, cutting, fitting and nailing. Every 4' x 8' panel, for instance, actually covers 32 square feet. This means that you can lay a Plywood sub-floor in half your usual sub-flooring time. Plywood walls and ceilings don't have to dry out for weeks... they're ready to finish the instant you put them in place.

Dri-Bilt with Douglas Fir Plywood houses are structurally superior, too. Their walls are more rigid and tighter, which means less wind and dust. Plywood interiors are strikingly beautiful, yet crack- and kick-proof. Dri-Bilt with Plywood construction is accepted by F.H.A. and approved in the Uniform Building Code, making financing and selling easy.

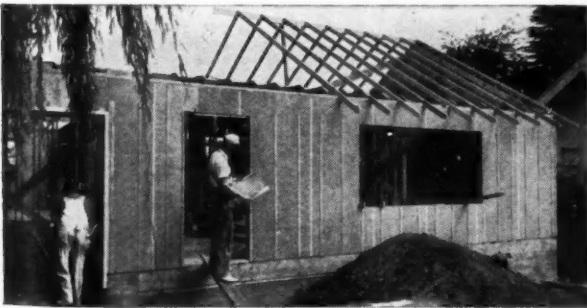
Send now for the free Dri-Bilt Manual that gives full details. Write also for free plan booklets which show how National Homes Foundation plans can be adapted to Plywood construction. Douglas Fir Plywood Association, Tacoma Bldg., Tacoma, Washington.

Recommended method of concealing joints in Plywood walls



1. Nail "Firstix," furring strips of Douglas Fir Plywood, Plywall grade, loosely to studding and blocking. Note that grain direction of exterior plies of furring strips is crosswise to grain of studding and blocking.
2. Apply a good cold resin or casein glue to faces of strips which come behind joints in finished wall. This binds panels together across joint and prevents hairline cracks being caused by shrinkage or movement of frame.
3. Place Plywall panels over glue-covered strips and nail. If desired, use double headed nails on this covering strip which can be removed after glue sets. 3/8" Plywall is recommended, but economical 1/4" is entirely satisfactory.
4. Spread a good crack filler over joints with a broad knife. This hides joints completely and bridges the slight unevenness that might occur if panels were not identical hairbreadth thickness.
5. Sandpaper after the filler has dried. Wall is now ready to be given any finish desired.

NOTE: Furring strips are often used over Plyscord sheathing, too. This increases wall thickness to permit use of standard window frames and provides an extra dead air insulation space in the wall.



PREFABRICATION is rapidly coming of age and gaining acceptance everywhere. It makes for speed of building, brings about substantial economies and, most important, provides better shelter. Surveys show that most prefabricators use Douglas Fir Plywood as a basic structural material. Write for details.

DEFENSE ORDERS and the orders of our regular customers are being filled as promptly as possible. But more plywood is on the way! Production capacity of the Douglas Fir Plywood industry will soon reach one hundred fifty million ft. a month.

DOUGLAS FIR PLYWOOD
Real Lumber
**MADE LARGER, LIGHTER
 SPLIT-PROOF
 STRONGER**

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

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HOW TO PUT MORE HEATING HAPPINESS INTO *Small Homes*

IT'S A SMALL HOME—but it gets the very latest in heating comfort with a Crane No. 14 Boiler.

Low in cost, the No. 14 burns all fuels economically. You can even install it in homes without basements, because of its completely water-jacketed ash pit and low return inlet. What's more, you can place it directly on a

wooden floor without insulating the base.

It pays you—in dollars and cents—to provide better heating for small homes. And Crane can help you provide the latest in low cost, small home heating systems for any need, for any fuel. Get the facts for yourself at the nearest Crane display room.

CRANE

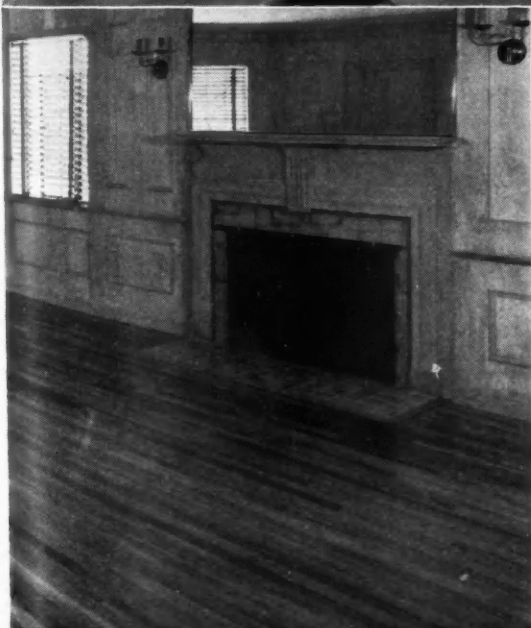
CRANE CO., GENERAL OFFICES:
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VALVES • FITTINGS • PIPE
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NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

*It's a Perfect Floor, quickly laid—
—when it's*



Bradley's
STRAIGHT-LINE
OAK FLOORING



Here's flooring that's machined to straight, parallel lines and square edges throughout. Improved tongue and groove permit snug fitting without forcing. Strips, loosely assembled on floor, are pulled together and nailed in place with minimum effort. Result — maximum saving in time and material, plus beautiful floors which compliment the skill of layer and finisher alike.

No wonder, then, that Bradley's Straight-Line Oak Flooring is so heartily endorsed by leading architects, contractors and property owners. Contractors also find that it harmonizes perfectly with Bradley's famous trim and mouldings in Arkansas Soft Pine, Oak and Gum, available from your favorite lumber dealer.

BRADLEY LUMBER COMPANY *of Arkansas*
WARREN, ARKANSAS

Protect America's Homes for **30 YEARS PLUS***

with this new, low-cost asbestos
roof shingle that is scoring
record-breaking success all
over the country—the Johns-
Manville *American Colonial*

ANNOUNCED just a few months ago, the new
Johns-Manville *American Colonial* Shingle is
already a sensation in the building field! And for
good reasons.

This is an *asbestos* shingle...built to protect homes
against fire, weather and wear for *30 years plus*.*
Yet the *American Colonial* has the deep texture, stag-
gered edge and beautiful appearance of weathered
wood. The rich color blends in which it is available
add charm and beauty wherever used.

On new homes or on re-roofing work, its mod-
ern, self-spacing, fast-laying design cuts application
costs. At the new low price of the *American Colonial*,
finished roofs with permanent qualities *cost little
more than roofs of many far less lasting materials*. Send
for full-color brochure. Just mail the coupon.

● Orders for the new Johns-
Manville American Colonial
Shingle have reached un-
precedented volume. In ad-
dition to the steadily grow-
ing demand for private con-
struction, defense projects
have called for thousands of

squares. As a result, delivery
may be slower than during
normal times. However,
factory production is being
speeded up...every step is
being taken to assure the
fastest delivery possible un-
der the present emergency.



***This is an intentional understatement—**Thou-
sands of the very first J-M Asbestos Shingles applied
30 years ago are still going strong. No sign that
they won't last another 30, 40, 50 years.

JOHNS-MANVILLE, Dept. AB-10,
22 East 40th Street, New York, N. Y.

Send me a copy of your new full-color brochure
on J-M American Colonial Asbestos Shingles. No
obligation, of course.

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JOHNS-MANVILLE

Asbestos Shingles

MAKE THIS TEST -
Prove **BRIXMENT is BEST!**



1 Mix a batch of 1-3 Brixment mortar (above) and a batch of 50-50 cement-lime mortar made with the same proportion of sand (right). Get any competent bricklayer to test



2 them on the board—to spread them on the wall—to lay up a few brick with each of the two mortars. Then ask him *which* has the best workability.

BRIXMENT Assures More Economical Brickwork

Aside from the cost of the brick itself, the most expensive item in masonry construction is the bricklayer's time.

Therefore the most economical mortar you can buy is the one that enables the bricklayer to lay the most brick per day. You cannot afford to give your bricklayer any mortar which causes unnecessary work, such as constant retempering, stooping to the board to replace mortar that failed to stick when he threw up the head-joint, etc.

To secure economical brickwork, the mortar must

have excellent workability.

The plasticity of Brixment mortar is *ideal*. It approaches that of straight lime putty. It enables the bricklayer to do faster, neater brickwork, with the brick well bedded and the joints well filled.

This is the principal reason why Brixment reduces the cost of brickwork. But in addition, less labor and supervision are required in mixing. No soaking or slaking. No mortar is wasted. And Brixment mortar makes a neater job that costs less to clean down.

BRIXMENT *For Mortar and Stucco*

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.

SCHOOL: Montpelier, Vt. • ARCH.: Robert R. Graham, Middletown, N. Y. • ENG.: Edwin E. Seeley, New York City • CON.: J. A. J. Const. Co., Brooklyn, N. Y.



Cold weather bugaboo IS TAKEN OUT OF CONCRETING



Time was, of course, when Old Man Winter slowed down or put a stop to plenty of concrete construction. But that was before Lehigh Early Strength Cement became available, curing to service strength 3 to 5 times faster than normal cement.

The basement walls of this Vermont school were poured at temperatures ranging from freezing to 10° below. Contractor Supt. Newburg reports that, due to the use of Lehigh

Early Strength Cement, a saving of 20 days' time and \$1000 in form construction and lumber was effected.

Quick curing of concrete naturally lessens the danger of damage by frost, shortens the period of heat protection, reduces fire hazard, lowers form cost and overhead. These are big advantages in themselves; but not so big, perhaps, as the key fact that cold weather no longer need say "NO!" to concrete work.

Ask the Lehigh Service Department for additional data on Lehigh Early Strength Cement. The more you know about it, the less you'll mind the winter.

Lehigh

EARLY STRENGTH CEMENT
FOR SERVICE-STRENGTH CONCRETE IN A HURRY

LEHIGH PORTLAND CEMENT COMPANY • ALLENTOWN, PA. . . . CHICAGO, ILL. . . . SPOKANE, WASH.

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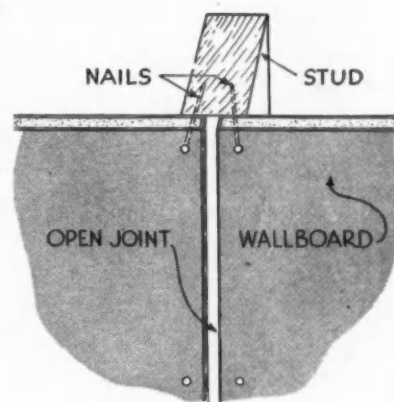
HOW TO INCREASE PROFITS ON LOW-COST WALLBOARD HOMES!

• The Gold Bond Streamlined Joint System was originally developed to enable builders to make a reasonable profit on wallboard-equipped defense housing projects. A practical method for building attractive wallboard walls without tape or moulding strips, this new system can be erected by any carpenter without special training or extra tools. It cuts application costs as much as \$20 per thousand square feet—eliminates waste—can save two full days time on the average five-room house.

The Streamlined Joint System is just another instance of getting *the best things first from Gold Bond*. Through consistent research, National Gypsum Company has become the pace-setter for the industry, with 21 model plants, 10,000 dependable Gold Bond dealers, and 300 trained repre-

sentatives ready and able to help you select the best material for your particular job. Today, there are more than 150 better Gold Bond products for every wall and ceiling requirement—including plaster, wallboard, sheathing, gypsum and metal lath, lime, wall paint, insulation, and sound control materials.

And when you use Gold Bond exclusively, you get the added protection of having the responsibility for *all* products centered with *one* organization—the world's largest exclusive wall and ceiling materials manufacturer. Write today for detailed specifications on the new Gold Bond Streamlined Joint System of wall and ceiling construction. National Gypsum Company, Buffalo, New York.



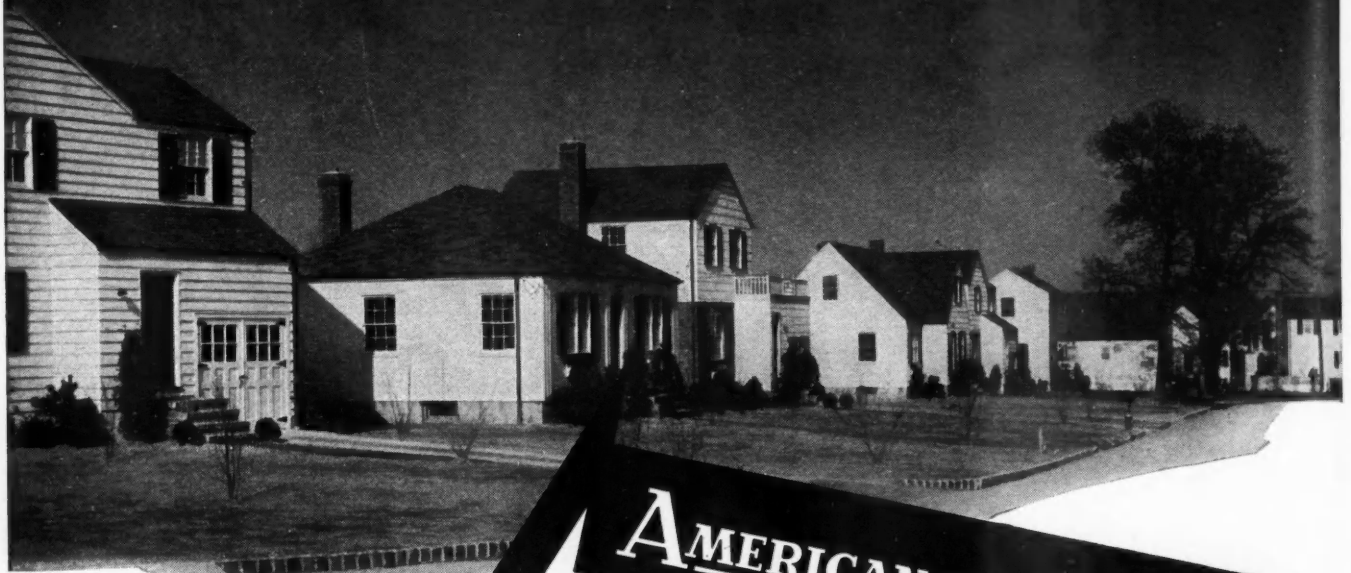
BUILD BETTER WITH
Gold Bond
Everything—for walls & ceilings

THE GOLD BOND STREAMLINED JOINT SYSTEM SAVED \$20 PER THOUSAND square feet on these smart walls and ceilings. No specially trained mechanics or special tools are needed—conforms to defense housing authority requirements. Diagram shows how full-width Gold Bond gypsum wallboard is nailed direct to studs, leaving 1/4" between panels.

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 SALTVILLE, VA. . . . NILES, O. . . . MOBILE, ALA. . . . NEWBURGH, N. Y. . . . ALEXANDRIA, IND. . . . DUBUQUE, IA. . . . DOVER, N. J.

*For Heating and Plumbing
in homes of every price range—*



**AMERICAN HEATING EQUIPMENT
COST NO MORE THAN OTHERS
"Standard" PLUMBING FIXTURES**

Follow the Arrow!

FOR MANY years the products of American Radiator and Standard Sanitary Corporation have been well advertised, well known, well regarded. In homes of all kinds they have won a fully justified reputation for excellence and attractive appearance. That's why builders everywhere install efficient, quality-proved AMERICAN Heating Equipment and "Standard" Plumbing Fixtures.

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*There are automatic and hand-fired
Units in all sizes, for all fuels.*

"Standard" PLUMBING FIXTURES
*are made in a wide price range, in many smart
styles, in white and eleven exquisite colors.*

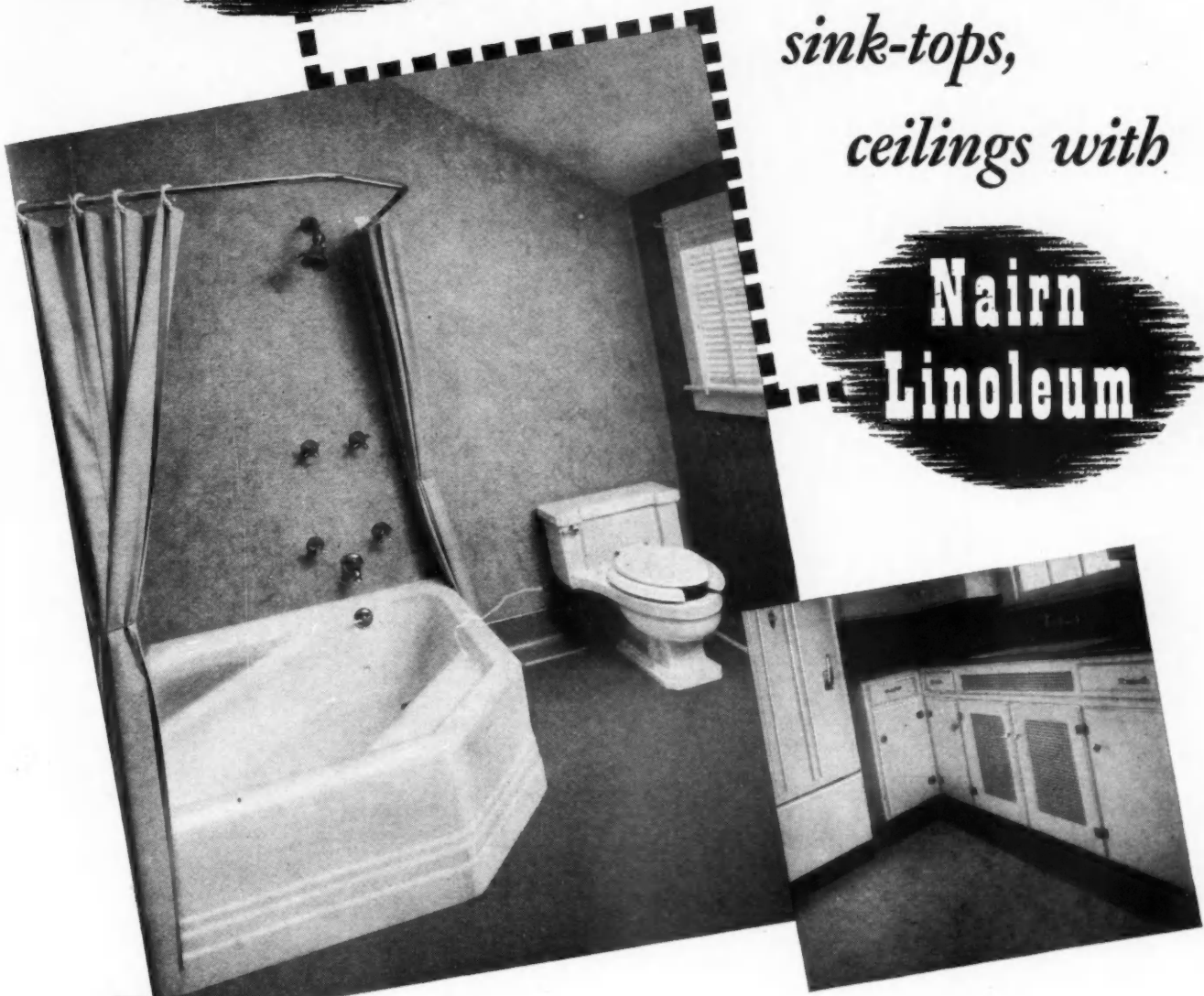
★ ★ **DEFEND OUR COUNTRY. ENLIST NOW IN THE U. S. REGULAR ARMY** ★ ★

“Functional” beauty for floors, walls,

sink-tops,

ceilings with

**Nairn
Linoleum**



NAIRN LINOLEUM enables architects and builders to combine utility with real beauty in bathrooms and kitchens — and do it at very moderate cost. Here's a specification that provides clean-cut, *practical* decorative effects obtainable with no other material.

Home owners are becoming more and more enthusiastic about the sanitary features of Nairn floors and walls. They like its stainproof, fadeproof patterns. They like the way it can be formed into coved corners at floor

and wall junctions and on sink splashbacks, eliminating dirt-catching cracks and crevices.

All Nairn wall patterns are Color Correlated with Nairn Linoleum for floors. From among the wide distinctive range of colors and patterns, the

architect can create unique treatments. Unusual floor color schemes with contrasting insets and feature strips. Interesting designs on linoleum covered doors using brass nailheads. Or the new “sculptured” effects on Nairn walls, done with *incised lines*.

From any point of view, long-wearing Nairn Linoleum is the ideal residential specification. Moderate in first cost, it requires practically no upkeep. Fully guaranteed when installed by authorized contractors.

CONGOLEUM-NAIRN INC., KEARNY, N. J.

NAIRN
Linoleum Floors and Walls

QUALITY
never
counted
more!



PEOPLE are judging everything on the basis of quality and performance these days. Wise builders are taking the cue and using top-quality materials throughout the homes they're building to sell.

And where does quality count more than right on the roof of the house — the place where rain, snow, sleet, wind and heat strike first and hardest. Play safe and use Barber Genasco Roofs from now on.

These are the roofs that not only have the quality features that other fine roofings offer, but they also have the added toughness and durability of Trinidad Native Lake Asphalt. No other brand of roofing provides this extra assurance of service and long life.

Barber Genasco Roofings come in a wide range of beautiful colors . . . in sizes, shapes and styles that please the public eye . . . at prices that are strictly

competitive. Barber also has a special shingle that meets all F. H. A. requirements.

Get the facts and figures from your near-by Barber dealer or applicator. You'll find his name in your local classified telephone directory. Barber Asphalt Corporation, Barber, New Jersey.



BARBER
MEANS A GOOD ROOF!

SHINGLES • SIDINGS • ROLL ROOFINGS • BUILT-UP ROOFINGS

HOW TO CASH IN ON "SUNBEAMS"



● Light and air—"sunbeams"—can make money for you! For here's how to answer the question "Won't lots of windows make our home harder to heat and drafty?"

To people who really want lots of windows in their rooms but who hesitate because they fear large fuel bills, you say, "You can have all the windows you want if you use Silentite 'insulated' windows."

The famous Curtis Silentite Windows, double-hung or casement style, in wood, help keep fuel bills down. They're "insulated"—weather-stripped effectively to help save as much as 25% of fuel bills. They help keep out drafts, dust and dirt, too! And they are trouble-free—won't rattle, stick or jam!

To help you prove this superiority, and cash-in on "sunbeams," Curtis has developed a handy "economy calculator." This pocket salesman helps you figure heat

loss through ordinary windows and Silentite. It helps you estimate—indicates how Silentite double-hung windows and Curtis Mitertite trim may save as much as 3/8 in installation costs!

Silentite and this "Calculator" are the easy way to clinch window sales. Your Curtis Dealer can give you both. Stop in for your calculator. And mail the coupon below for Silentite literature. If you live in Canada, write to W. C. Edwards & Co., Ltd., 991 Somerset Street, West, Ottawa, Canada.

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE

1866
CURTIS
WOODWORK

SILENTITE
PRE-FIT
the "Insulated" window

THERE'S ONLY ONE SILENTITE AND ONLY CURTIS MAKES IT
Its patented features aren't available in any other window

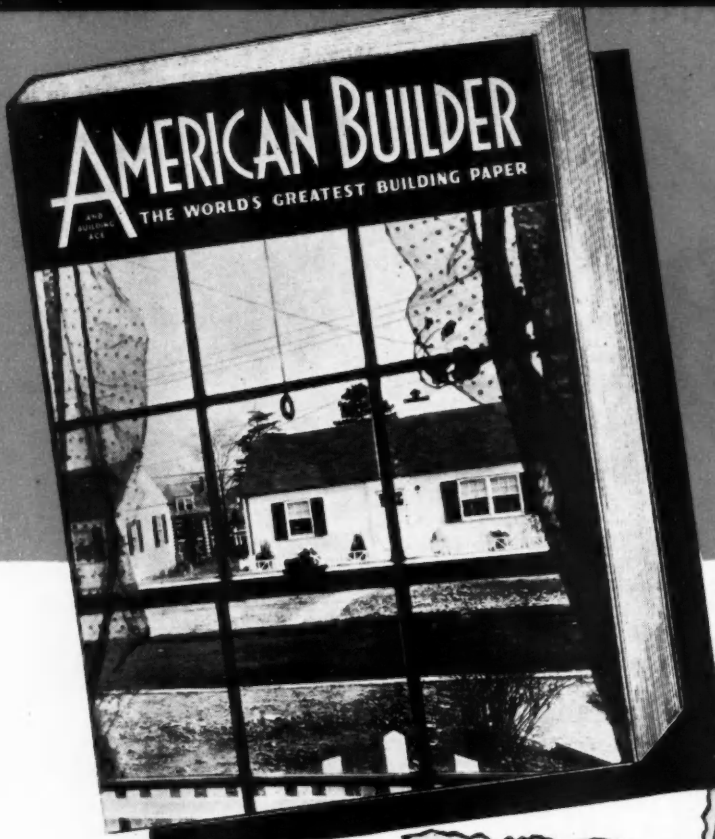
CURTIS COMPANIES SERVICE BUREAU
Dept. AB-10, Curtis Bldg., Clinton, Iowa

Tell me more about Silentite "Insulated" Windows.

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Address.....

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



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**NEW BUILDINGS
FEATURE SUITES
OF MEDIUM SIZE**

Built-In Furniture, Larger
Closets and 'Efficiency'
Kitchens Offered

**Building Gain
Of 26 P. C. Is
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Dow Service Report Puts
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at \$5,990,000,000

Defense Is Credited
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**U. S. Will Help
Owners Repair
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President Authorizes Use
of \$100,000 for Advice of
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**Home Owners
Found Hit Least
In Inflation Era**

Hold Tangible Utility Value,
Find Mortgage Payment
Easier, Nelson Declares

July Home Loans
Total \$443,039,000

**Defense Shortages Will Force
Some Changes in Home Building**

Stall Showers Recommended Instead of Bathtubs;
First-Floor Heaters May Replace Furnaces;
Drop in One-Family Building Expected

WHAT is really happening in the building industry? It is vitally important for active builders to know. But it is necessary to go behind the headlines to learn the true picture. A reliable interpretation of the news—a dependable analysis of conditions from an outstanding source which specializes in digging out the truth from the news behind the news—these are needed if you would know what is really happening in the building industry. You can find this source in AMERICAN BUILDER, established in 1879, and which has brought the truth behind the news to its readers ever since. Methods in the building industry are changing over night. It may pay you to know why, so that you may meet the fast shifting situation with even more intelligence, and, therefore, with greater ability to solve the problems that now face you.

YOU will not likely care—nor well can afford—to miss features such as these in a coming issue:—1. OUTLOOK & FORECAST—total of residential units built, location, value, estimate of volume for the coming year.—2. TRENDS IN ARCHITECTURAL STYLES—most popular in various parts of the country—trends in style, color and equipment of homes.—3. HOMES THAT SELL—analysis of sales prices, room sizes, materials and other features.—4. "WHERE AMERICA LIVES"—analysis of U.S. census figures showing the need for homes—population trends.—5. "THE MEN

WHO BUILD AND SELL"—showing huge number of men involved in the building industry—of the great value in pointing out to government officials the importance of maintaining employment in construction—of doing nothing arbitrarily to limit or curtail such work.—6. TRENDS IN BUILDING COSTS—labor rates and material supplies.—7. PRIVATE BUILDING VERSUS GOVERNMENT OPERATIONS—to solve the housing problem, pointing out importance of private initiative.—8. TRENDS IN 1942 HOME DESIGNS—selected group of popular homes and interiors—trends in architecture, design and construction.—9. TRENDS IN HOME EQUIPMENT AND BUILDING MATERIALS—new products, descriptive catalogs builders will be referring to, in planning their building operations for the coming year.

IN every issue you can get just such factual, interpretative material—10 or more good, salable new home designs—elevations—construction features—a wealth of photographs and drawings, interior, exterior and "on-the-job"—many invaluable experience articles—"stop press" timeliness. And, you will also receive AMERICAN BUILDER'S latest book of home designs, SECURITY HOMES, at no extra cost. Just fill in and mail with your remittance the form at top of opposite page. We suggest you act promptly!

AMERICAN BUILDER

TRUTH e News

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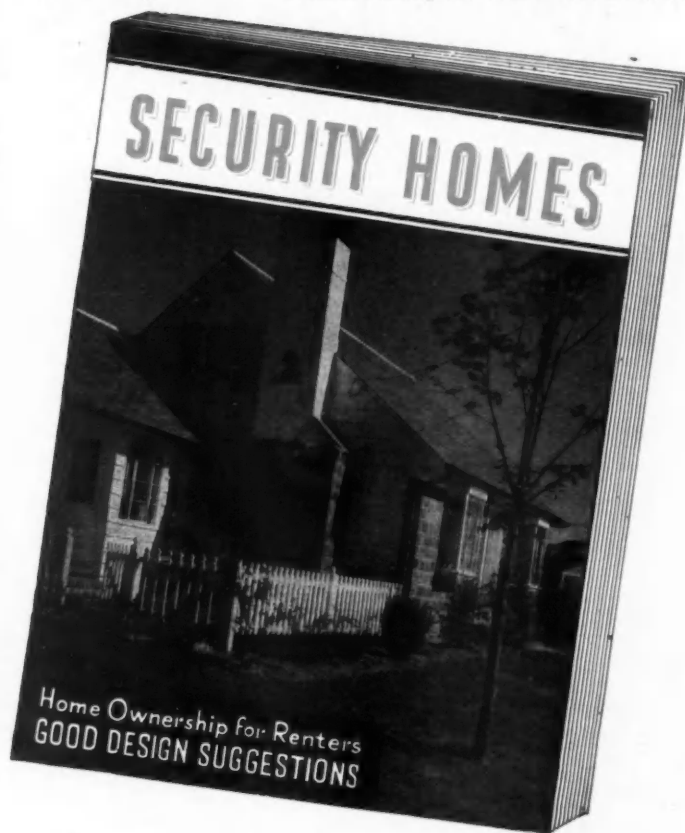
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AT NO EXTRA COST WITH EVERY SUBSCRIPTION OUR LATEST BOOK OF FAST SELLING DESIGNS

Every Design in **SECURITY HOMES** is shown because it has proved a **SUCCESSFUL SELLER**. 180 pages, 8½ x 11¼, this book has more than 129 good Home Design Suggestions. De Luxe Designs, Floor Plans, Exterior, Interior, on-the-job photographs galore. Teeming with good ideas, here is a sales aid that you will refer to constantly.

And besides the more than 129 good design suggestions, there are many articles pertinent to your interests in **SECURITY HOMES**. You might use them for your own good—you can bring them to the attention of your customers, for they are persuasively conceived and soundly written. Please consider these titles: "The Best Investment You Can Make"—advice of a father to his son and daughter-in-law on home ownership . . . "Peg Rental Costs Through Home Ownership" . . . "Income Tax Favors Home Owning" . . . "A Simple Way to Figure Monthly FHA Payments" . . . "15 Reasons For Building Now" . . . "Methods That Speed Work—Reduce Costs."

SECURITY HOMES assists dealers in their business—it supplies them with good home design suggestions that are proving fast sellers in the North, South, East and West—suggestions they can use every day. A glance at just a part of the contents of **SECURITY HOMES** shows that these carefully selected, tested home designs have quick appeal—they definitely help make sales. Brief reference reveals: How Eye Appeal and "Sex Appeal" Items Help Builders Sell Homes; found in "Do You Respond?—to the Unusual in Home Fittings?" . . . A Streamlined 5-Level House in Modern Styling is fully described in text, floor plans, and illustrations—interior and exterior—in "Novel Year-Round Home on the Pacific" . . . "Three Distinctive Kansas City Homes" in the modest cost bracket, with illustrations, floor plans and with details as practical as they are unusual. Details of excavation, stone foundation, grading, draining, iron work, carpentry and framing, all are included in this typical article . . . In "Variations in Economy Type of 6-Room Plan" are the floor plans and description of three attractive Colonial homes that are as readily salable as they are adaptable in all parts of the country. . . . A shingled home in Studio City, near Los Angeles, gives a choice of three floor plans. In addition to construction details, floor plans, exterior and interior views, interesting facts about special features, bathroom equipment, flooring and interior finish are included. The title is: "Model California Home—A Headline in Design" . . . In addition to the foregoing good design suggestions, there are more than 115 others. Builders and dealers find they can use this book to excellent advantage with their customers.



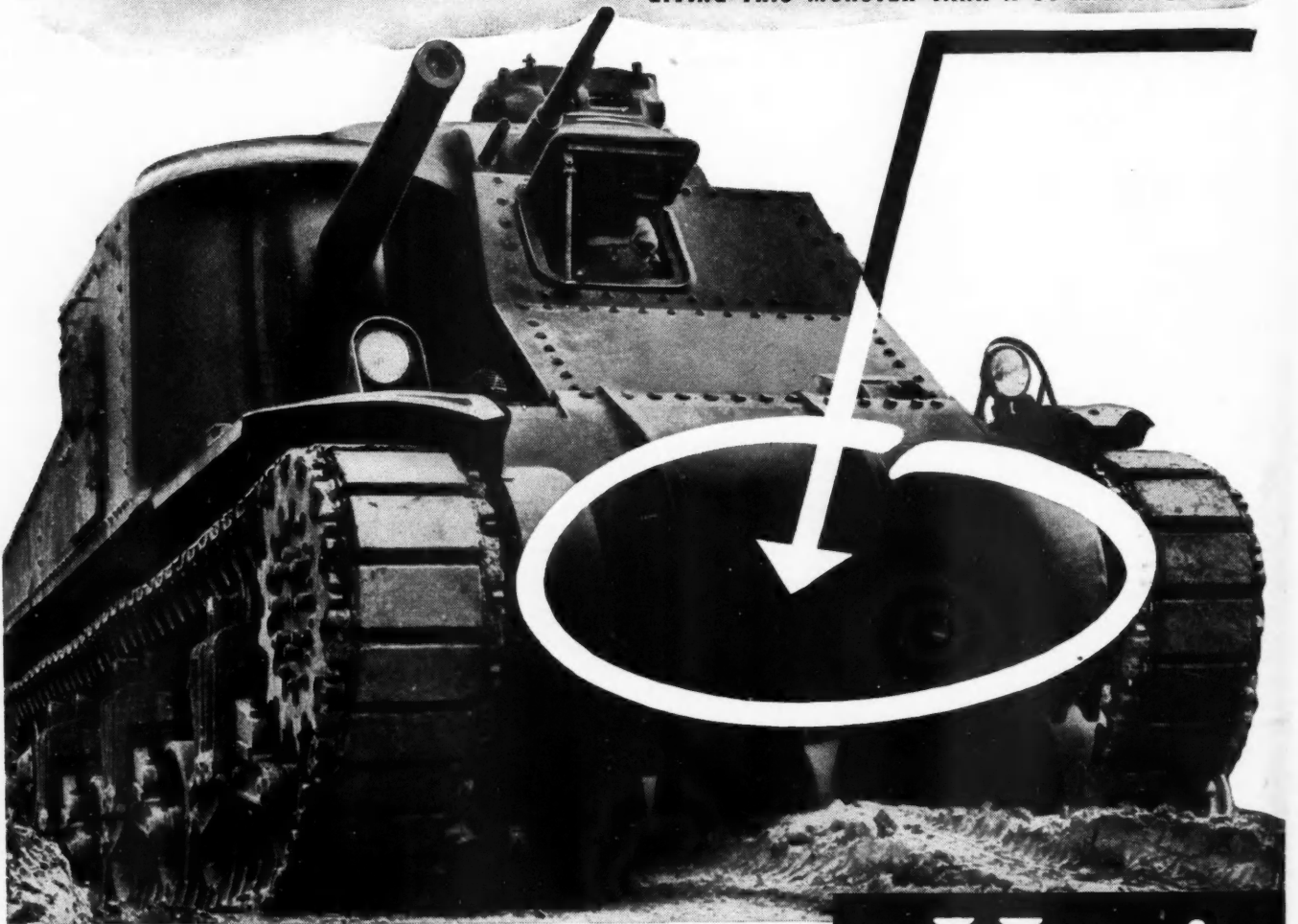
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30 Church St., New York

30 TONS—geared for fast action!

MACK BUILDS AN 8,000 POUND TRANSMISSION

GIVING THIS MONSTER TANK A 35 M. P. H. SPEED!



Army M-3 tank, "land battleship" of America's modern mechanized army. Armed with cannon and machine guns.

The Army had to have a transmission—one capable of converting the speed of a 400 h.p. airplane engine into the smashing force of a 30-ton tank. *Mack is building it*—a mighty 8,000 pound gearbox, the largest ever manufactured in quantity production—more than 300 times the weight of a passenger car transmission.

The largest trucks in Army service are gigantic six-wheel Macks. Great fleets of Mack dumpers are clearing the way for air-base construction at defense outposts. Mack skill and resources contribute in more than a score of ways to America's military might.

The Tough Jobs Go to Mack!

MACK TRUCKS, INC., NEW YORK, N. Y.

Mack

TRUCKS

1 TO 45 TONS



MAKERS OF WORLD-FAMOUS GASOLINE AND DIESEL-POWERED TRUCKS. BUSES, FIRE APPARATUS AND MARINE ENGINES

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COOPERATE WITH DEFENSE PROGRAM

Recommend

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REG. U.S. & CAN. PAT. OFF.
INSULATION



KIMSUL IS COMPRESSED AT THE FACTORY — EXPANDED ON THE JOB

KIMSUL is a soft, flexible insulating blanket composed of processed wood fibers. KIMSUL comes in wanted widths and thicknesses...is compressed to about 1/5th its installed square footage. Thus KIMSUL is extremely easy to ship, store, handle and install. Illustration No. 1 shows compressed blanket attached to top plate of side wall. Illustration No. 2 shows blanket being expanded to correct density and length.

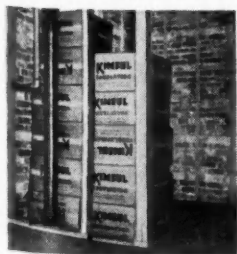
KIMSUL* gives top insulation efficiency — KIMSUL releases freight cars for urgent defense uses!

• By using KIMSUL Insulation in Defense construction, the U. S. Government not only obtains top-rank insulation efficiency, but at the same time releases freight cars for other important transporting jobs. KIMSUL Insulation is delivered in compressed blankets. Five carloads of KIMSUL equal 25 carloads of non-compressed insulation in installed square footage!

KIMSUL is one of the most effective heat and cold stoppers ever developed. It is fire-resistant, moisture-resistant and *lasting*. But just as important in this period of emergency, KIMSUL's exclusive compressed form speeds shipments, simplifies installation and lowers over-all costs. Specify KIMSUL and you assist the U. S. Defense Program by releasing freight cars for other urgent needs.

Learn more about KIMSUL now. Mail coupon below for free illustrated KIMSUL book containing complete information.

*Reg. U. S. and Can. Pat. Off.



KIMSUL Does Not "Hog" Space
 Compressed form results in fewer cartons. KIMSUL does not get "in the way" on the job. Illustration shows 1,375 square feet of KIMSUL on the job and not in the way.



KIMSUL is Easy to Handle
 Carton containing 125 sq. ft. of KIMSUL weighs only 19 lbs. Remarkably easy to carry... adds but negligible weight to structural load of the building.



KIMSUL Saves Man-Hours
 KIMSUL goes up FAST! It's usually only a one-man job to install KIMSUL. Workmen like to work with clean, odorless, non-disintegrating KIMSUL.

KIMBERLY-CLARK CORPORATION
 (Building Insulation Division) AB-10
 Established 1872 Neenah, Wisconsin

- Please send a representative
- Please send free book, "Guide to Efficient Insulation"

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



IF you're going after a slice of those
200,000 Defense Homes Mr. Nelson
has authorized for Priority approval

**WE'VE SOME FACTS YOU
OUGHT TO KNOW!**

**WRITE
TODAY**

Lochinvar

*America's Outstanding
Small Homes*

**STEEL
HEATING UNITS**

for
GAS and OIL

Also builders of America's fastest selling Oil-fired
WATER HEATERS.

LOCHINVAR PRODUCTS

Div. Mich. Tank and Furnace Corp.

14247 Tireman Ave.
DEARBORN, MICH.

Comfortzone

**AMERICA'S FINEST
STEEL**

FURNACES

for
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Makers of the famous COMFORTZONE Oil-fired,
Pressure Burner type WATER HEATERS.

**MICHIGAN TANK &
FURNACE CORP.**

14101 Prairie Ave.
DETROIT, MICH.

Low-cost floors

... IN TUNE WITH THE TIMES



YOU'LL sing a song of savings . . . when you specify Armstrong's Asphalt Tile. This material is truly low in cost, yet it lends itself to the creation of the most beautiful designs. Forty-one different colorings—both plains and marbles—are available in a variety of sizes and shapes.

Your clients will sing the same tune, because Armstrong's Asphalt Tile will save them money on upkeep. All it needs to stay fresh and bright for years

is routine dusting, occasional washing and waxing. No costly refinishing is necessary. And the rich beauty of the colorings can't scuff or wear off because they run right through to the back.

Special insets can be added to Armstrong's Asphalt Tile floors for very little extra money. It is the only resilient-type floor which can be used safely over concrete in direct contact with the ground. Thus it is ideal for residential and commercial basement-jobs. Get

DANCERS CAN'T MAR the beauty of this Armstrong's Asphalt Tile floor because it is tough and scuffproof. Albert's, of Providence, installed this floor in "Club 400," a dance hall in Warwick, R. I. The colors are: Ebony, Sea Green, Cinnabar, Tennessee, and Cordovan—all marble colorings.

our free, illustrated book—"Low-Cost Floors with a Luxury Look." Write Armstrong Cork Company, Resilient Tile Floors Department, 1233 State Street, Lancaster, Pennsylvania.



ARMSTRONG'S
Asphalt Tile

**THE LOW-COST
FLOOR WITH
THE LUXURY
LOOK!**



ARMSTRONG'S LINOLEUM • LINOTILE (OIL-BONDED) • CORK TILE • RUBBER TILE • LINOWALL

2,100,000 SQUARE FEET OF MENGEL BORD IN THIS DEFENSE HOUSING PROJECT!



"The Anchorage", U. S. Naval Housing Project at Newport, R. I. . . . 600 units—150 four-unit buildings. . . . W. W. Rausch, Architect. . . . Constructed by Holt-Fairchild Co., Arlington, Mass. . . . Mengel Bord furnished through Roddis Plywood and Door Co., Cambridge, Mass., Local Distributors.

IN CHOOSING the plywood for *all* walls and ceilings in this big new U. S. Naval Housing Project, the architect required a product which would not only be economical and durable, but would also give fine results *when finished with wall-paper and water paint.*

Mengel Bord was the answer! Mengel Bord is resin-bonded by the hot-plate method. *And being genuine hardwood throughout, Mengel Bord is free from grain-raising.* (The Regular Grade used on this project has one-piece faces

of unselected Gum. De Luxe Mengel Bord, which is also promptly available, has faces of Mahogany, Walnut, Gum, Birch and Oak. *All Mengel Bord is made with the grain running the long way and is genuine hardwood throughout.*)

If you are interested in speedy, *economical* dry-wall construction, ask your distributor for all the facts about Mengel Bord—or write us direct. *Address:* The Mengel Company, Incorporated, 1124 Dumesnil Street, Louisville, Kentucky.



Applying glue to Mengel Bord strips on studs, before installing Mengel Bord sheets.



Putting Mengel Bord sheets in place. Edges glued to strips on stud.



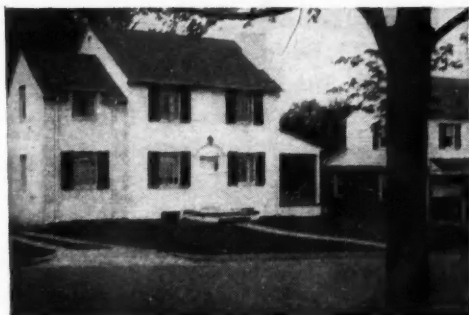
Sanding off glue at joints of Mengel Bord, and applying trim before papering and painting.



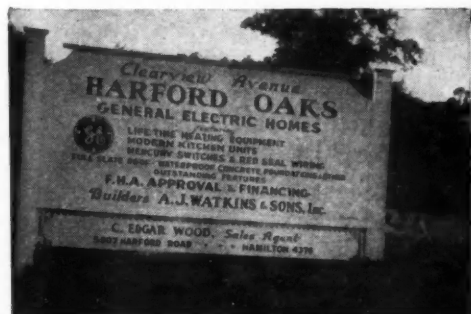
1. "We have built and sold 54 General Electric equipped homes in the last eighteen months", says Bill Watkins, President of The Tanglewood Development Co., prominent Maryland builders. He adds . . .



2. "The name 'General Electric' has a powerful sales appeal — erases all doubt in prospects' minds as to quality of our homes." Above is typical row of Tanglewood houses that sold like hot cakes.



3. Close-up of one of the Tanglewood houses, featuring General Electric heating equipment, wiring system and all-steel kitchen cabinets. Take a tip from Bill Watkins — use General Electric equipment, and .



4. . . . sell more houses! Harford Oaks, Watkins' new development, will be completely G-E equipped, including General Electric Kitchen appliances. Note the sign above. You, too, can cash on public acceptance for G-E!

SUCCESS STORY With Proof!

THE TANGLEWOOD DEVELOPMENT CO.
DEVELOPERS AND BUILDERS

Phone: CATONSVILLE 178-J
1018

"Tanglewood"
PARADISE AVENUE
CATONSVILLE, MD.

September 5th, 1941.

8 CROMARTY ROAD
BALTIMORE, MD.

Mr. H. C. Maccubbin;
General Electric Home Bureau,
1405 Locust St.
Philadelphia, Pa.

Dear Mac:

Eighteen months ago we opened our development, "Tanglewood" - featuring General Electric heating, wiring, and metal cabinets. The results have been far beyond our expectations inasmuch as we have built and sold 54 homes; most of them sold before they were under roof. We have found that the name General Electric has a powerful sales appeal, and erases all doubt from the prospects mind as to the quality of our homes.

On the basis of the above results, our two new properties, "Briarwood" and "Harford Oaks" will be completely GE equip; heating, wiring with "Mercury switches" and kitchen equipment. We are sure that the results at these properties will be as satisfactory as at "Tanglewood".

May we take this opportunity to express our appreciation for the many helpful suggestions advanced, and the sincere cooperation given by your company.

Very sincerely yours,

The Tanglewood Development Company,

By;

Wm. B. Watkins, Pres.

WBW/v.-p

Mail The Coupon Today

You should have all the facts on the General Electric Home Bureau's complete House Merchandising Plan (see last paragraph of above letter). Here's a free service that includes architectural engineering, promotional and advertising aids. The coupon will bring you complete information without obligation. Mail it today!

General Electric Home Bureau
Dept. HB-11810
1285 Boston Ave., Bridgeport, Conn.
Please send information on House Merchandising Plan

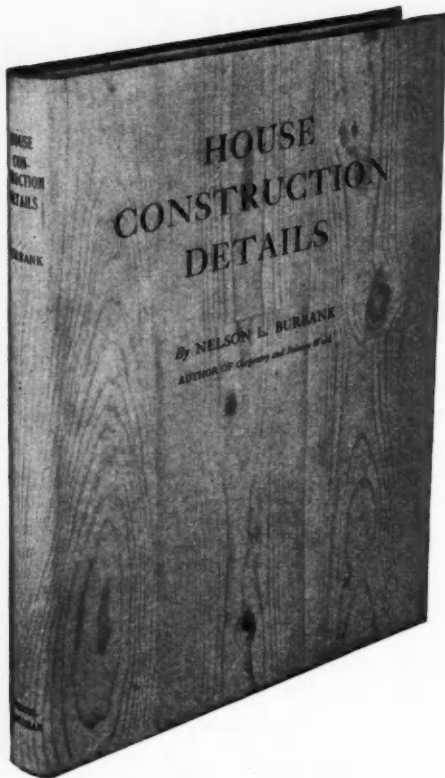
- I am a builder for resale
- I am an Architect
- I am building my own home

Name.....

Address.....

City.....State.....County.....

GENERAL  ELECTRIC



HOUSE CONSTRUCTION DETAILS

Compiled by Nelson L. Burbank

Author of *Carpentry and Joinery Work*

Builders will find this new book helpful when making alterations in a set of stock plans and when drawing up a complete set of plans. By simply referring to the detailed cross-index the draftsman can locate drawings of construction details and photographic views of the finished work which can be used for guidance. The layout of these details is in accordance with standardizations recommended by housing authorities wherever such have been established.

In this book are brought together the best features of two popular predecessors: "Good Construction," by "American Builder," and "Building Age Construction Details." Sections are presented in construction sequence so as to constitute a working guide in detailing every step in the construction of a modern dwelling, from foundation to finish.

Many of the details and photographic views have appeared in "American Builder and Building Age." In addition there is brought together graphic and factual information that is otherwise scattered through books, magazines, catalogs and sets of plans. Because of its plan of organization it can be used as a companion volume to the author's CARPENTRY AND JOINERY WORK by carpentry apprentices and in the school as well as in the contractor's drafting room.

Many of the important new building materials such as plywood which have been developed in recent years are pictured. The assembly of pre-fabricated units is shown in step-by-step views.

CONTENTS

Floor Plans—Sets of House Plans; Excavations — Foundation Forms— Foundations; Outside Walls; Inside Walls — Wall Sheathing — Ceiling Joists; Roof Construction—Bay Construction — Roofing; Cornices and Porches; Exterior Wall Construction; Interior Wall Coverings—Interior Trim; Stair Construction; Windows; Doors; Hardware; Closets—Shelves—Built-in Equipment; Finished Flooring; Chimneys and Fireplaces; Scaffolds; Garages; Heating—Air Conditioning; Elements of Electric Wiring; Insulation—Sound Proofing; Gates—Garden Furniture; Shopcrafter's Corner; Camps—Cabins — Cottages; Farm Buildings; Wood Connectors; Pre-fabrication —Modern Building Materials; Painting and Finishing; Modern Homes; Index.

320 pages, 1500 illus., 9 x 12 inches, cloth, \$3.00

Money back if not satisfactory

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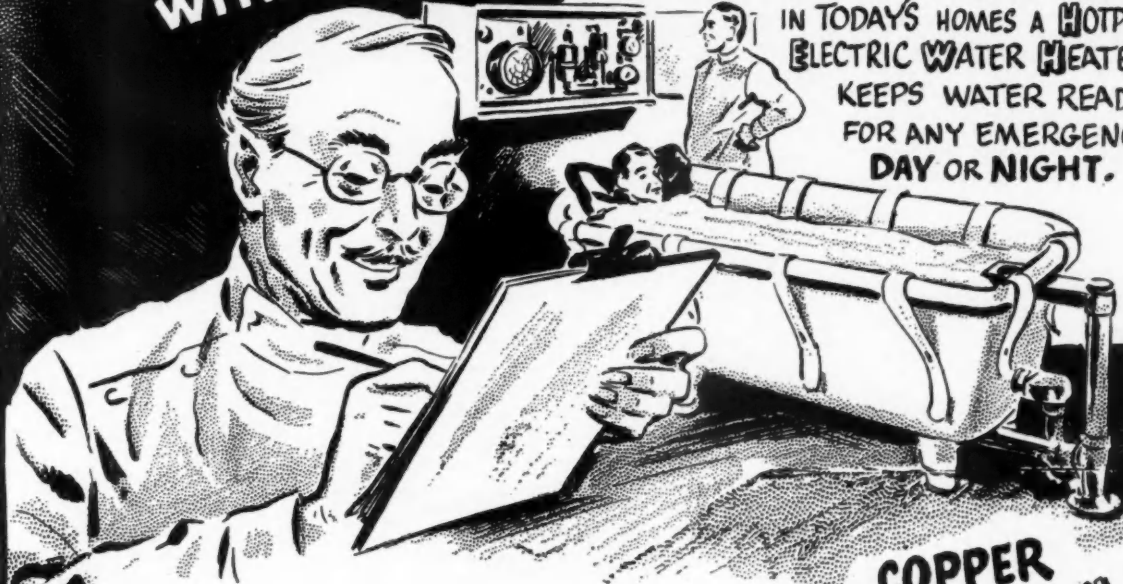
AMERICAN BUILDER AND BUILDING AGE
30 CHURCH STREET, NEW YORK

WOULD YOU BELIEVE IT?

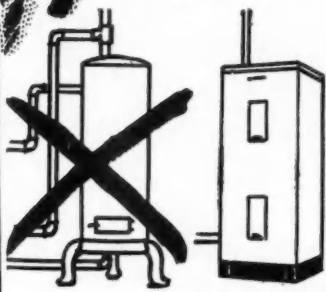
MIRACLES WITH HOT WATER

EVERY DAY IN MODERN HOSPITALS THERAPEUTIC TREATMENT OF CERTAIN AILMENTS EFFECTS REMARKABLE RESULTS.

IN TODAY'S HOMES A HOTPOINT ELECTRIC WATER HEATER KEEPS WATER READY FOR ANY EMERGENCY DAY OR NIGHT.

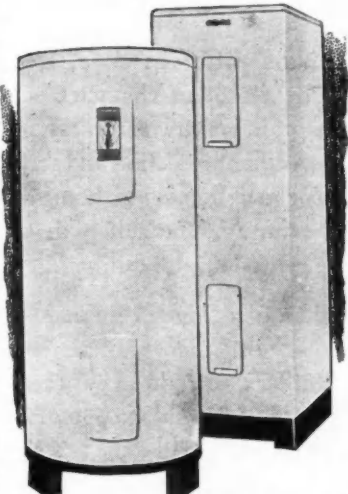


COPPER 99⁵¹/₁₀₀% PURE



THE HOTPOINT ELECTRIC WATER HEATER, BECAUSE IT CAN BE SAFELY PLACED NEAREST THE POINT OF FREQUENT USE, REDUCES HEAT LOSSES AND PIPING!

IS USED IN MAKING TUBING- FROM WHICH THE CALROD IMMERSION UNIT IS MADE. ONLY THE FINEST MATERIALS ARE USED IN HOTPOINT ELECTRIC WATER HEATERS WHICH ACCOUNTS



THERE are good reasons why Hotpoint leads the parade in Electric Water Heater sales. These Hotpoint advantages for you and your clients show why: 1. Convenient installation in closet, kitchen or basement. 2. Safe and flameless. 3. Saves installation time and money because it requires no flues. 4. Accurately controlled heat lengthens life of plumbing fixtures and pipes. 5. Completely automatic, dependable and safe. Send the coupon NOW for full information. Edison General Electric Appliance Co., Inc., 5641 W. Taylor St., Chicago.

FOR THE FACT THAT LAST YEAR HOTPOINT OUTSOLD ALL OTHER MAKES!



AUTOMATIC ELECTRIC

Hotpoint

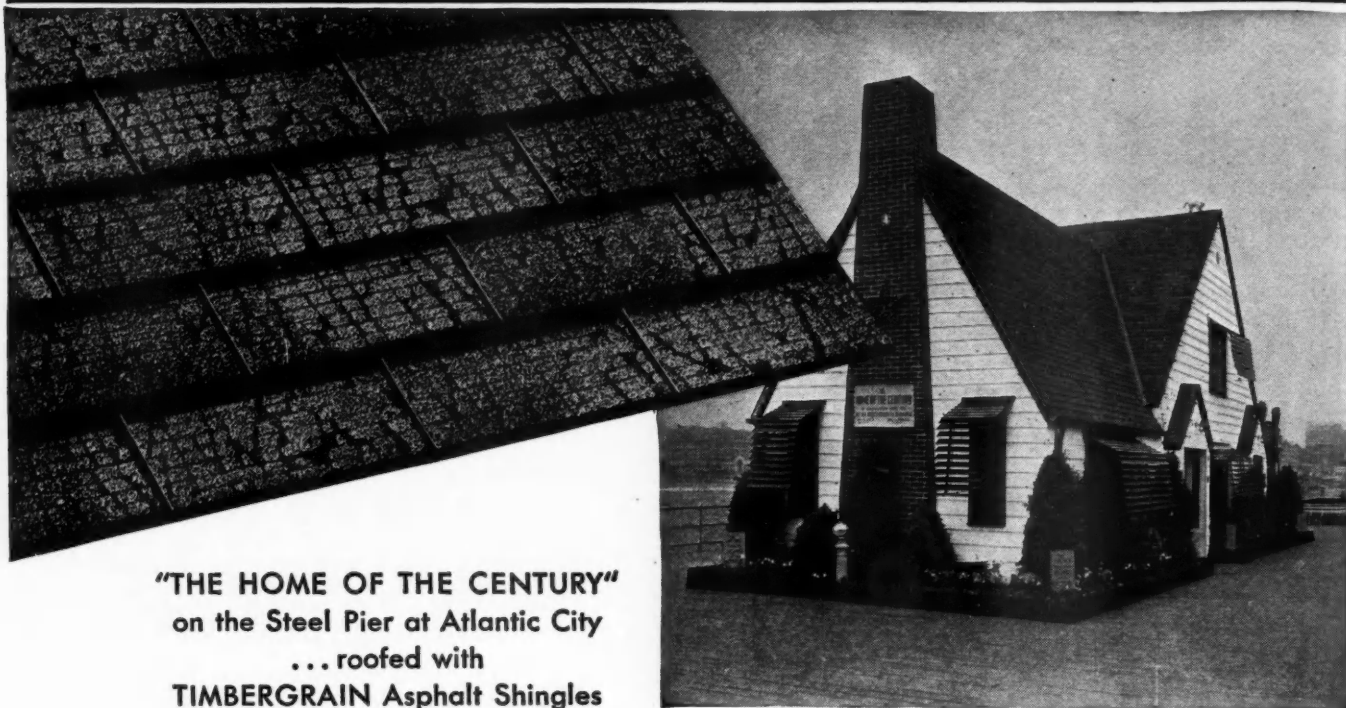
WATER HEATERS

ELECTRIC RANGES • REFRIGERATORS • WASHERS AND IRONERS • CLOTHES DRYERS
AUTOMATIC DISHWASHERS • ELECTRASINK • STEEL KITCHEN CABINETS

Edison General Electric Appliance Co., Inc.
5641 West Taylor Street, Chicago, Illinois
Please send me full information on the complete line of Hotpoint Automatic Electric Water Heaters.

Name _____
Address _____
City _____ State _____

SELECTED for its beauty and its resistance to wind and weather ... RU-BER-OID TIMBERGRAIN!



"THE HOME OF THE CENTURY"
on the Steel Pier at Atlantic City
... roofed with
TIMBERGRAIN Asphalt Shingles

Standing at the end of the Steel Pier in Atlantic City, N.J., is the "Home of the Century," National Exhibit Home. Actually a half-mile at sea, this model house must bear the brunt of nature's worst—salt spray, fierce wind, terrific heat and cold.

To meet these extreme tests—and to provide extraordinary beauty at the same time—RU-BER-OID TIMBERGRAIN was selected for the roof.

Millions of visitors have seen this sensational shingle on the model home and admired its rugged beauty, its weathered "wood-grain" appearance. They, too, like architects, operative builders, contractors, property owners, acclaim Timbergrain as the most beautiful asphalt shingle ever made!

Timbergrain's textured surface is rough, rugged, *built-up*.

Combined with two-tone coloring, it provides transverse shadow effects, and eliminates the *flat* look frequently found in asphalt shingles.

Timbergrain's extra thick butts, with the deep, black, *built-in* shadow lines—provide a roof of character, massiveness and beauty. Timbergrain's extra thickness provides greater strength, more weather protection and safety. Timbergrain's sales appeal for new homes—or homes being remodeled—is *your* opportunity. You sell both outward beauty, and inward long life and durability.

Recommend and sell this style leader, Timbergrain. Available in Greentone, Redwood, Bluetone and Slatetone blends. Write for colorful folder and complete information. Address Dept. A.B.-10, The Ruberoid Co., 500 Fifth Avenue, New York, N. Y.



RU-BER-OID

ROOFING AND BUILDING PRODUCTS





A Selling Feature
**CORRECT AND PRACTICAL FOR
 EVERY HOME YOU BUILD**
OWENS-ILLINOIS
INSULUX
Glass Block

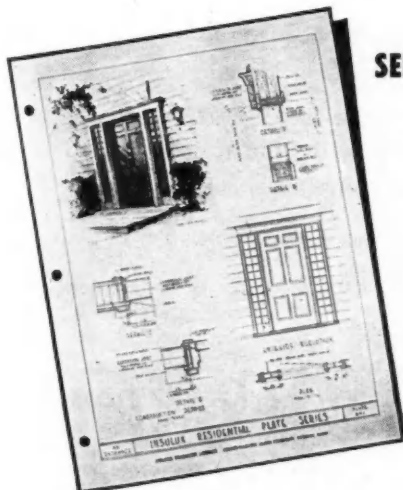
You can turn your houses faster when you use INSULUX Glass Blocks to give them up-to-date beauty and extra convenience. INSULUX panels are a powerful selling feature—and cost you so little that you can use them in the lowest-cost homes you build!

The experience of builders everywhere proves that INSULUX Glass Blocks are practical for homes in every price-bracket. They are easy and inexpensive to use in every type of construction—frame, brick or concrete.

INSULUX Glass Blocks are architecturally correct in any style of home. The sketch above shows INSULUX used as sidelights with a classic entrance.

INSULUX Glass Blocks give you *new* selling points. They admit soft, diffused light, but maintain privacy. They have high insulation value. They are easy to clean, need no painting.

Mail the coupon to get our new plate series that shows how you can use INSULUX in the houses you are building today. Owens-Illinois Glass Company, INSULUX Division, Toledo, O.



SEND FOR FREE HOME PLATES SHOWING LOW-COST INSTALLATIONS

Send coupon for new home plates. Architect-planned, they are complete—show uses, plans, details and bill of materials. Every one is a practical, low-cost suggestion that you can use to help sell houses.

OWENS-ILLINOIS GLASS COMPANY
 INSULUX Division
 15th Floor, Ohio Building, Toledo, Ohio

GENTLEMEN: Please send me, without obligation Plate No. 1 and succeeding issues of your INSULUX Residential Plate series.

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FOR QUALITY AT LOW COST IN ANY HOME, USE

Ponderosa Pine

DOORS, FRAMES AND WINDOWS . . .

Quality at low cost in doors, frames and windows comes with the economies of mass production. Modern precision manufacturing methods and Ponderosa Pine can help you reduce costs in any style, size or price of home.

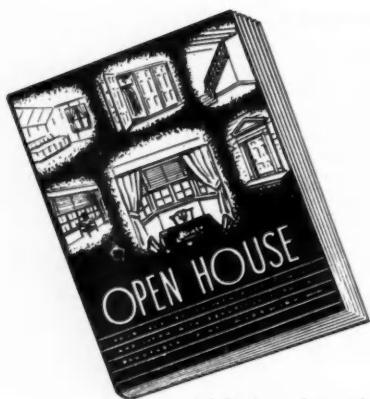
Why is Ponderosa Pine so well adapted to these fast, modern production methods? First, there are the qualities that have made Ponderosa Pine the *preferred* wood for woodwork for more than 40 years. It takes and holds paint, enamel, or other finish well; its uniform grain resists "raising"; it takes nails and screws without splitting, thereby reducing your cost for hanging doors and mortising locks; it can be worked by hand or machine—takes any architectural design readily. Add to these proved features the abundance of Ponderosa Pine. It's easy then to see why this wood is so well suited to modern requirements.

PEOPLE WANT BETTER DECORATION AND GREATER CONVENIENCE

Extensive surveys have shown that people want windows for more light and air, doors for greater convenience and privacy. A national advertising campaign, that includes a 32-page idea book called "Open House," is telling the public how they can get the things they want, *plus* lasting value in all woodwork, with stock doors and windows of Ponderosa Pine.

These stock items of Ponderosa Pine can be used to solve almost any door and window problem. Stock doors, for example, are available to suit every architectural style. When they are used, costs are reduced. It's a straightforward proposition you can put into action to your own benefit.

You'll want to see "Open House." Let us send you a free copy.

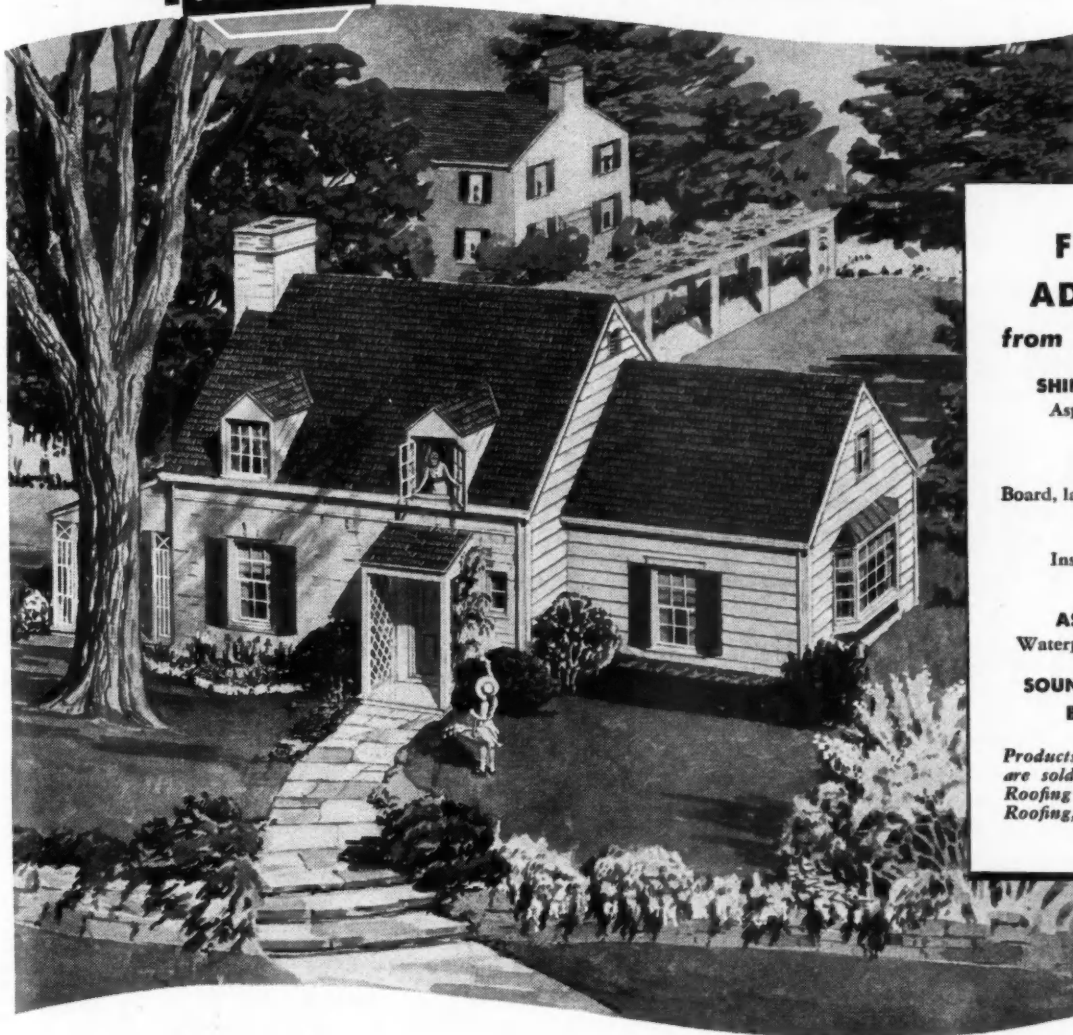


Additional copies of "Open House," which you may want, are available at 10c each.

PONDEROSA PINE WOODWORK

111 WEST WASHINGTON STREET • CHICAGO, ILLINOIS

PROTECTION AGAINST COLD • DAMP • HEAT • WEAR • FIRE



FLINTKOTE ADVANTAGES from roof to basement

SHINGLES and SIDINGS
Asphalt mineral surfaced
Asbestos-Cement

INSULATION
Board, lath, sheathing • Rock Wool

WALL BOARDS
Insulating tile and plank
HardBoard

ASPHALT COATINGS
Waterproofing • Dampproofing

**SOUND DEADENING FELTS
BUILDING PAPERS**

*Products of the same high quality
are sold by the Beckman-Dawson
Roofing Company and Richardson
Roofing, affiliates of The Flintkote
Company.*

Specifications for thousands of moderately priced homes . . . particularly in defense areas . . . call for fire-safe materials that require minimum upkeep. Designed attractively yet economically, exterior walls of this small home show Flintkote asbestos-cement sidings . . . proof against termites, rot and wear, as well as fire. The colorful, durable, long-lived roof shows Flintkote mineral surfaced asphalt shingles which rate the Class C Underwriters' label.

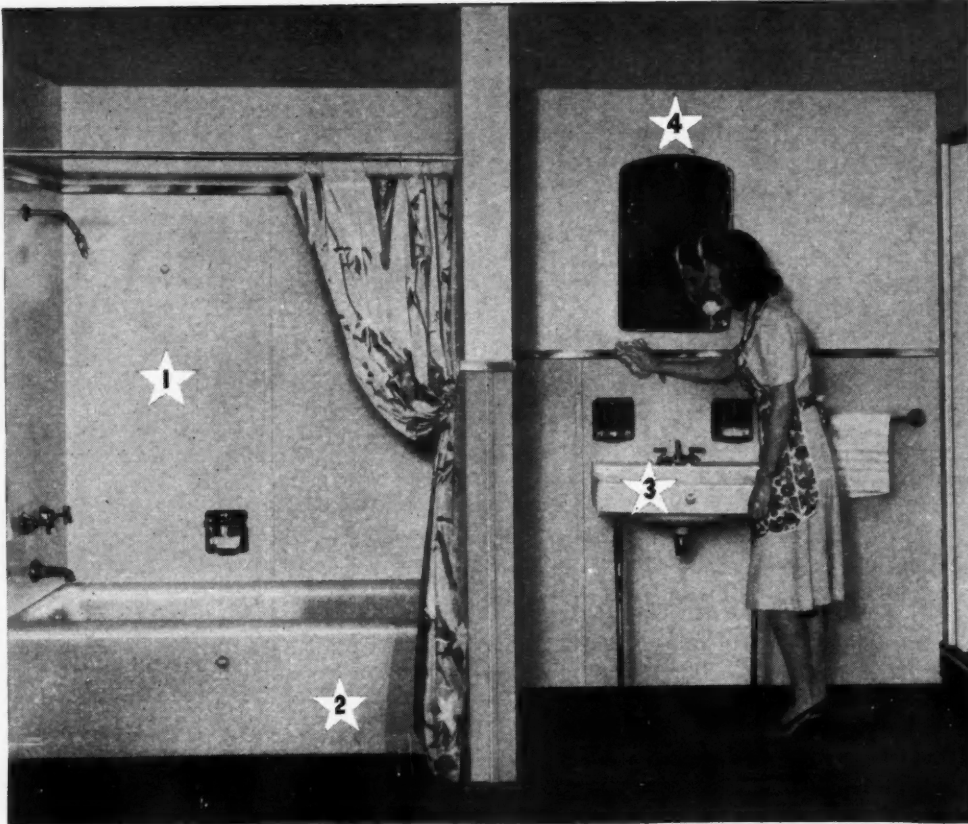
The sheathing is Flintkote insulation board...a fuel-saver that also carries structural loads. Flintkote insulation lath provides an ideal plaster base. Some rooms are finished with Flintkote decorative tile and plank that insulate, beautify and quiet unwelcome noise at one low cost.

Flintkote building materials please dealers, builders and architects because these time-proved products are carefully made to please and satisfy home buyers. For modernization jobs or new construction, you can depend upon Flintkote products for quality, service and sales appeal.

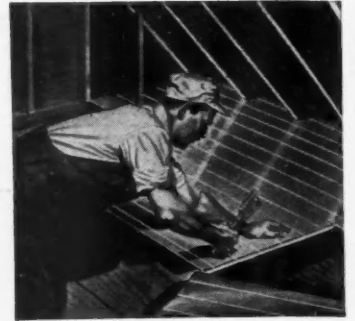
THE FLINTKOTE COMPANY

30 ROCKEFELLER PLAZA, NEW YORK

Atlanta . . Boston . . Chicago Heights . . Detroit . . New Orleans . . Waco . . Los Angeles



Steel Shower Stall. Can be set up easily in the basement or playroom for inexpensive extra shower bath.



Steel Insulation made from U·S·S rust-resisting Copper Steel terne plate. Thoroughly proved in hundreds of installations. Reflects 95% of radiant heat.

4 NEW IDEAS

FOR THE BATH IN PORCELAIN ENAMEL

1. PORCELAIN ENAMEL WALLS IN COLOR

Here's a wall panelling that meets every requirement. First — Large quickly installed panels that can be handled by any competent workman. Second—Six colors—cream, green, yellow, blue, black and white. All are fade-proof and stain resisting. Third—Adaptability to all types of construction with provision to meet minor variations in dimensions. Fourth—Permanent surface. Does not crack or craze. Fifth—Can be used with various types of wall moldings and fixtures.

2. PORCELAIN ENAMEL BATHTUB

Pressed from U·S·S VITRENAMEL Sheets. Chief advantages are great strength with less weight, lower cost installed, acid-re-

sisting finish, more uniform dimensions.

3. PORCELAIN ENAMEL LAVATORY

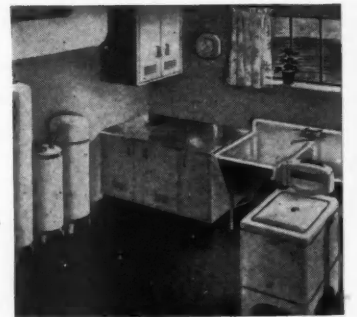
Made by quantity production methods at low cost. Stain resistant, light weight, modern style.

4. PORCELAIN ENAMEL BATHROOM CABINET

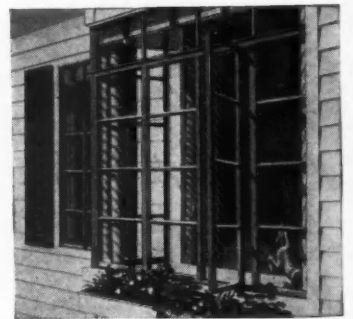
Permanent finish, resists corrosive attacks, more sanitary, easy to clean.

All of these units are adapted to individual houses, housing projects, apartments and hotels. Their accurate dimensions save time and expense on any large scale job.

The use of U·S·S VITRENAMEL Sheets as a base assures smooth surfaces, durability and top quality.



Porcelain Enamel Laundry. Hot water tank, tubs and washer, made from U·S·S VITRENAMEL.



Steel Windows admit more light, give better ventilation. They're easy to operate and free from troubles.

CARNEGIE-ILLINOIS STEEL CORPORATION
Pittsburgh and Chicago

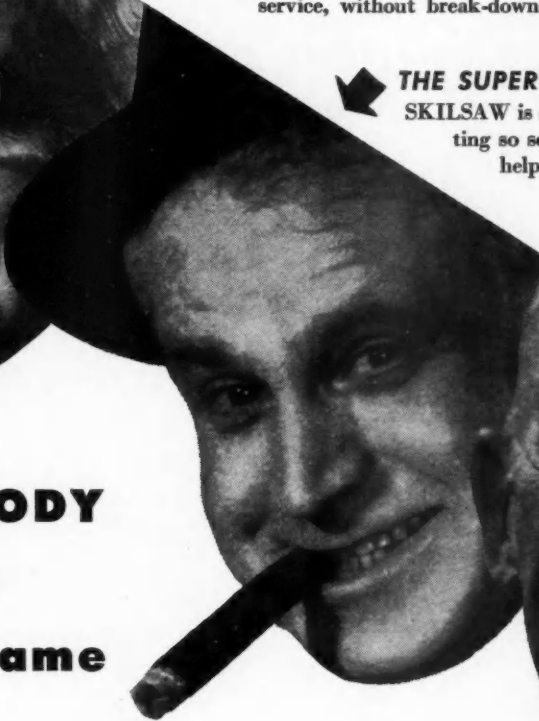
Columbia Steel Company, San Francisco, Pacific Coast Distributors · United States Steel Export Company, New York



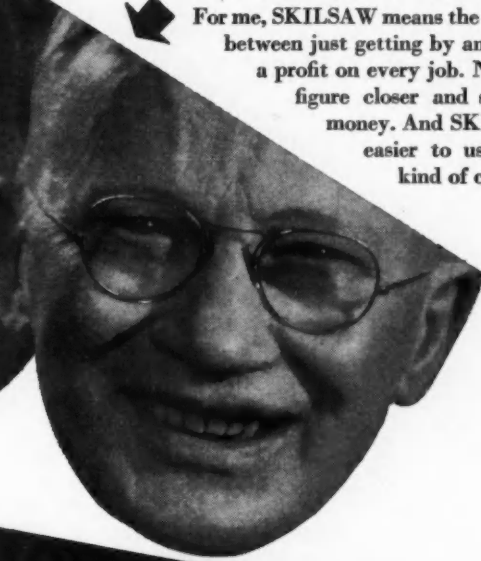
UNITED STATES STEEL



THE BIG BUILDER SAYS:
 SKILSAW is one of our best investments—it reduces our sawing costs and gives us many years of trouble-free service, without break-downs or costly maintenance.



THE SUPERINTENDENT SAYS:
 SKILSAW is a life-saver for me, now that good help is getting so scarce. My men get more work done with the help of SKILSAW and my jobs get done faster.



THE CARPENTER SAYS:
 For me, SKILSAW means the difference between just getting by and making a profit on every job. Now I can figure closer and still make money. And SKILSAW is easier to use on any kind of cut.

**Ask ANYBODY
 in the
 building game
 and
 you'll hear:**

"I'd rather have SKILSAW!"

• If you're confused by rival claims for electric handsaws, just ask the men who use them—and you'll see why SKILSAW is bought by **MORE** contractors of every type than all other makes combined!

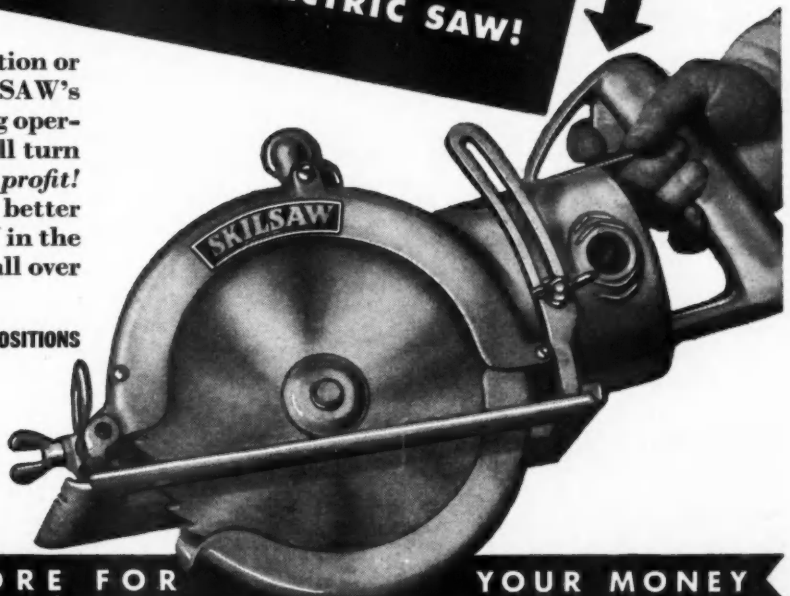
Whether the job is small home construction or the biggest commercial project, SKILSAW's faster cutting power speeds up every sawing operation and *brings costs down*—with it you'll turn *more bids into jobs, more jobs into profit!* SKILSAW is lighter, better balanced, better built, easier to use. That's why ANYBODY in the building game will tell you: "Look them all over and you'll buy SKILSAW!"

9 POWERFUL MODELS FOR WOOD, METALS, STONE AND COMPOSITIONS

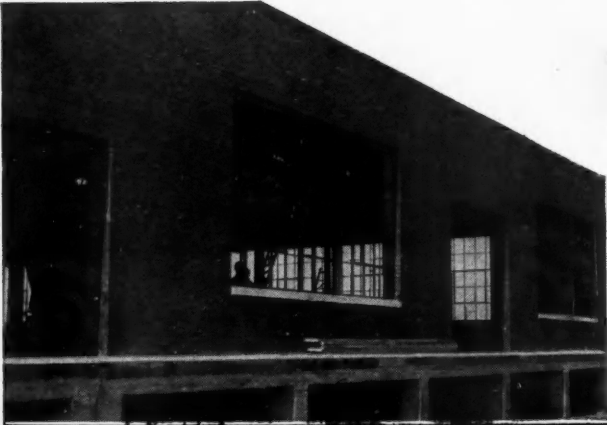
SKILSAW, INC.,
 5031 Elston Avenue, Chicago

New York • Boston • Philadelphia • Atlanta
 Buffalo • Cleveland • Kansas City, Mo.
 New Orleans • Dallas • Los Angeles • Oakland
 Seattle • Toronto, Canada.

**the original... the finest
 the world's largest selling
 PORTABLE ELECTRIC SAW!**



★ ★ ★ SKILSAW IS MORE FOR YOUR MONEY



This floor was marked "FULL SPEED AHEAD"



By using Atlas High-Early cement, the floor of this air-cleaner manufacturing building for the United Specialties Co., Chicago, was ready for use in 24 hours. Contractor: Bulley and Andrews, Chicago.

With Atlas High-Early it was ready for traffic in just 24 hours!

IN CHICAGO, the United Specialties Company found their paper section crowded out by munitions work. They needed an 80' x 300' building . . . and they needed it *fast!*

What happened? Simply this: Six weeks after the ground was broken, paper stock and stored material were moved into the new building. The floor was built with Atlas High-Early cement, and the contractor reported that the floor was ready for use just twenty-four

hours after the concrete was placed.

Contractors everywhere know that *this* cement often saves time—and cuts costs, too. For this cement gains working strength rapidly, and frequently cuts time required for protection and curing as much as 60% to 70%. It often permits earlier stripping and earlier re-use of forms, thus requiring fewer forms and reducing form costs. And it produces serviceable concrete in much less than the usual time.

Next time you get a job marked "Rush"—switch to Atlas High-Early. You'll find it more than pays for its slightly extra cost on many jobs. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York.

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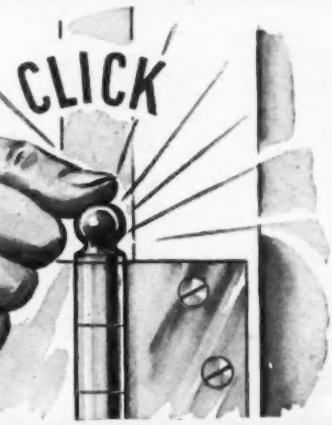
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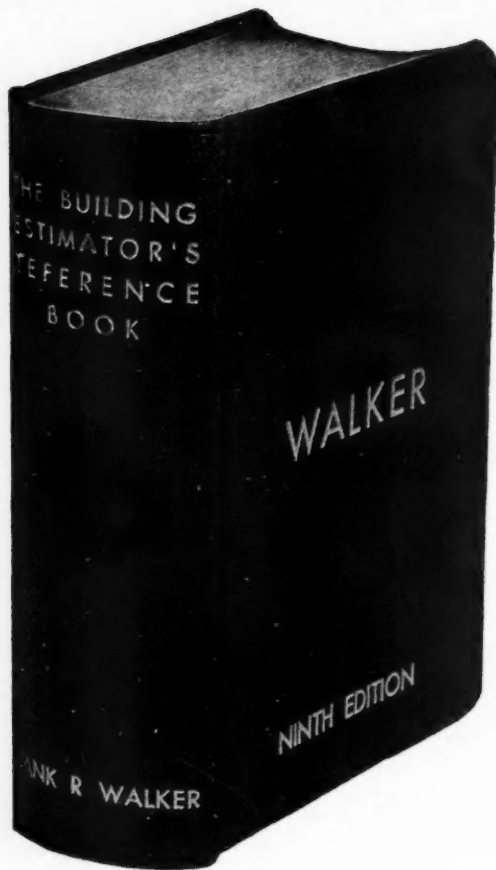
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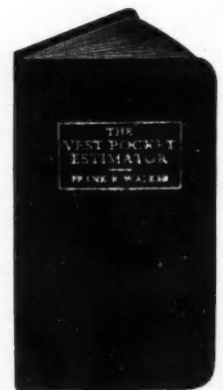
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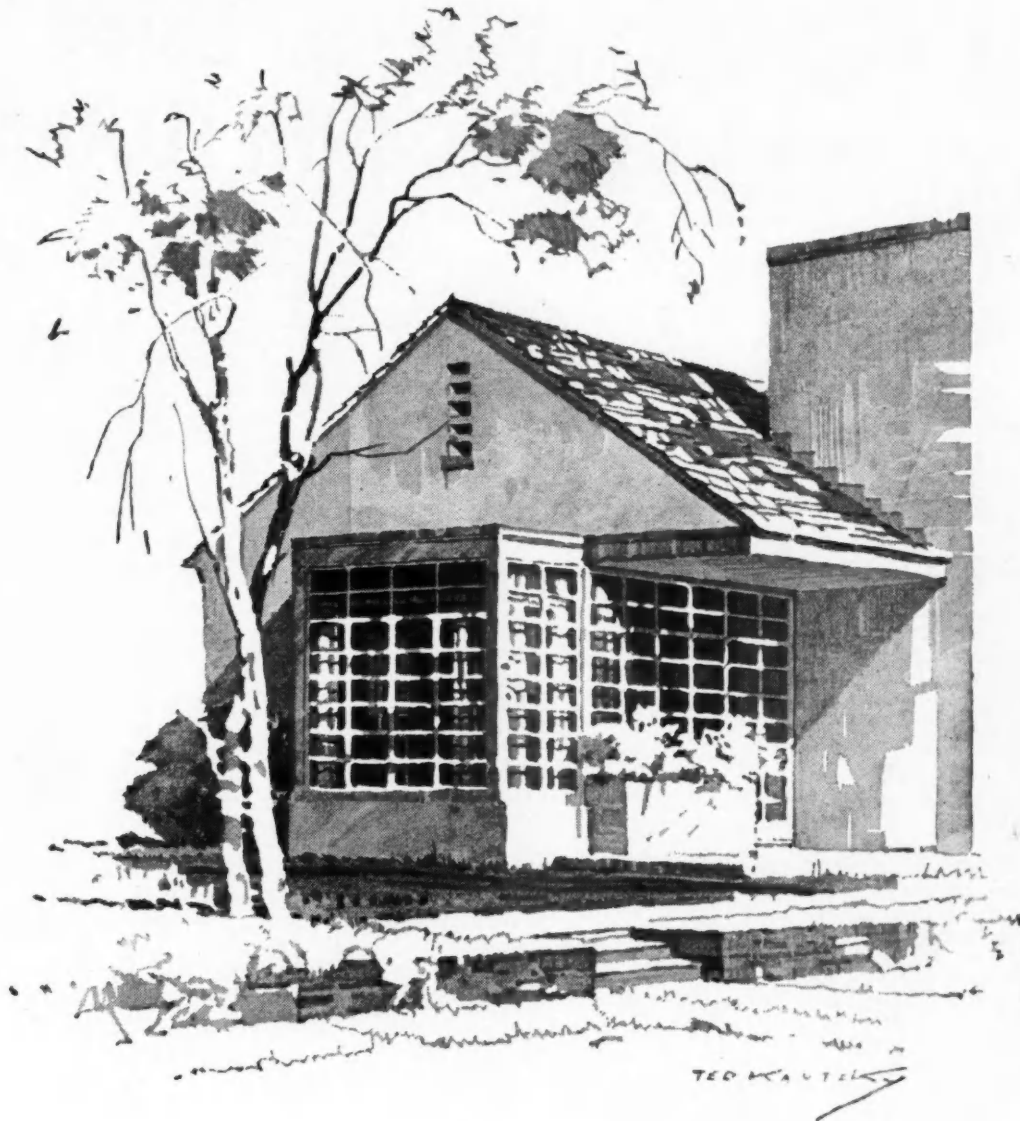
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AMERICAN BUILDER

and Building Age

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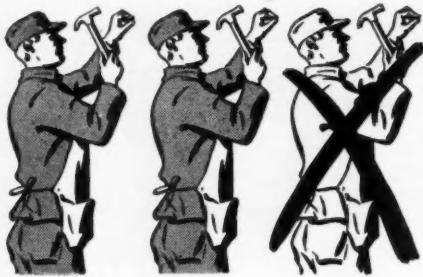
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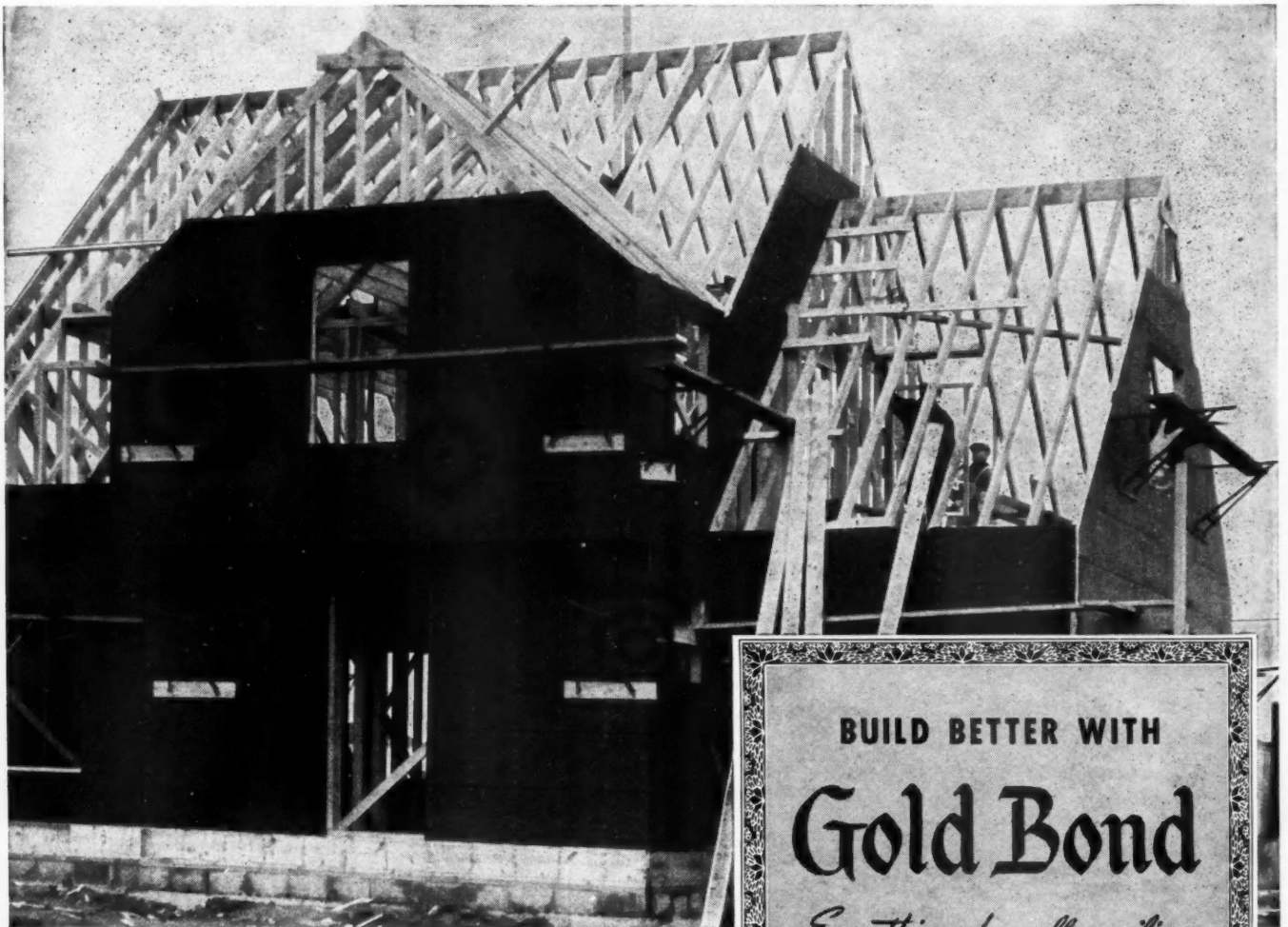
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PUBLISHER'S PAGE

Full Production Versus "Shortages"

ALMOST everybody must have become overnight a military expert. At least, almost everybody expresses positive opinions about whether we can best provide for defense by going over at once to lick Hitler or waiting until he comes over to lick him here. The *American Builder* believes as strongly as anybody in arming to the hilt, but admits it is so ignorant of military matters that it has formed no opinion as to what else we should do.

It is, however, the function of a business paper not only to present information regarding the conditions and influences prevailing in the industry that it especially serves—in our case, the building industry—but also to study and discuss economic conditions and policies affecting it. And it is of vital importance that this should be done now as regards every important American industry. For economically sound conditions in industry are an absolutely essential foundation for defense.

AVAST amount of production is required for defense. If possible, it should be *added* to adequate production for civilian purposes. Otherwise, it *curtails* civilian production and makes it *inadequate*. An adequate standard of living depends on adequate civilian production. And the taxes for defense must, in the long run, be derived *entirely* from civilian production. For, however necessary, production for defense and war is economically a complete *waste and loss*. Only production for civilian purposes maintains or increases a nation's real wealth and income.

In order that adequate production for defense shall not prevent adequate production for civilian purposes, there must be comprehensive and intensive study of all a nation's available means of production that will make possible their full use and expansion. There has not been such comprehensive and intensive study. Hence the lack of orders and materials for little business that has been rapidly tending to

put it out of business. But, in the aggregate, little business has a very large productive capacity, and, obviously, if it is not kept supplied with orders and materials the nation's *total productive capacity* cannot be used and expanded. There will then be either not enough defense production, or not enough civilian production, or not enough of either.

It is an absolute absurdity, and evidence of gross mismanagement, that there should already be all the real "shortages" there are, and much larger threatened shortages, in a country with the vast potential productive capacity of the United States. One plain reason is that, because of incompetent or unfair allocations of materials, large companies are piling up huge inventories, while many small companies cannot maintain their production for lack of the very kinds of materials being piled up in these big inventories.

GIVE little business a break. Allocate materials intelligently. Utilize fully the capacity of all plants. Increase the working hours of labor wherever necessary to operate all plants full time. Do these things, and most of the present and threatened "shortages" for both defense and civilian purposes will fast disappear. We adopted an economic philosophy during the depression fearing *too much production* and based government policies on it. Abandon that philosophy. Reverse those policies. Treat all industry alike. Help all industries to maintain or increase production instead of scaring or ruining many with artificial shortages. We will then provide adequately for defense, while not starving industries producing for civilian purposes now and rendering them unable to produce enough to make the country prosperous afterward.

Samuel O. Dunn,

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



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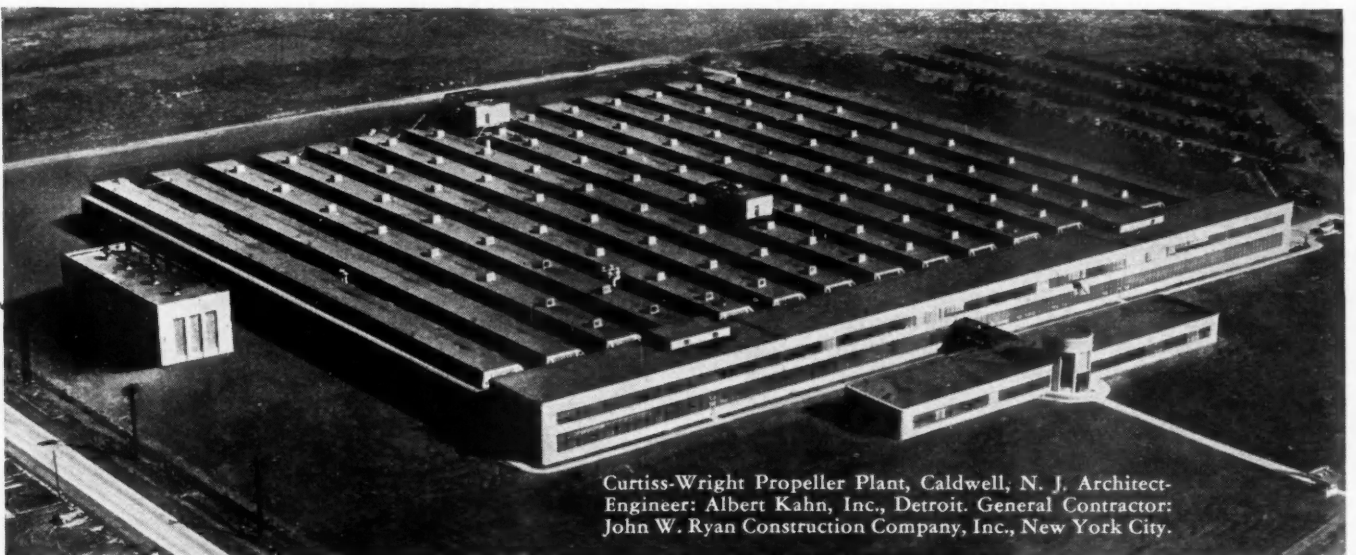
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AMERICAN BUILDER

AND BUILDING AGE

Priorities and the Future of Home Building

IN SETTING up the new priority system Donald M. Nelson, Defense Priorities Director, has placed private home building side by side with tanks and guns in the defense effort.

To a large extent the Defense authorities in Washington have recognized what it was the express purpose of this issue of *American Builder* to point out—namely, the importance of the private home building industry in today's war economy. Homes are both "guns" and "butter." The entire magazine is dedicated to this thesis and is the culmination of a program started several months ago.

200,000 A Generous Quota

OPM's priority plan has features both good and bad which will bear careful analysis. But the fact of outstanding significance is that Nelson has agreed to allocate enough materials to make possible the building of 200,000 private homes by private builders in the next six months, in addition to public housing.

Defense housing officials indicate that if private builders can exceed this number in less than six months, additional materials will be allocated.

Thus, private home builders in defense areas can look forward to a period of intense activity in the months ahead if the priorities system does not get bogged down in red tape. Right now that looks like a rather big IF.

The number of defense areas established is so great that a large part of the normal building market is covered. A significant feature of the new ruling is that houses located within "the normal and reasonable commuting distance" of defense industries are eligible for the priority assistance.

Private Builders Backbone of Program

In considering the good aspects of this new priority plan builders in defense areas may well feel that the 200,000 quota for six months is a generous allotment. It will mean an increase in their business and will, in fact, call for the utmost effort of all local building groups to hit such a pace in the winter months ahead.

Builders may also be glad that as far as the early stages of the priority procedure are concerned they will be dealing with an institution which they respect and with which they are familiar—the Federal Housing Administration and its field offices.

Private builders have been made the backbone of the defense housing program. The Project Preference Ratings they will get will be respected by local suppliers because they will enable them to replenish stocks. Considering the influence of public housing enthusiasts in Washington, the fact that private builders are being called upon to do the bulk of this job is an important victory for private enterprise.

There are many other commendable features of the plan. It gives top preference rating to modernizing jobs that add additional living units to a house. This seems sound and sensible and should enable thousands of private builders to obtain the necessary refrigerators, stoves and equipment for this type of work. It also gives top priority rating to residential construction under way on September 1, thus enabling builders whose jobs have been tied up to complete the work. By including all priority requests for a housing project under one rating, it simplifies procedure.

Non-Defense Areas Also Need Homes

These are some of the good features. Let us look at some that are not so good and which will undoubtedly require modification.

Most obvious of the defects in the plan as announced is that it does not make any provision for home building in non-defense areas, no matter how badly needed. It makes no provision to assure a supply of materials for farm structures—and surely this is highly important.

With a housing need greater than any in history causing shortages in many communities not included in the defense areas, it does not seem possible that home building in such places can be ignored. A way must be found to give priority assistance to needed home building or other types of construction in non-defense areas.

Non-defense areas might be served by a limited type of priority system. This would permit at least some

home building for which there is an especial need to obtain priority assistance. It may be that OPM is wise in tackling a selected list of defense areas alone at the start: if the system works, it may be found possible to extend it.

Materials Situation May Improve

There is a definite possibility that the situation in regard to critical metals and materials for home building will improve to the extent that priority assistance will not be needed in non-defense areas. There is nothing in the OPM plan to restrict any type of building in non-defense areas *if the materials for such building can be obtained.*

It is becoming daily more apparent that (a) stocks of materials are greater than generally acknowledged; (b) many shortages in the building field are due largely to inventory buying; (c) better scheduling of defense orders and better routing of materials will greatly alleviate certain shortages; (d) a new check by OPM of overall production as compared with defense needs is expected to show considerable capacity available for such an important use as home building.

Should Avoid Further Controls

If the flow of materials into the home building field in non-defense areas can be assured without a priority system, none should be established. The distribution system is so complicated and the number of firms involved so great that anything of the kind would be very difficult to make work.

A further fault in the defense housing priority setup was the fixing of a \$6,000 maximum price regardless of the wide difference in building costs in different parts of the country. There are ample data available which might have been used to establish different maximums in different areas. A \$6,000 house in some parts of the South would be the equivalent of a \$10,000 house built

under existing conditions in some parts of the North.

There seems no sound reason for the \$6,000 limit. The building of a \$10,000 house does just as much to alleviate the housing shortage in a defense area as the building of a \$4,000 one. The individual able to afford \$10,000 is just as much entitled to own a house as a man of smaller means. This limitation seems arbitrary, and far too low.

Thousands of Small Firms Involved

The largest question of all is whether the new OPM plan will function without interminable delays and confusion. OPM officials have previously dealt principally with large firms. Now they are attempting to establish a system of priorities in which many thousands of small firms are involved and it is probable that they will have some difficulty adjusting to this different type of organization.

First FHA, and then the OPM regional priority offices will be flooded with applications. The number of builders and subcontracting firms engaged in modernizing jobs and in small home construction is so great that OPM will have difficulty in handling applications without a vast increase in staff and even then will have its troubles. It may prove advisable to turn over a larger part of this work to the field offices of the Federal Housing Administration.

There will undoubtedly be a period of confusion during the time the priority system is being put into effect and until the mistakes that will be made are corrected. In fact, most observers feel that the whole priority situation will get much worse before it will get better but that eventually OPM under the undoubtedly capable leadership of Donald Nelson will cut red tape and get things working. In spite of immediate difficulties, home building, representing one of the three big necessities of human existence—food, clothing and shelter—will continue and the long term future for private builders is good.

Home Building in Non-Defense Areas Is NOT Restricted

Nothing in OPM's new defense housing priority system limits construction of any type in non-defense areas. Builders who are able to get materials are free to build any house or structure they wish.

While some construction in non-defense areas may be held back by lack of materials, it is felt by informed observers that a large volume of home building will be able to con-

tinue without benefit of priority assistance.

Within the next few months much of the confusion concerning availability of critical materials for home building is expected to be cleared. It is felt that materials will then be available to permit a reasonable volume of needed home building in non-defense areas, or that a priority system for civilian supply of materials will be established there.

OPM's New Priority Plan to Aid Private Home Building

DONALD NELSON approves allocation of materials for 200,000 privately built houses in defense areas during next six months.

PRIVATE HOME BUILDERS to get Project Preference Rating covering the critical materials needed.

FHA OFFICES will process applications from builders, but OPM will make actual decision on granting priority aid.

HOUSES UNDER \$6,000 eligible for aid and must be located within "commuting range" of defense area.

MODERNIZATION that adds an extra housing unit gets top rating.

THE most important fact about the new defense housing priority plan announced September 19 by Donald Nelson, Priorities Director of OPM, is that the nation's top defense official has agreed to allocate materials for at least 200,000 privately built houses in the next six months.

Nelson said that the plan had been approved by the OPM Council and that the 200,000 privately built houses would be in addition to 100,000 publicly financed.

This priority setup makes the private home builder the spark plug of the defense housing program. He will be encouraged to build more houses and will be given a project preference rating which he can serve upon suppliers of materials. This will be a legal document backed by severe penalties in cases where suppliers refuse to comply.

It will enable builders to secure refrigerators, stoves, metals and critical materials required for both new homes and modernizing. All of the critical materials for a building project are covered by one project preference rating.

An extremely important point for *American Builder* readers to note is that nothing in this priority program or in any other government decree limits construction of any type, either within or without defense areas. Builders who can get materials are free to build anything they wish, and in the opinion of informed observers a large volume of home building will continue to go ahead without benefit of priority assistance.

Briefly, the new defense housing priority setup is as follows:

1. OPM approves the allocating of necessary metals and materials for the building of a minimum quota of 200,000 privately built houses in defense areas during

the next six months. A project priority system is set up to insure that builders and manufacturers can get the necessary materials. The 200,000 privately built homes are in addition to the present publicly-financed and owned defense housing program.

2. While OPM will allocate enough of the critical metals for this program, it is setting up limitations on the amount of vital materials that may be used in each house. OPM has issued a Critical List (see page 59) of materials and equipment on which priority assistance will be given. Study of this list quickly indicates that drastic changes in many building methods will be required. Most of these changes call for the elimination of copper and other critical metals, wherever possible. Some changes in former FHA standards and in local building codes may be required.

3. A new list of defense housing areas is issued (see page 58) in which privately built defense housing projects will be granted priority assistance. Houses may be located "within the normal and reasonable commuting areas of defense industries."

Each community gets a special and highly secret priority rating based on its importance to national defense. Thus, private defense housing in some areas may get an A2 rating, while in others an A10.

4. In order to qualify for priority assistance, the market price of a house must not exceed \$6,000 per family unit, except where extreme circumstances may require that units exceeding these limits may be required, or a rental value of \$50 per month. The builder must certify that the houses are intended "primarily for defense workers and are suitable for and available to them."

5. Modernization and repair projects also will receive priority assistance, and *any modernization job which adds an additional housing unit will get top rating.*

This feature is significant and should give a great

How to Get a Home Building Project Preference Rating:

1. Obtain copies of Application for Preference Rating (Form PD-105) from nearest FHA offices or from local financing institution. Also get Documentation Sheets PD-105a (new houses) or PD-105b (modernizing).
2. Fill in forms (six copies of each) and attach one set of drawings, specifications, plot plan.
3. File Application with Priorities Clerk at local FHA office.
4. Check with local FHA official to make sure that you have filled in forms correctly as required by OPM and have provided complete data. Application must be notarized.
5. FHA then transmits Application to OPM district priority office, which will notify builder when Priority Application is approved or rejected.

APPLICATION FORM PD-105 to be used by private builders in applying for priority assistance in building privately owned homes in defense areas.

APPENDIX III
No. _____
Date _____

**OFFICE OF PRODUCTION MANAGEMENT
DIVISION OF PRIORITIES
WASHINGTON, D. C.**

**APPLICATION FOR PREFERENCE RATING
(Privately-Owned Defense Housing)**

INSTRUCTIONS—Applicant must be the user of the material or equipment. Before filling this application, the applicant should obtain and carefully consider the Outline of Procedure for Obtaining Preference Ratings for Defense Housing Construction issued by the Director of Priorities, Office of Production Management, Washington, D. C. The application must be executed in quintuplicate, original and three copies forwarded to the local office of the Federal Housing Administration. **PLEASE USE TYPEWRITER.**

The undersigned applicant hereby requests preference rating assistance on materials and equipment included in the Defense Housing Critical List to be used in connection with the construction or rehabilitation of _____ dwelling units to be located at _____ Street _____ City _____ State _____

Check Whether
New Construction
Rehabilitation

One set of drawings and specifications showing the design, materials, and equipment for each basic type of dwelling unit or property improvement is submitted herewith together with a plot or subdivision layout plan showing the location of each building.

Item No.	Name and Description of Material	Total Quantities
1.		
2.		
3.		
4.		
5.		

(If additional space is needed a supplemental typewritten statement may be attached.)

In support of this Application the undersigned hereby certifies that, insofar as items on the Defense Housing Critical List are concerned:
(1) all the materials and equipment listed above are necessary to the completion of the construction, and will be used solely in order to complete this project;
(2) no practical substitute or alternative source of supply is available;
(3) quantities are not greater than needed and delivery is actually required for the job not later than _____;
(4) the rehabilitation shall create or make habitable increased living accommodations.

Construction commenced, or will commence _____
Subscribed and sworn to before me this _____ day of _____ 19____
Notary Public _____
Legal Name of Applicant _____
Address of Applicant _____
By _____ Signature and title of duly authorized official.

The undersigned, as owner of the property, hereby certifies that:
(1) the estimated present market price of the property (including land and proposed buildings) per dwelling unit is \$ _____;
(2) the estimated monthly shelter rental (including charge for services such as light, heat, etc.) per dwelling unit under present market conditions is \$ _____ (Fill in No. (2) if for sale, or No. (3) if for rent. Do not fill out both.)
(3) he proposes to charge a sale price per dwelling unit of \$ _____;
(4) he proposes to charge a monthly shelter rental per dwelling unit of \$ _____;
(5) he understands that it is in the interest of national defense to provide dwelling accommodations for persons engaged in national defense activities and that if priority aid is granted pursuant to this application, it will be upon the condition that the owner will make every reasonable effort to grant preference as to occupancy to such persons; and
(6) he agrees to report on rentals, sales prices and occupancy as may be required from time to time by the Director of Priorities.

Subscribed and sworn to before me this _____ day of _____ 19____
Notary Public _____
Legal Name of Owner _____
Address of Owner _____
By _____ Signature and title of duly authorized official.

DEFENSE HOUSING COORDINATOR
The above construction, subject to modification, if any, noted on the back hereof, (is) (is not) considered to be within the meaning of "defense housing," and to comply with the applicable requirements:
at _____
Requested for priority and subject to actions, if any, noted on back hereof:
By _____ Federal Housing Administrator
Authorized Agent _____
Housing Coordinator _____

FORM PD-105 is obtainable from local FHA offices or local financial institutions and has to be executed in quintuplicate, stating housing need and type of materials wanted. It must be notarized and filed with local FHA office.

338 Defense Housing Areas Where Priority Assistance Will Be Granted to Private Homes Within "Normal and Reasonable Commuting Area."

ALABAMA
Anniston
Birmingham
Childersburg-Sylacauga-Talladega
Gadsden
Mobile
Montgomery
Muscle Shoals
Phenix City
Selma

ARIZONA
Litchfield Park
Tucson

ARKANSAS
Hope
Little Rock-Jacksonville
Ft. Smith

CALIFORNIA
Bakersfield
Fresno
Los Angeles
Monterey
Oceanside-Fall Brook
San Diego
San Francisco and East Bay Cities
San Luis Obispo
San Miguel-Paso Nobles
Stockton
Vallejo

COLORADO
Denver

CONNECTICUT
Bantam
Bridgeport
Hartford
New Britain-Bristol
Meriden
Middletown
New Haven
New London
Stamford
Waterbury

DELAWARE
Wilmington

DISTRICT OF COLUMBIA
Washington

FLORIDA
Cocoa
Jacksonville
Key West
Opa Locka
Orlando
Panama City
Pensacola
Starke
Tallahassee
Tampa
Valpariso
West Palm Beach

GEORGIA
Albany
Atlanta
Augusta
Columbus

Hinesville
Macon
Rossville
Savannah
Toccoa
Valdosta

IDAHO
Boise

ILLINOIS
Alton
Chicago-Waukegan
Joliet-Wilmington
Rantoul
Rockford
Savanna
Rock Island-Davenport (Ia.)

INDIANA
Anderson
Charleston-Jeffersonville-Louisville (Ky.)
Connersville
Evansville, Ind.-Henderson (Ky.)
Ft. Wayne
Gary-Hammond
Indianapolis
LaPorte-Kingsbury
Madison
South Bend

IOWA
Burlington
Council Bluffs
Des Moines

KANSAS
Junction City
Kansas City
Parsons
Wichita

KENTUCKY
Louisville-Charlestown

LOUISIANA
Alexandria
Baton Rouge
Lake Charles
Leesville-De Ridder
New Orleans
Shreveport

MAINE
Bangor
Bath
Portland

MARYLAND
Aberdeen
Annapolis-Laurel
Baltimore
Elkton
Hagerstown

MASSACHUSETTS
Boston
Falmouth
Greenfield
Lynn
Pittsfield
Quincy
Springfield-Holyoke
Worcester

(Continued to page 134)

impetus to remodeling of old houses. When a builder arranges a job which will add a kitchen and bathroom, he will get one of the highest priority ratings to enable him to buy such items as kitchen stoves and refrigerators, which may be difficult to obtain in any other way. At the same time the recent Federal Reserve Board restrictions on modernizing credits have been relaxed for defense areas.

6. Federal Housing Administration and its field offices and staff have been selected by OPM as the "processing agency" to accept applications and transfer them to OPM. Builders will make applications for priority assistance at the nearest FHA office. But FHA does not actually grant the priority request. It merely transmits the forms, after they are properly checked, to OPM priority district offices. Sixteen OPM priority offices have been set up to handle this work, each covering a group of states (see list, page 60).

To assist OPM in making decisions, regional priority boards will be established, on which will be representatives of FHA, Federal Home Loan Bank Board, OPM and Defense Housing Co-ordinator Palmer's office. The need for housing in a given area is to be determined by the recommendation of Housing Co-ordinator Palmer.

It is stressed that FHA's part in this plan is completely divorced from, and has no connection with its underwriting activities as a mortgage insurance agency.

7. Private builders are the spark plugs to the whole program. They will make application for a preference rating on any number of houses they wish to build, or on modernizing work. The forms are designated as Forms PD-105, to which are attached Documentation Sheets PD-105a (new homes), or PD-105b (modernizing). If the builder's application is approved he will be assigned a Project Preference Rating covering all the critical materials required for his houses. This project preference rating will be extensible, that is, it may be extended from dealer to wholesaler, to manufacturer, and ultimately

Building Codes Must Be Changed

RESTRICTIONS imposed by the OPM priority plan on use of materials may have a far-reaching effect on antiquated building codes and practices. Many of the material requirements as established by OPM are in conflict with local building codes.

BUILDERS and other local building men will be expected to get together to force changes to make building possible under the priority plan.

IN THE LONG RUN, priority restrictions may prove a boon to home building.

all the way down the line to the raw material producer.

The builder is asked to fill out the forms in quintuplicate, and so should obtain at least six copies in order to have one for his file. He must attach one set of drawings, specifications, and a plot plan where required, to the original document.

Forms may be obtained at FHA offices or from local financing institutions. When they are properly filled out they should be taken to the nearest FHA office and filed with the Priorities Clerk which FHA is to designate in each office to receive such applications. Builders should check with the Priorities Clerk or other FHA representatives to make sure that the forms are properly filled out and all the required data provided. The forms must be notarized.

FHA will then transmit the builder's Application for a Project Preference Rating to the nearest OPM regional priority office, which will notify the builder whether his application has been accepted or rejected.

8. Both large and small builders will function under

OPM Critical List—Materials on Which Priorities Assistance Will Be Given for Private or Public Defense Housing

1.—This list is based upon the critical position of the materials involved as of the date of issue hereof and since that position may change at any time this list is subject to revision.

2.—Herein included are all items for which priorities assistance will be given for the construction of defense housing, including Government owned, or assisted, and privately financed. Any materials under priority control not listed herein and which may be deemed essential in a given project shall be handled as an independent item for priority consideration.

3.—Any material not requiring priority assistance may be used in any defense housing project at the discretion of those constructing the project.

4.—The preference rating granted to a project will apply only to the materials listed herein and only in such quantities as the Office of Production Management may permit under the order granted. This limitation, unless otherwise defined, shall lie within the limits of good practice.

STEEL AND IRON—to include only:

1. Reinforcing steel, including rods, mesh, fabric, tie wire and accessories, for concrete and masonry construction.
2. Structural members—to include only:
 - a. Bearing plates, under 6 pounds.
 - b. Joist hangers—multi-family dwellings only.
 - c. Anchors, bolts, tie rods, dowels and cleats.
 - d. Angle lintels—over openings in veneer masonry walls only.
3. Steel stairs, rails, etc.—only for multi-family dwellings

where necessary for fire hazard protection—concrete preferred. Uncoated ferrous metal.

4. Insect screen mesh—made only of:
 - a. Painted steel.
 - b. Thin coat galvanizing and lacquered.
5. Fire doors and their frames for multi-family dwellings only—wood cored with terneplate covers.
6. Roofing devices, flashings, half-round gutters, hangers and downspouts—to include only:
 - a. Steel not heavier than 26 gauge, uncoated or phosphate treated and painted, or zinc coated by electrical process and phosphate treated and painted, or 2 lb. lead.
 - b. Gravel stops, as for item "a" or asphalt dipped steel.
 - c. Roof ventilators (aspirator type) as for item "a."
 - d. Termite shields for infested areas only—as for item "a."
 - e. Wire basket strainers only for downspouts connected to sewer lines—zinc coated.
 - f. Scuppers, and downspout connections for flat roofs—ferrous metal zinc coated.
7. Lath—to include only:
 - a. Ferrous metal, paint dipped. Limited to fire-resisting partitions, ceilings and soffits, and to wall tile bed base, and where gypsum lath and gypsum plaster is not permitted.
 - b. Corner reinforcing—ferrous metal, paint dipped. Limited to not more than 2½ inch lap on each surface

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this plan. It is thought that the number of project preference ratings in a given area will be apportioned among qualified builders, both large and small, somewhat according to their present activity.

Obviously a large number of builders will be required to perform the modernizing jobs as well as the new home construction. Defense housing officials expressed the hope that small building firms would be able to function efficiently under this plan as they are best qualified to perform the thousands of jobs that need to be done. However, time alone will tell whether the setup provided will be able to handle effectively the tremendous number of applications that will undoubtedly be received.

OPM officials announced that highest ratings will be available to houses which were already under construction on September 1, 1941, and for remodeling and rehabilitation which creates additional living accommodations for defense workers. Lower ratings will be granted to new construction for rent, and still lower ratings for new construction for sale. All defense home ratings, however, will be in the defense or A class.

The above is a brief outline of the system, but there is room for considerable speculation as to how smoothly it will work. The greatest significance of the plan lies in the fact that Donald Nelson himself has agreed to allocate enough critical materials to private home building to permit at least 200,000 houses to be built by private builders in the next six months, in addition to 100,000 public. The

system appears complicated and will undoubtedly engender much confusion, but may eventually work.

The project priority method has its good points when viewed from the field, and may simplify the supply problem of builders. But just how the thousands of project priorities on various materials will ultimately work their way through the distribution system and into the hands of manufacturers in a way to enable them to obtain raw materials is not clear. OPM officials say that under this method they are tackling the problem of material shortages from both the top and the bottom. And perhaps after a period of confusion and experiment the system will become effective.

Important to building manufacturers is whether, even with the assistance of the new housing priority, they will be able to get materials they need. Under the plan, as we have said, it is possible that the project priority ratings from many communities will bear a very high number, such as possibly A2.

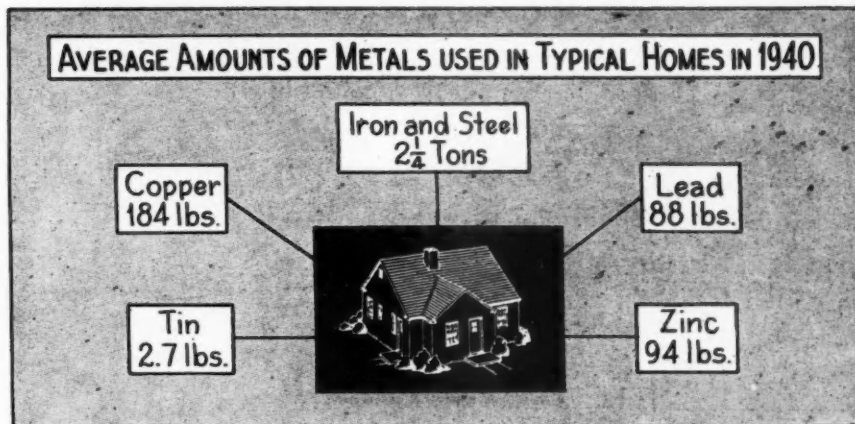
The final answer as to whether sufficient materials will be available, not only for houses in defense areas but elsewhere, is the over-all supply of steel, copper, zinc and other critical materials that will be available after the top military defense requirements are met. *American Builder* representatives have discussed this subject thoroughly with many of the top ranking OPM officials, and their conclusion is that although we will undoubtedly pass

(Continued to page 134)

OPM District Priority Offices and FHA Offices Which Report to Them

F H A OFFICES	RELATED PRIORITIES DISTRICT OFFICES	F H A OFFICES	RELATED PRIORITIES DISTRICT OFFICES
Maine Massachusetts New Hampshire Rhode Island Vermont	William P. Homans, Dist. Manager Priorities Field Service Office of Production Management 30 Pearl Street Boston, Massachusetts	Cleveland, Ohio	William T. Walker, Dist. Manager Priorities Field Service Office of Production Management E. Sixth Street and Superior Ave. Cleveland, Ohio
Connecticut New Jersey New York City Jamaica, New York Albany, New York Buffalo, New York	John D. Pollock, District Manager Priorities Field Service Office of Production Management 25 Broad Street New York, New York	Kansas City, Mo. Kansas	Clifford E. Carr, Dist. Manager Priorities Field Service Office of Production Management Federal Reserve Bank Building Kansas City, Missouri
Delaware District of Columbia Maryland Philadelphia, Pa. Virginia	Frederick W. Slack, Dist. Manager Priorities Field Service Office of Production Management 925 Chestnut Street Philadelphia, Pa.	Arkansas St. Louis, Missouri	Louis E. Crandall, Dist. Manager Priorities Field Service Office of Production Management 411 Locust Street St. Louis, Missouri
Pittsburgh, Pa. West Virginia	Charles F. Orndger, Dist. Manager Priorities Field Service Office of Production Management Grant Street and Ogle Way Pittsburgh, Pennsylvania	Louisiana Oklahoma Texas	James B. Crockett, Dist. Manager Priorities Field Service Office of Production Management Wood and Akard Streets Dallas, Texas
Alabama Jacksonville, Florida Miami, Florida Georgia Mississippi North Carolina Puerto Rico South Carolina Tennessee	John B. Reeves, Dist. Manager Priorities Field Service Office of Production Management 104 Marietta Street Atlanta, Georgia	Arizona Los Angeles, Calif. Hawaii	G. Howard Hutchins, Dist. Manager Priorities Field Service Office of Production Management 1151 South Broadway Los Angeles, California
Illinois Indiana Iowa Minnesota Wisconsin	Warren G. Bailey, Dist. Manager Priorities Field Service Office of Production Management 164 West Jackson Boulevard Chicago, Illinois	San Francisco, Calif. Nevada	Andrew L. Kerr, Dist. Manager Priorities Field Service Office of Production Management 400 Sansome Street San Francisco, California
Michigan	Walter Hall, District Manager Priorities Field Service Office of Production Management 160 Fort Street, West Detroit, Michigan	Colorado Nebraska New Mexico Utah Wyoming	Virgil L. Board, Dist. Manager Priorities Field Service Office of Production Management U. S. National Bank Building Denver, Colorado
Cincinnati, Ohio Columbus, Ohio	Bruce W. Burroughs, Dist. Manager Priorities Field Service Office of Production Management 34 East Fourth Street Cincinnati, Ohio	Alaska Idaho Montana Oregon Washington	William D. Shannon, Dist. Manager Priorities Field Service Office of Production Management 957 Stuart Building Seattle, Washington

Amounts of Critical Metals Necessary for Home Building Are Small



AVERAGE amounts of metals used in FHA insured houses built last year based on a study of one thousand houses.

AMOUNTS of critical metals required for an adequate home building program in 1942 are amazingly small in relation to the nation's productive capacity in these metals.

In the case of steel, home building requirements would be only 1.12 per cent of the total expected production capacity in 1942. The amount of copper required is 1.1 per cent and zinc, 1.2 per cent.

650,000 House Program Analyzed

In view of the social and economic value to the country of decent homes, it appears that a way should be found to see that these small amounts of materials are made available, not only in defense areas but in non-defense as well.

Basis for estimating the amounts of materials required in a 650,000 unit program is a thorough sur-

vey conducted by FHA and summarized in the *FHA Portfolio*. More than 1,000 houses in all parts of the country were analyzed. They were selected by FHA to represent a typical cross section and so represent the various types of practice and different uses of materials that prevail in all parts of the country. The average FHA insured house, as analyzed, has 1,208 square feet—a fairly small house. Such a house, built under normal conditions prevailing in 1940, consumed 2 1/4 tons of steel, 184 pounds of copper, 94.5 pounds of zinc, 87.8 pounds of lead and 2.7 pounds of tin, as well as small amounts of several other metals.

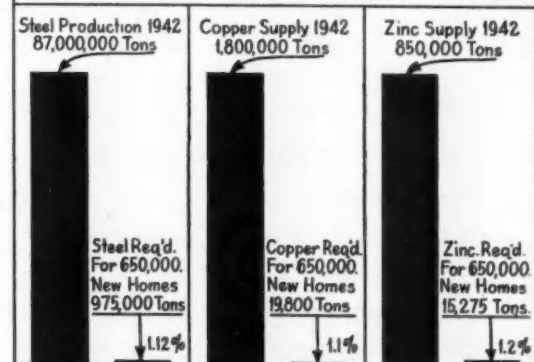
Under the restricted use of metals in houses planned for 1942, however, the amounts would be greatly reduced. In calculating the totals for 650,000 houses as indicated in the chart below, it was estimated that the use of steel would be cut one-third, copper two-thirds and zinc one-half.

Estimate of Quantities of Metals Used in 1,000 FHA Single Family Detached Houses Built in 1940 (in pounds)

	Structure lbs.	Heating lbs.	Plumbing lbs.	Electric Wiring lbs.	Total lbs.
Iron and Steel.....	1,668,621	1,181,857	1,600,065	84,575	4,535,118
Copper.....	48,389	12,221	94,940	28,746	184,296
Zinc.....	37,954	18,102	32,756	5,729	94,541
Lead.....	173	2,842	84,863	.....	87,878
Tin.....	258	927	991	510	2,686
Aluminum.....	284	563	253	.....	1,100
Monel.....	.....	.....	756	.....	756
Nickel.....	18	7	258	.....	285

STUDY by FHA and published in the *FHA Portfolio* shows small amounts of critical materials used in typical FHA insured homes in 1940. Above amounts will be sharply reduced in defense housing by substitution and elimination.

650,000 NEW HOMES IN 1942 WOULD REQUIRE ONLY 1.12% OF STEEL SUPPLY-1.1% OF COPPER.



STEEL, copper and zinc needed for 650,000 new homes is infinitesimal in relation to the nation's capacity. Estimates are based on use of reduced amounts from normal as shown in table at left.

America's Housing Need

Why home building must go on even in war is shown in this expert analysis of new factors affecting population. Home requirements far greater than usually estimated

By *W. C. Bober*



WAR prosperity is sweeping the country. As this article is being written, we are riding by far the greatest manufacturing boom in history. The Federal Reserve Board's index of production is now approximately 42 per cent higher than in the peak months of 1929—an unparalleled achievement in factory output.

The construction industry generally and the home building industry in particular are also at very high levels, but they have by no means kept pace with a rise in manufacturing production that is making 1929 appear like a moderate-sized depression.

Total construction this year will perhaps equal the \$11,000,000,000 spent in 1929 but is unlikely to surpass it. We will build over 700,000 homes this year which

will be greatly in excess of 1929's 509,000 homes but far below the 937,000 dwelling units built in the all-time record year 1925.

The construction industry which always shares and to an important extent creates prosperity, therefore has a right to expect still higher levels. But in the coming year 1942, the home building industry will face difficult and almost unprecedented problems because of priorities and shortages in both materials and labor, and it is up to the industry to face realistically the fact that its future for years to come is intimately tied up with defense and possibly war. It would be unrealistic in the extreme to imagine that "housing as usual" can go forward in an era when the nation is being called upon to arm to the teeth and perhaps may drift into all-out war.

READ THIS ARTICLE CAREFULLY FOR A LONG RANGE PICTURE OF THE HOME BUILDING INDUSTRY. SALIENT POINTS INCLUDE:

DEFENSE is the "new industry" of this decade, just as railroads were in the 80's and automobiles in the 20's.

HOME BUILDING is a necessity even in war.

POPULATION in motion creates huge new home requirements. Trend back to manufacturing centers is great.

NEW STUDIES show huge replacement market caused by deterioration and demolition of old houses.

NUMBER OF PEOPLE in best home buying ages (25 to 44) mounts to flood proportions.

HIGHER standard of living makes American workers demand better homes—won't be crowded like immigrants of past expansion eras.

"TRIUMPH OF PRIVATE ENTERPRISE" seen in reduction of average cost of homes due to better planning.

POTENTIAL NEED for new homes in present decade set at 1,600,000 units annually.

CONSTRUCTION of new homes this year expected to reach 700,000 units.



WORKERS such as these seen at left leaving a shipbuilding job must have decent homes. Gigantic population shifts are vastly increasing the nation's housing need. We have barely begun to build the homes needed by the new armies of workers.



PRIVATE ENTERPRISE has met the housing challenge by producing smaller homes at lower cost.

Home Building a Necessity, Even in War

On the other hand, it is equally unrealistic—in fact, absurd—to assume that housing is a luxury industry that can be sidetracked even if we go to war. On the contrary, satisfactory housing for defense workers is an absolute prerequisite for satisfactory output of armaments. The staggering demands of war preparation are already revealing shortages in all directions, not least of which is in the housing plant.

Because of wholesale suspension of building activity during the long depression, we entered the war period that began in 1939 with a definite shortage of proper housing. This is being recognized by the rush to build homes in the defense areas. But just as we have as yet made a mere beginning in production of armaments, we have barely begun to build the homes required for the people who are to produce the armaments.

As we will see later in this article, because of factors that are still inadequately recognized, the need for housing is far greater than most of the estimates of the "housing shortage" have indicated.

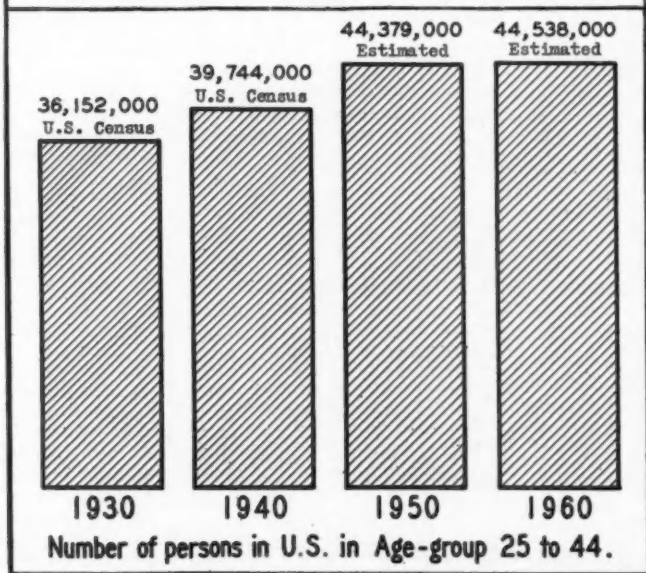
Four Long Range Factors

Behind the "housing problem" there are certain long range factors too fundamental to be ignored or suspended by even so compelling a force as a war economy. These are:

(1) The American family is rapidly becoming smaller. Therefore more family dwelling units are now required to house a given number of people than were required in past decades.

(2) A rapid and far reaching change in the age-composition of the American people is underway. The number of people in the age groups from 25 to 44, that is, the age groups that are most likely to need new homes,

NUMBER OF PEOPLE IN BEST HOME-BUYING AGES [25 to 44] IS MOUNTING TO FLOOD PROPORTIONS



PERSONS aged 25 to 44 will reach all-time numerical peaks in this decade and in first part of next. From 1940 to 1950, population as a whole will increase only 7 per cent but people aged 25 to 44 will increase 11.7 per cent. In last decade the increase in age-group 25 to 44 was only 9.9 per cent.

"WAR PROSPERITY is sweeping the country—we are riding by far the greatest manufacturing boom in history. But home building has not kept pace.

"WE ENTERED the war in 1939 with a definite shortage of proper housing—we have barely begun to build the homes required for the people who are to produce the armaments.

"THE NEED for housing is far greater than most of the estimates have indicated"—W. C. BOBER.

is not only growing considerably faster than the population as a whole but is rapidly reaching flood proportions.

(3) The requirements for new homes in this country has been determined in the past to a very great extent by the flow of population from the farms, villages and small towns to the larger cities and manufacturing centers. This movement, largely suspended in the depression, is rapidly being resumed and may reach enormous proportions.

(4) For the first time in our history, a definite replacement market in homes is coming into being. More light has been thrown in the last ten years on the deteriorated condition of our housing plant than in all the decades preceding, and it is now widely recognized that civilian morale and output of armaments are intimately tied up with satisfactory housing.

Smaller Families—More Houses

Let us look at the above long-term factors in somewhat greater detail. In the early years of the first World War the average American family consisted of about 5 members and approximately 200,000 homes were required to

Number of New Dwelling Units in Nonfarm Areas, 1920 to 1940¹

Year	Total nonfarm	Area		Type of dwelling		
		Urban	Rural nonfarm	1-family	2-family ²	Multi-family ³
1920.....	247,000	196,000	51,000	202,000	24,000	21,000
1921.....	449,000	359,000	90,000	316,000	70,000	63,000
1922.....	716,000	574,000	142,000	437,000	146,000	133,000
1923.....	871,000	698,000	173,000	513,000	175,000	183,000
1924.....	893,000	716,000	177,000	534,000	173,000	186,000
1925.....	937,000	752,000	185,000	572,000	157,000	208,000
1926.....	849,000	681,000	168,000	491,000	117,000	241,000
1927.....	810,000	643,000	167,000	454,000	99,000	257,000
1928.....	753,000	594,000	159,000	436,000	78,000	239,000
1929.....	509,000	400,000	109,000	316,000	51,000	142,000
1930.....	286,000	224,000	62,000	185,000	28,000	73,000
1931.....	212,000	164,000	48,000	147,000	21,000	44,000
1932.....	74,000	56,000	18,000	61,000	6,000	7,000
1933.....	54,000	40,000	14,000	39,000	4,000	11,000
1934.....	55,000	41,000	14,000	42,000	3,000	10,000
1935.....	144,000	106,000	38,000	110,000	6,000	28,000
1936.....	276,000	199,000	77,000	203,000	13,000	60,000
1937.....	286,000	205,000	81,000	219,000	15,000	52,000
1938.....	347,000	246,000	101,000	261,000	17,000	69,000
1939.....	465,000	342,000	123,000	351,000	28,000	86,000
1940.....	540,000	386,000	154,000	425,000	37,000	78,000
1941.....	(Estimated) 650,000					

¹Data for 1920-35 are from National Bureau of Economic Research, data for 1936-40 from Bureau of Labor Statistics.

²Includes 1- and 2-family dwellings with stores.
³Includes multifamily dwellings with stores.

house a million people. But by 1940 the average American family consisted of only 3.8 members. Hence 263,000 home units are now required to house a million people.

This represents a truly enormous increase in home requirements and we only grasp its full significance if we apply these figures to the entire population as of course—gradually throughout the decades—we must rehouse all the people of the U.S.

At the average size of the family a generation ago, our total present population could have been rehoused in only 26,500,000 homes. But with only 3.8 members per family in 1940, it now takes 34,700,000 homes to rehouse the country's entire population. Therefore this single factor—the increasing smallness of the American family—has added in the course of about a quarter-century practically 8,000,000 dwellings to the long-term home requirements of the U.S. as viewed in long range perspective for decades ahead.

This factor is of course already operative as to the homes required to house current population increase and will become of vast importance in the growing replacement market.

Buyers Reach "Flood Proportions"

We now come to the second factor. The country's birthrate is now a great deal lower than a generation ago and as a result we will have in 1950 about 2,500,000 fewer children under 9 years of age than in 1930. A great deal of publicity has been given this trend and it is of course true that these children are the future home prospects and their declining numbers will affect the requirements for homes in future decades when they will have reached marriageable age.

But in this present decade it is not a question of home requirements for children born in current years but of children *born 25 to 45 years ago when the birthrate was far higher than today.* The abundant baby crop of those years has ripened by the passage of time into a most abundant crop of persons who are today 25 to 45 years old and therefore constitute the natural heads of families, persons who have had time to marry, establish themselves in a reasonably secure economic position and accumulate savings for a new home. They are the backbone of the market for homes built by private enterprise.

Not only is this age group of 25 to 45 increasing considerably faster than the population as a whole, it is rapidly mounting to flood proportions and we will have a greater number of these family-heads in this decade and early in the 1950's than at any time in the past or probably any time in the future.

Thus, the very crest of the flood of population that began 25 to 45 years ago with a very high birthrate is now passing through this decade and its impact on the building industry in the form of unprecedented demands for homes will be too great for even the harshest war economy to ignore. The situation is clear from the following figures indicating the numbers of people by age groups in the census years 1930 and 1940 with the best available estimate for 1950:

Age Group	1930	1940	1950	Per Cent Increase	
				1930 to 40	1940 to 50
Below 25.....	58,478,000	57,022,000	55,372,000	- 2.5	- 2.9
Aged 25 to 44..	36,152,000	39,744,000	44,379,000	+ 9.9	+11.7
Over 44.....	28,141,000	34,903,000	41,462,000	+24.0	+18.8
Total Population	122,775,000	131,669,000	141,213,000	+ 7.2	+ 7.0

The above figures show at a glance that whereas young people below 25 will decline about 2.9 per cent in numbers from 1940 to 1950, and the population as a whole will grow only 7 per cent, the main home-prospect age

(Continued to page 148)

Leaders Speak Out for Home Building

Influential business men, government officials and public leaders endorse industry's part in defense housing and better homes for the people

ON September 3 the editor sent the following telegram to a number of prominent men in business and public life: "October *American Builder* will present symposium, ideas building industry and government leaders, on importance defense housing and home building by private enterprise, as related to nation's industrial production, creation of taxable wealth, maintenance of public morale, avoidance of widespread local unemployment, and utilization of materials most of which are not directly usable for war needs. We request your participation and assistance. Please send air mail concise statement your views any angle this important matter."

The results were immediate and generous. The statements follow.

Home Building Is Vital—Jesse Jones

Washington, D. C.

To the Editor:

In the face of a grave national emergency, defense requirements must necessarily take precedence over all other considerations. The urgent need for additional housing for defense workers in some areas makes home building an integral part of the defense effort. American industry produces most of the basic construction materials in such quantities that the building of many new homes can continue even in the face of the unprecedented demand for construction of defense projects.

Unfortunately, defense requirements create serious potential shortages of certain materials, primarily metals and metal products, which are essential to home building. It is evident that the amount of these critical materials remaining after defense requirements have been met will not be sufficient to fill the normal civilian demand. To some extent the amounts of these materials necessary to produce a given volume of housing or other finished goods, can be reduced through changes in design or the development of satisfactory substitutes. Beyond that point, production for civilian purposes will necessarily be limited, even though these critical materials constitute a small part of the total cost and there are ample supplies of the major non-critical materials.

The various government agencies concerned have a grave responsibility and a difficult task to apportion the critical materials remaining after defense requirements have been met. They are doing their best to handle this problem in a way that will cause a minimum of unemployment, dislocation of private enterprise, and restriction of civilian consumption. Private enterprise can contribute toward a solution by promoting the conservation of these critical materials wherever possible.

The social and economic significance of home building is so vital and so generally recognized that I am sure it will be given every consideration which is consistent with our defense effort.

JESSE JONES

Secretary, United States Department of Commerce.

Palmer Asks Priority for 525,000 Homes

Washington, D. C.

To the Editor:

Based upon extensive research by the Division of Defense Housing Coordination, along with first-hand information, it is my considered belief workers will be forced to undergo undue hardship, localities will be burdened with severe social problems, and the defense program will be impaired unless during the coming year the country provides at least 525,000 homes needed in connection with defense activity.

Of these 525,000 homes, it is our belief that 400,000 can and should be provided by private industry, given adequate priority assistance. The remainder must necessarily be supplied through Government financing.

Our first interest in housing today is in relation to the overall defense program. That interest alone would be enough to make it of paramount importance in our minds to see to it that necessary living accommodations were provided for workers forced to migrate to new localities in order to take jobs that will keep the defense machinery running smoothly.

There is, however, another consideration of almost equal importance, a consideration that affects the economic lives of thousands of people. That consideration is the bearing the far flung building industry has upon the lives of the thousands of people directly and indirectly concerned. Undue havoc will be wrought unless provision is made that enough materials will flow into residential construction to take care of housing requirements that are needed in connection with the defense program. Although these requirements by no means represent the overall shelter needs of the nation, they nevertheless will serve to provide the medium by which the building industry can survive until after the present emergency.

CHARLES F. PALMER

Executive Office of The President,
Office for Emergency Management.

Ferguson Confident of Building Volume

Washington, D. C.

To the Editor:

During this defense emergency, manufacturers of the guns, ships, airplanes and tanks imperative for our national security must and will have first call upon the materials and labor needed for their production. Subject only to these basic prior needs, I believe that the provision of adequate housing facilities for defense workers is one of the most essential requirements for effective prosecution of the defense program and for the maintenance of strong morale among the men and women who are on the front line of the production effort.

The private building industry has already made an impressive contribution to defense housing. Since July 1, 1940, private builders have started construction on approximately 250,000 new homes financed under the FHA program and more than 85 per cent of these are located in areas affected by defense activities. At least as many more have been started outside the FHA program. Furthermore, by concentrating on homes in the lower price ranges and on construction in localities where there is urgent need for more housing for defense workers, I believe that the industry can maintain a substantial volume of operations in the field of defense housing.

As the defense program progresses, the questions of the availability of materials and labor will become more and more acute. To a large extent, the labor employed in private home building is not suited by training, location or age to easy transfer to mass production jobs in mechanized defense factories. Similarly, many of the materials used in home construction are not in direct demand for defense production purposes. As to the critical materials for which the defense plants have first call, I believe that to a large degree the problem can be met in the housing industry by intelligent use of substitutes and by similar conservation measures. As to the remainder, favorable consideration can be anticipated for the irreplaceable material needs of essential defense housing.

ABNER H. FERGUSON

Administrator, Federal Housing Administration.

Bohannon: Must Not Choke Off Small Business

San Francisco, Cal.

To the Editor:

It is the duty of every American to support the defense of his country in every way he possibly can.

In order to maintain a healthy economy which is essential to the

(Continued to page 155).

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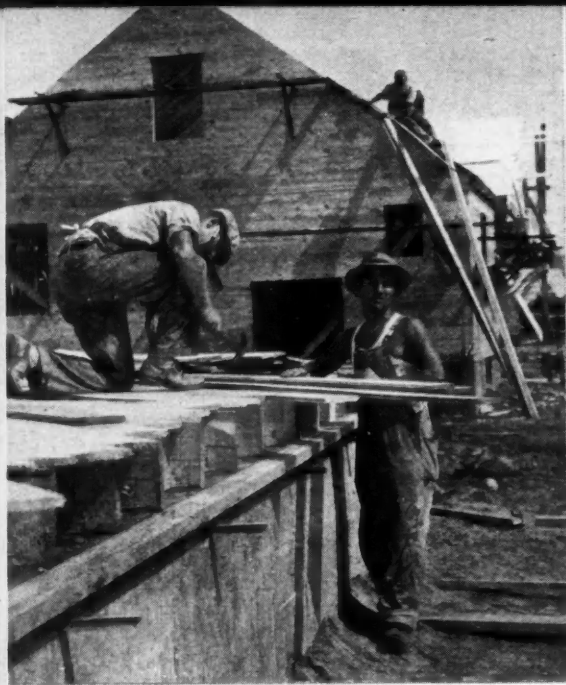
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Ample Labor Supply

TABLE I—EMPLOYMENT BY INDUSTRIES MAKING CONSTRUCTION PRODUCTS
(U. S. Census of Manufacturers, 1939)

	No. of Establishments	Per Cent of Products Used in Construction	No. of Employees for Construction Products	Value of Construction Products
Aluminum products.....	162	1	230	\$ 1,698,000
Asbestos products.....	211	20	4,000	19,580,000
Blowers & fans.....	77	50	2,750	14,300,000
Brick & structural tile.....	800	100	31,520	78,153,227
Cement.....	160	100	30,300	192,600,000
Clay products (tile, pipe, etc.)....	394	80	23,000	67,500,000
Concrete products.....	2,040	90	20,800	117,000,000
Construction machinery.....	199	100	23,216	140,137,586
Cork products.....	35	4	140	700,000
Cast iron pipe.....	74	80	14,800	52,000,000
Cut stone & marble.....	1,244	60	14,160	45,480,000
Electric apparatus.....	313	20	6,900	22,315,000
Elevators & escalators.....	183	100	13,400	64,100,000
Explosives.....	80	10	920	7,105,000
Felt goods, rope & jute.....	184	4	736	480,000
Glass.....	37	16	5,580	30,600,000
Hardware.....	434	30	46,400	46,200,000
Lighting fixtures.....	568	40	11,700	49,600,000
Lime.....	269	43	11,700	15,900,000
Linoleum.....	17	90	7,840	63,000,000
Metal doors, frame, trim.....	205	100	9,388	48,219,000
Mineral wool.....	58	100	2,537	8,237,000
Nails & spikes.....	36	60	3,123	7,740,000
Nonferrous metals.....	1,369	3	4,100	50,400,000
Oil burners.....	130	50	1,450	9,200,000
Paints & varnishes.....	1,165	55	21,340	239,250,000
Paper & paperboard.....	638	4	3,800	37,320,000
Partitions, cabinets, store fixtures	716	100	16,100	70,718,000
Planing mills.....	3,076	70	56,000	224,000,000
Plumbing supplies.....	284	100	33,200	147,500,000
Plywood mills.....	86	100	11,400	38,878,000
Prepared paving materials.....	231	100	3,600	32,750,000
Refrigerators & air cond. units....	309	40	16,900	51,200,000
Roofing materials.....	129	100	11,238	107,827,000
Rubber products.....	519	2	1,360	5,280,000
Sand, lime, brick.....	27	100	390	1,915,000
Saw mills & logging camps.....	8,356	70	238,000	533,400,000
Saws.....	87	35	5,700	6,475,000
Screens & weatherstripping.....	162	100	3,687	15,200,000
Screws.....	345	4	880	3,300,000
Sheet metal shops.....	1,262	80	22,200	109,000,000
Steam fittings & heating contracts	180	100	30,100	85,707,944
Steam & h.w. heating equipment....	68	100	11,090	45,377,800
Steel & rolling mills products.....	486	20	91,000	544,000,000
Stokers.....	61	50	2,600	24,500,000
Stoves, furnaces, heaters.....	449	50	27,700	118,000,000
Struc. & ornam. iron & steel.....	1,136	100	47,600	284,600,000
Terra cotta.....	12	80	1,300	2,480,000
Tools.....	387	16	3,120	12,100,000
Wallboard & gypsum.....	192	100	14,100	81,750,000
Wallpaper.....	46	100	5,200	24,968,000
Wire & fencing.....	764	12	7,600	40,080,000
Wiring devices & supplies.....	146	30	5,700	30,100,000
Wood preserving.....	218	100	12,674	106,295,000
TOTAL CONSTRUCTION PRODUCTS	30,816		996,269	\$4,176,216,557
ALL U. S. MANUFACTURING INDUSTRIES	184,244		10,414,764	\$56,828,807,223
Per Cent Construction Products Were of all U.S. Manufactures	16.7		9.6	7.3

FAR-REACHING EFFECT of construction on employment and on tax-paying industries is shown in Census of Manufacturers.

Conflict with defense program small. Unnecessary hardship for industry employees would be caused by curtailment

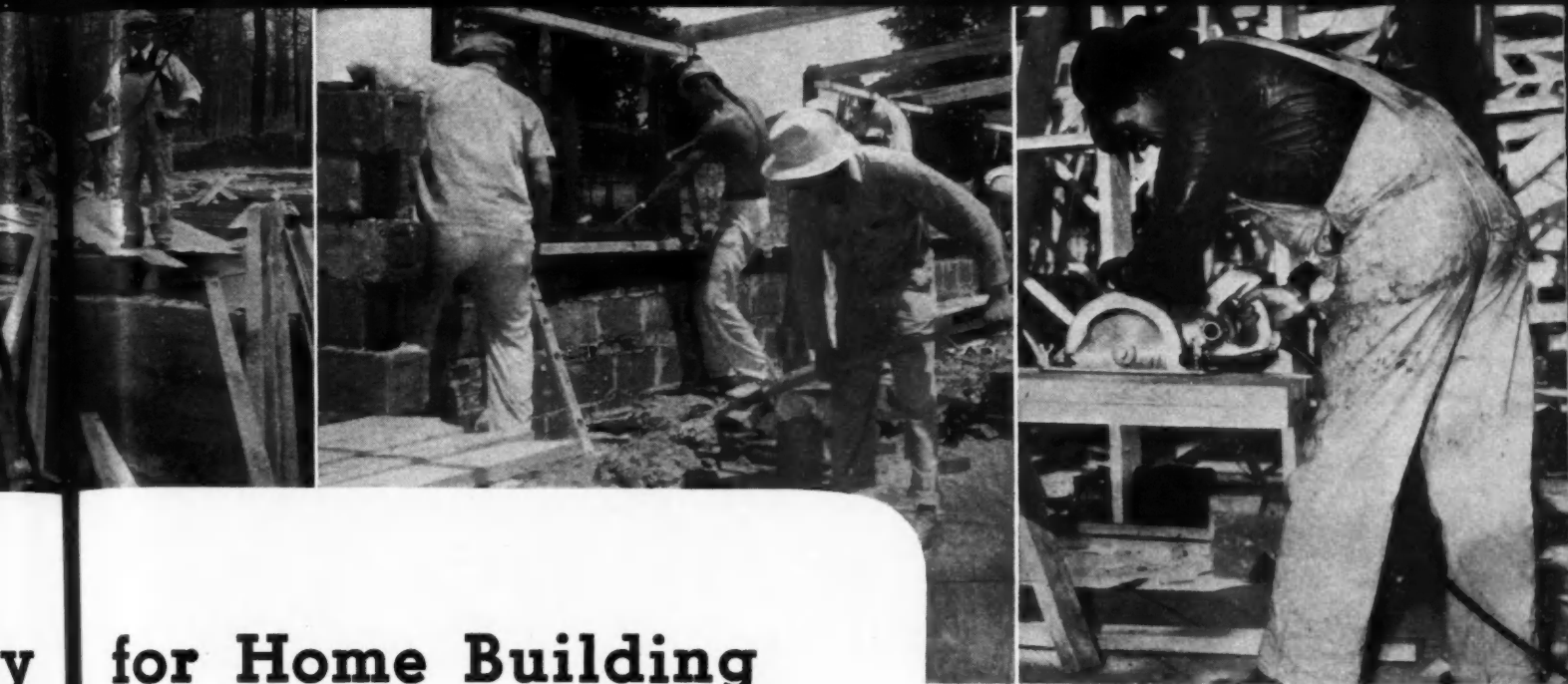
THERE is no serious shortage of building industry workers at the present time, and the opinion of experts is that since the industry has been able to come through the huge construction programs of the present year without serious trouble it can face any future problems with confidence.

Construction employment on national defense work reached a peak in February this year with the army barracks building program. Even this huge labor demand superimposed on other types of construction did not tie up building anywhere to any serious extent. It was significant that in March of this year there were still 164,000 skilled construction workers registered with state employment offices, showing this large number of skilled workers still looking for work.

Perhaps the most important consideration in discussing construction labor is that this industry is largely a local business. The vast majority of men engaged in home building and other types of construction work depend on local building activities for their livelihood, and for the most part are difficult to uproot and transport to other places or different types of operation. This tendency to resist moving to other localities is aided by the fact that the average age of skilled construction workers is rather high, and the workers are thus still more firmly rooted in their localities.

Another factor not fully appreciated because it is hard to prove statistically is the flexibility of building employment. Particularly in the smaller towns and rural and suburban areas union restrictions are fortunately not strong enough to keep out new employment when there is a definite need. When demand for building labor is strong there are literally millions of new workers to be drawn on. These include youthful workers just out of high school and elderly workers who do not function at top efficiency but whose work is still valuable.

As far as home building itself is concerned the above factors are particularly important, for the vast majority of homes are built by small operators constructing a few houses at a time. Frequently the builder himself works on the job, and even where he does not, he has a



for Home Building

close relationship with his employees which enables him to work out arrangements to keep the job moving. This frequently includes the hiring of some young men of little more than high school age to work along with more experienced men.

Available employment in home building will also be increased by the curtailment of other types of non-defense construction, such as theatres, public buildings, amusement structures. Work of this type requiring structural steel and other materials in which there is a growing shortage is expected to be curtailed before home building. Many of the men normally employed on this type of work will undoubtedly go into defense construction operations of various kinds, but there will still be a large number available for home building.

How vast is the supply of building construction labor is indicated in Table II, which is taken from the occupations statistics of the U. S. Census of 1930. These are individuals who have listed themselves as employed in the listed trades and include workers not only in the construction industry but in other industries. Yet the figures showing, for example, more than 929,000 carpenters, 430,000 painters, 237,800 plumbers and 280,300 electricians, give a striking picture of the men available. Since 1930 there has undoubtedly been a considerable shift in many of these trades, but the number who have grown old and disappeared from the industry has been largely made up by young men with a good high school training, including considerable trade training, who have come into the industry or are available for this type of work.

Another factor not frequently considered in connection with home building labor is the technological improvements that have taken place in home building procedure. Due to the greater use of power equipment and to the greater use of factory fabricated materials, the amount of labor required at the site is not as great as it used to be. Home builders are able to produce a far greater number of homes today with a smaller number of skilled workers at the site.

Thus any possible curtailment of home building in the coming year will not be the result of a labor shortage but will be due to the inability of contractors to get materials.

This brings up the further question, how far should the construction industry, and particularly home building, be curtailed in order to release vital materials for

(Continued to page 153)

CENSUS FIGURES SHOW VAST BUILDING LABOR SUPPLY

Table II—The Men*

Carpenters	929,426
Retail Lumber Dealers (persons).....	34,070
Laborers in Coal & Lumber Yards.....	73,232
Architects	22,000
Brick & Stone Masons & Tile Layers.....	170,903
Painters, Glaziers & Varnishers (bldg.).....	430,105
Plumbers, Gas & Steam Fitters.....	237,814
Plasterers & Cement Finishers.....	85,480
Roofers & Slaters.....	23,636
Structural Iron Workers (bldg.).....	28,966
Designers & Draftsmen.....	100,430
Civil Engineers & Surveyors.....	102,086
Tinsmiths & Coppersmiths & Sheet Metal Workers.....	83,427
Real Estate Agents & Officials.....	240,030
Engineers, Cranemen, Derricks, Hoistmen.....	60,886
Electricians	280,317
Cabinetmakers	57,897
Laborers & Helpers, Bldg. Construction.....	419,802
Apprentices to Bldg. & Hand Trades.....	40,133

Table III—Retail Stores and Sales, 1939†

	No. of Stores	No. of Employees	Net Sales, 1939
Lumber Yards.....	20,621	109,624	\$1,196,817,000
Building Materials Dealers.....	4,446	25,649	281,642,000
Heating—Plumbing Equipment Dealers.....	4,262	14,932	102,404,000
Paint, Glass, Wallpaper Stores.....	8,480	15,642	152,673,000
Electrical Supply Stores.....	1,858	3,952	27,669,000
Hardware Stores.....	29,147	56,762	629,276,000
Furniture Stores.....	19,902	104,751	973,157,000
Floor Coverings Stores.....	1,986	6,083	58,618,000

Table IV—Wholesalers and Sales, 1939†

Builders' Supplies (general line).....	189	4,061	\$ 67,773,000
Lumber	1,236	10,770	378,222,000
Lumber and Millwork.....	154	2,384	50,376,000
Millwork	280	4,186	59,012,000
Brick, Tile and Terra Cotta.....	145	714	18,700,000
Cement, Lime and Plaster.....	102	900	22,532,000
Glass	282	3,451	32,143,000
Hardware	1,343	39,176	592,000,000
Electrical Apparatus and Equipment.....	207	1,683	24,214,000
Wiring Supplies and Construction Materials.....	955	7,140	126,738,000
Floor Coverings.....	487	5,216	149,584,000

*Occupation Census, 1930. Includes const'n workers in all industries.
†Census of Distribution, 1939.

MILLIONS OF MEN rely on building for their livelihood, and the above table taken from U. S. Census figures shows many of the important groups that would be affected if home building were unnecessarily curtailed.

BETTER citizens and a better community are created by the privately built, privately owned home



THE CASE FOR PRIVATELY BUILT, PRIVATELY OWNED HOMES

1. Make better citizens.
2. Encourage thrift and saving.
3. Pay their share of local taxes.
4. Built by local firms to fit local needs.
5. Vast numbers of smaller building contractors are equipped to do this work.
6. Existing utilities, streets and organizations are made use of.
7. Better environment for children.
8. Keeps home ownership out of politics.
9. Does not create favored class of government subsidized renters.
10. Encourages individual enterprise and local initiative rather than centralized government bureaucracy.

HOMES OR P

Will the "present emergency" be used as an excuse to replace privately built and owned homes by publicly financed, publicly owned housing? American Builder finds private residential industry well able to meet present and future needs for homes

IF THE public housing promoters have their way and manage to socialize the American home, they will have taken a long step to completely change the nature of American life.

For the private construction and ownership of homes intimately concerns the everyday lives and jobs of a vast part of the American public.

Is private ownership seriously threatened?

It is most seriously threatened, and the threat may become a bitter reality in the near future unless the millions of persons involved make themselves heard by Congress and the Administration.

Already Congress has appropriated money for the building of more than 110,000 public housing units under the classification of "defense homes." Some of these are temporary, and a considerable portion are definitely needed in industrial areas. But the unmistakable danger is that the public housing promoters who are strategically spotted throughout the defense housing setup will grasp the emergency as an excuse to go much farther.

The irony of the situation is that never before in its history has the private home building industry been doing



MASS housing in government projects is not a sound answer to America's need for better homes

HOUSING?

such a good job of providing low cost, well built homes for the masses of the people.

In the first half of this year the number of privately built and financed new homes (except farms) in this country totaled over 265,000. The average permit value of these homes was \$3,580. This figure conclusively shows that private builders are providing houses within reach of defense workers.

Further evidence is shown by the fact that more than 70 per cent of the FHA insured homes being built in the country had a valuation of less than \$6,000. Still more striking are the recent FHA figures on Title VI homes built in defense areas, which showed that 80.8 per cent were valued at less than \$4,500. The total monthly carrying cost of the Title VI houses ranges between \$27 and \$41 a month.

The building of these privately owned small homes goes on in thousands of relatively small projects. The average private building operation is run under the direct supervision of an experienced builder, using local men and materials. The houses thus built are suited to the needs of the community and to the personalized requirements of the individual—a far cry from the mass housing provided in government projects.

These thousands of building firms, both large and small, working through many more thousands of subcontractors and supply dealers, are well able to handle by far the greater majority of the much needed new homes.

Such privately built homes are usually located in suburban and semirural spots within easy reach of defense industries. There are ample building sites available at low cost, and these sites are far better as home communities than the congested areas usually selected for mass housing projects.

WHY PUBLICLY FINANCED AND OWNED HOUSING SHOULD BE KEPT AT A MINIMUM

1. Discourages private initiative and enterprise.
2. Eliminates incentive to ownership.
3. Reduces local taxes.
4. Increases population congestion.
5. Better bombing target.
6. Encourages isms other than Americanism.
7. Creates subsidized renting class.
8. Costs are higher.
9. Furthers "big business" at expense of local builders and suppliers.
10. Increases government bureaucratic control of masses of people, who would be more independent citizens if living in their own homes.

No Real Threat of a Transportation Shortage

—says the Editor of Railway Age; analyzes statistics and anticipated volume and shows that there is no present reason to fear curtailment through a car shortage

ONE of the "imminent shortages" that would affect all industries regarding which there has been propaganda from some government sources is a shortage of transportation. Before and during the depression there were large increases in the mileage of highways and in the number of trucks without any reduction in the mileage of the railways. Consequently, it had been generally understood that there was a large surplus of transportation facilities. In 1940 the railways handled 17 per cent less freight traffic than in 1929. Why, then, the talk about a transportation shortage?

It has been inspired, first, by the large increase in traffic expected to occur principally because of expenditures for defense; second, by a decline during the depression of over 600,000, or almost 30 per cent, in the number of freight cars owned by the railways; and, perhaps, third, by a willingness to embarrass railway management.

Actual Increase Only Two-Thirds of That Predicted

There has been a large increase of freight traffic, but far from as large as some government "authorities" predicted. One of these forecasted an increase of 27 per cent in freight carloadings in 1941. The actual increase in the first two-thirds of the year was 18 per cent. This caused "ton-miles" (number of tons carried one mile) by rail to be larger than in the first two-thirds of any previous year; but there were no car shortages. The reason is shown by the following figures: Average tons per loaded car in May, 1929, were 26.6 and in May, 1941, were 28.1. Average miles moved by each car daily were 32.9 in May, 1929, and 41 in May, 1941. Consequently, average ton-miles per car per day increased from 549 in May, 1929, to 746 in May, 1941, or 36 per cent. The increase in the efficiency with which cars were used offset the decline in their number.

Traffic reaches its highest level each year in October. How, then, about car shortages this fall? The prospect now is that there will be small shortages here and there, but no substantial general shortage.

The same New Deal "authority" that predicted the demand for cars in 1941 would be 27 per cent larger than in 1940 also has predicted that it will be 38 per cent larger in 1942 than in 1940. That would make it about 18 per cent larger than it actually will be in the entire year 1941. On this basis he estimated the railways would have to acquire 370,000 new freight cars within the next year to handle

the fall peak traffic of 1942. But they could not possibly acquire so many. The country's present capacity for building freight cars, according to experts, is not much more than 150,000, assuming no shortages of materials or labor.

The trouble with these figures is in the estimate that the demand for cars in 1942 will be 18 per cent larger than in 1941. It assumes an increase of at least 18 per cent in the production of all the country's industries, and a much larger increase in the production of its defense industries. But how many large defense industries will say they can increase their production 18 per cent or more in 1942? Steel, the largest of them, is now producing at a rate of 82 million tons a year. To increase this 18 per cent it would have to produce 97 million. But it estimates its 1942 maximum capacity at only 87 million—and does not expect a demand for even that much. For increasing their production the other defense industries are dependent upon steel. How are they going to increase their production 18 per cent or more if the steel industry cannot increase its production more than 6 per cent?

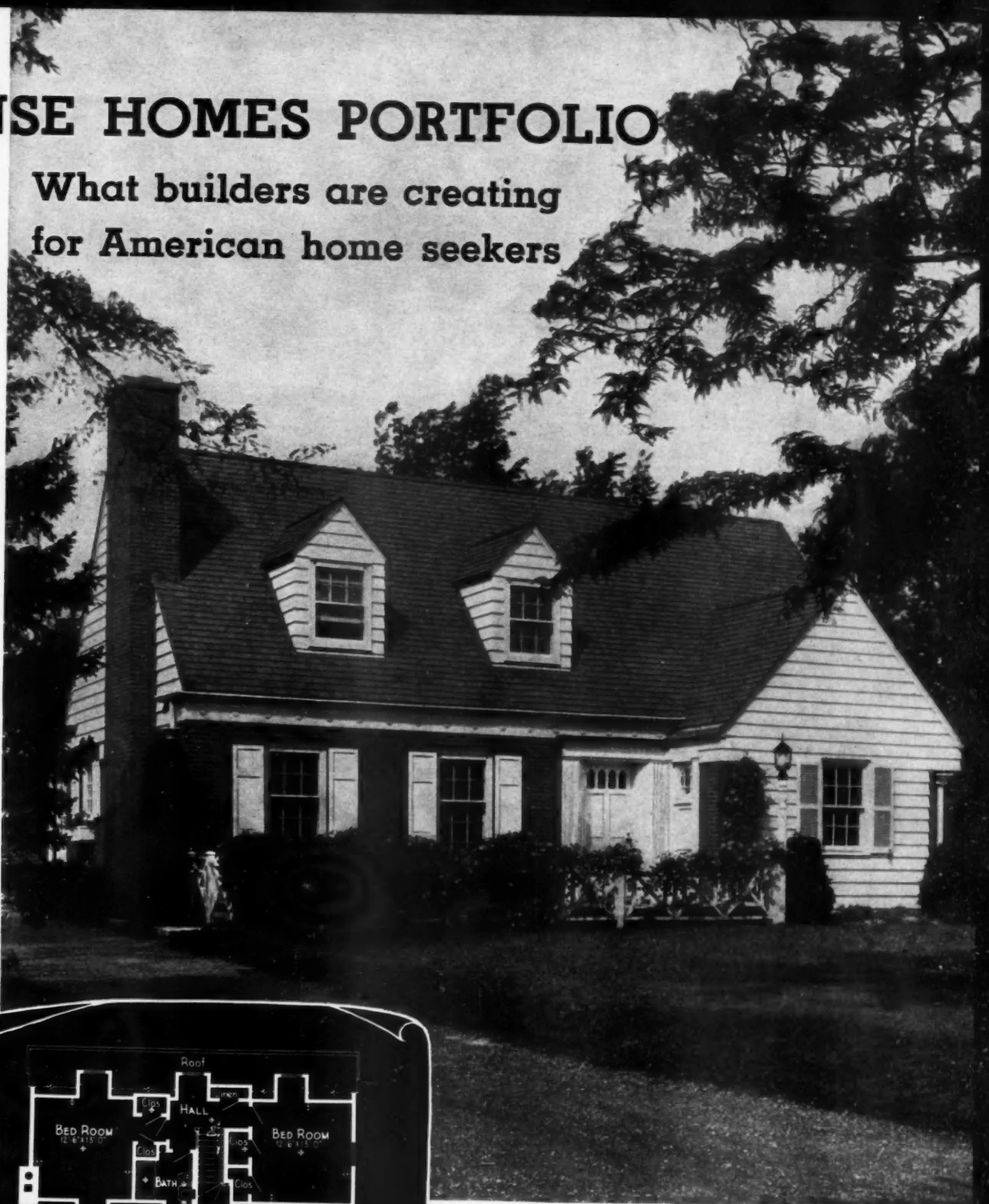
As our experience in the last war showed, large expenditures for defense or war increase some kinds of production and traffic, but also reduce other kinds. Undoubtedly the railways will have to handle a much larger traffic in 1942. But undoubtedly also the same "authorities" who so greatly overestimated the increase in 1941 have as greatly overestimated the increase in 1942. Meantime, the railways will have a year within which to carry out their program of increasing their supply of cars by 120,000 before the 1942 peak of traffic. Railways and shippers will also have a year within which further to increase the efficiency with which they use cars; and they can increase it much more by the same means by which they are now making 1,600,000 cars do as much work as 2,000,000 did a decade ago—i.e., by heavier loading and faster movement.

There was recently a phony "oil shortage" in the eastern states which was promptly dissipated by putting into service 20,000 tank cars that had been standing around idle. Neither the building nor any other industry has any reason now for fearing its business will be curtailed by a "car shortage." The predicted "car shortage" is as phony as was the "oil shortage."

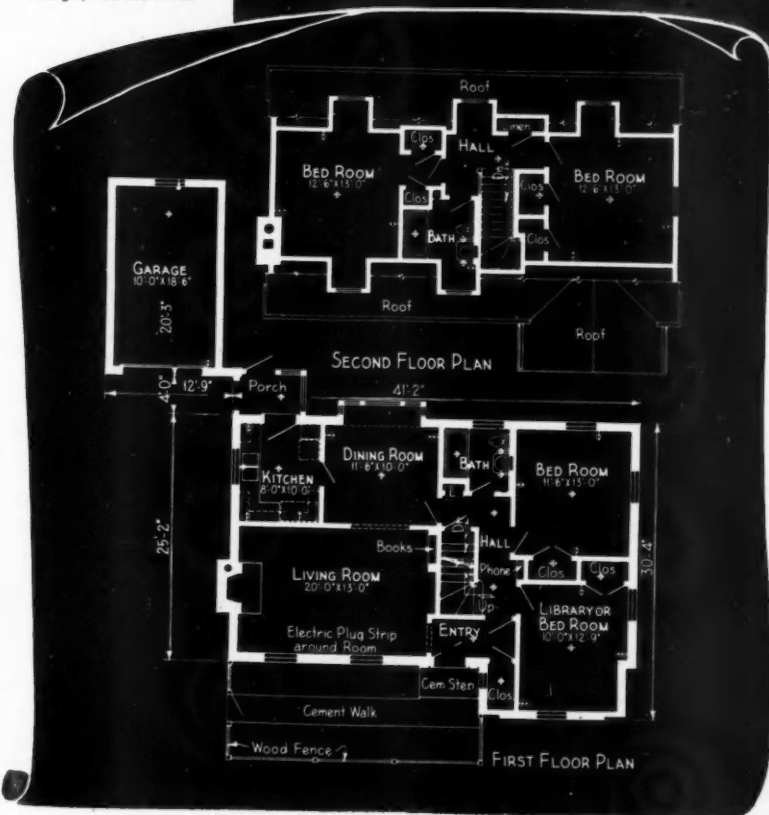


DEFENSE HOMES PORTFOLIO

What builders are creating
for American home seekers



THIS HOME built in Swainwood, Chicago suburban area, where government and defense industry executives have become owners, presents a flexible plan of two to four bedrooms attractively arranged and built. Rapp and Rapp of Chicago, architects.

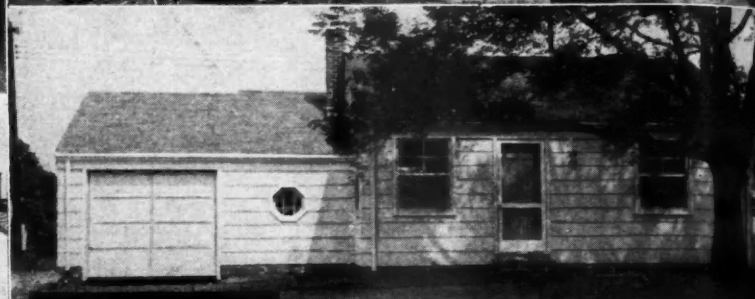


ALL HOUSING IS DEFENSE HOUSING—
in the vital areas of this country, which include practically all sections, better homes are necessary to bring forth our best efforts. Homes for all concerned—for those at the top and those at the bottom. Through a "step-up" process of ownership, every new home built creates vacancies all down the line to the most modest quarters.

ALABAMA



HARTFORD



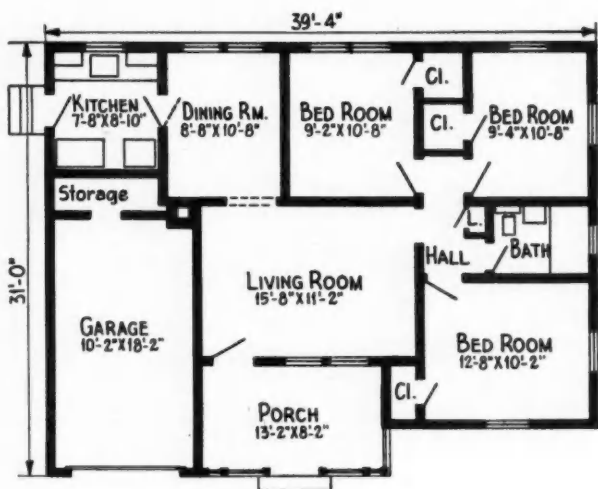
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Private Builders ARE

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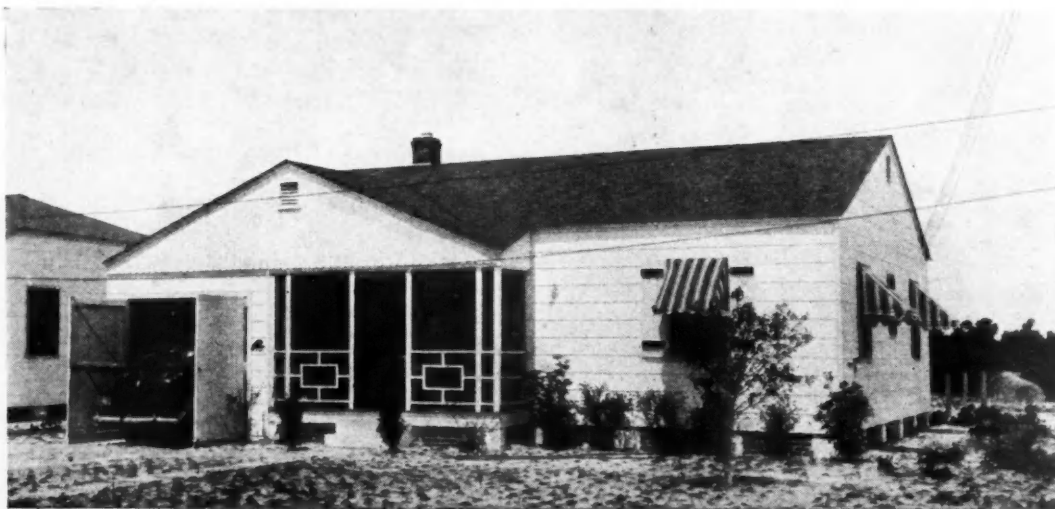
No government subsidies needed



THE houses on this page and the additional defense homes featured in articles throughout this issue show better than words that private home builders of the nation are successfully and satisfactorily meeting the current need for small homes.

Private builders will set a new record this year by building and selling more than 550,000 home units. If this activity is not cut off by subsidized government housing competition or by material shortages, private building industry will go on next year to still higher levels.

These privately built small homes require no government subsidies and are free from the red tape and delay of public projects. They help pay public taxes and help pay for the cost of national defense rather than draining the Government Treasury for subsidies.



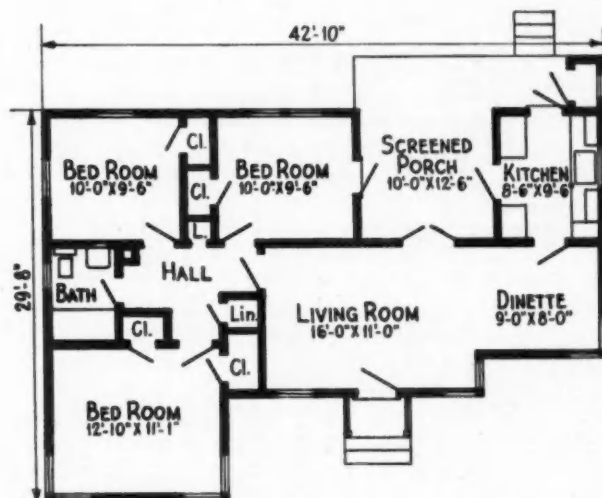
TYPICAL small defense home at Pensacola, Fla., built by Lester F. Prou, under FHA Title VI. FHA valuation was \$3,225. Experienced private builders are setting high production records for speed and quality.



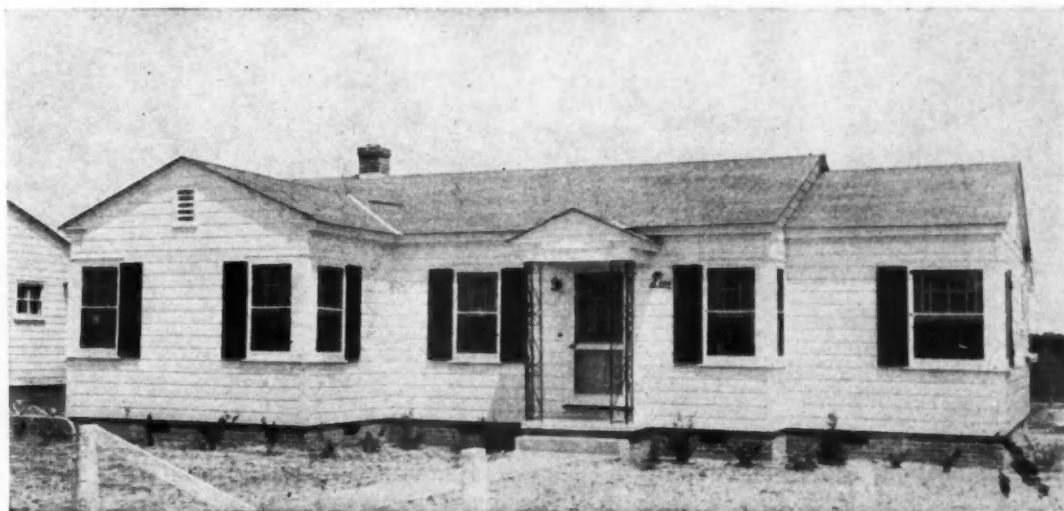
Meeting Home Shortages

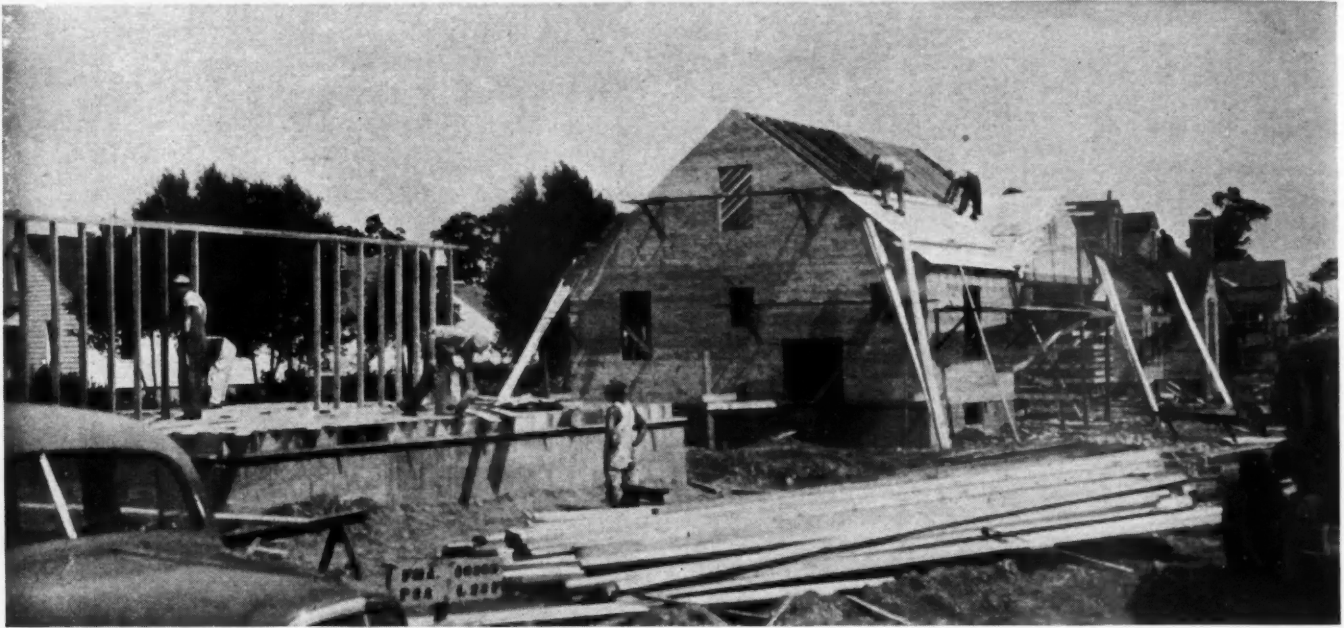
No red tape or delay wanted

Except for a limited number of temporary shelters and group projects in over-expanded industrial areas, the bulk of the nation's home building can and should be done by private builders. The housing need is great but there are many thousands of builders, subcontractors, material firms and other building professionals willing and able to do the job. The capacity of the industry to provide houses well within reach of defense workers has barely been touched. Until material shortages began curtailing operations this fall the industry was rapidly gearing itself for a tremendous productive effort. In 1942, it is estimated, 800,000 or 900,000 privately built houses would have been easily possible without any government subsidy whatsoever; question now is not whether private home builders can produce but whether they will be permitted to do so in 1942.



ANOTHER low-cost defense home, built in North Hills, a Title VI subdivision near Pensacola. Good small homes at prices within reach of defense workers are being built by the thousands without subsidy.





MATERIALS ARE PURCHASED from local dealers, and the work is done by local men with experience and responsibility.

Bridgeport Workers Prefer These Privately Built Small Homes

AMERICAN defense workers, like other American citizens, prefer to live in homes of their own built by private builders contributing to the cost of government rather than tapping the Treasury for subsidies.

This is true in small towns as well as large cities, and it is true in such an industrial area as Bridgeport, Conn.

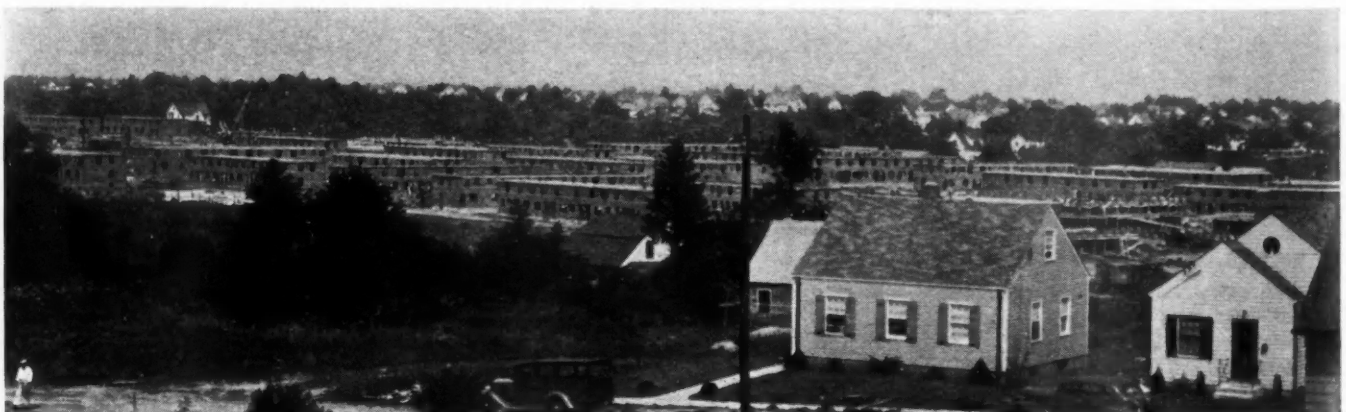
In Bridgeport and nearby suburbs the Federal Government is financing and building so many thousands of housing units that it has the private building industry and even their famous Socialist mayor worried.

Local builders feel that the construction of huge Federal mass housing projects is inexcusable and, for the most part, unnecessary. Bridgeport has many fine rural and suburban communities within easy reach of the defense factories. There are hundreds of skilled, experienced private building firms able and willing to supply the need.

One of the successful private builders who is erecting low cost homes for defense workers is Gustav Kohary, whose development, Rivercliff Manor at Milford, is illustrated with this article.

Kohary employs experienced, reliable local labor, buys his materials and equipment from local supply houses and is able personally to supervise each house he builds to see that the buyers get quality construction. Furthermore, he is able to give the buyers individuality and personalized touches that no public housing project can give.

Rivercliff Manor, just a few miles from the outskirts of Bridgeport, is in a pleasant wooded section with broad streets and lawns and a healthful, country-like setting. The homes are being purchased as fast as they can be built, by the employees of the Sikorsky Aviation plant, General Electric, Remington Arms and other defense



WHAT BRIDGEPORT PEOPLE DON'T WANT is huge government mass housing projects of the type seen above. This 600-unit project covering acres is considered a menace to the residential neighborhood and to private business.



STREET SCENE in Rivercliff Manor, where workers own and enjoy their homes—traditional American thrift and enterprise encouraged.

Local firm builds and sells good homes for \$36 a month—helps PAY the U. S. defense bill instead of tapping Treasury for housing subsidy

firms. The average home is purchased with a down payment of \$540 and monthly payments of \$36, which include interest, amortization, taxes and insurance.

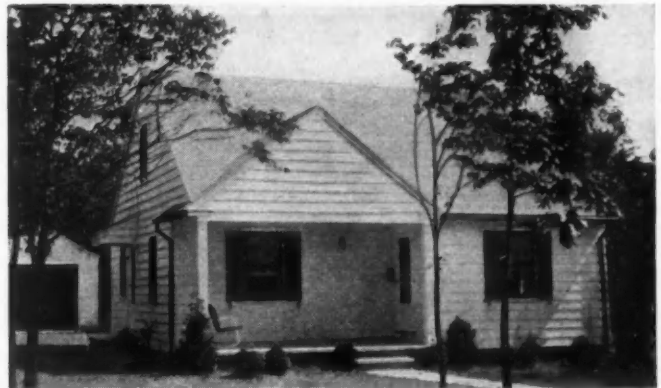
Just after visiting Rivercliff, your *American Builder* correspondent took a look at a huge 600-unit Federal housing project nearby. Here masses of monotonous brick housing cells are being put up to "house" workers at the expense of a subsidy from the general public.

When private builder Kohary erects and sells 100 houses, he contributes a large amount to the general tax paying business of the country, and the private homes he builds pay their fair share of local real estate taxes. But the Federally financed project puts a further burden on the already overloaded Federal Treasury, costs a great deal more, and at the same time discourages private business.

Despite this competition from government housing projects, Kohary and his associates have thus far been building and selling houses as fast as their relatively small organization permits. Because of the efficient nature of the organization overhead costs are low, and the economies of this type of operation are passed on to the buyers.

Under the program followed by Kohary, selling and the handling of contracts, plans, deeds and legal matters are handled by William R. Gleason, a real estate man of nearby Stratford. Under this system Gleason takes care of the sales and legal affairs while Kohary concentrates on the construction.

The typical Rivercliff Manor house has a foundation plan of 24' x 30'. It is an economical structure and well built, featuring concrete footings, stoops and platforms, bracing at all corners, 210-lb. asphalt roofs, copper leaders, gutters and flashing, Moncrief steel welded winter air conditioning furnace. A finished flight of stairs leads to the attic which provides space that can be used later if



TWO VARIATIONS of typical Rivercliff Manor homes (above and below) built on 24' x 30' foundations; plan details on next page.



No government red tape or bureaucratic inefficiency on this job. Defense workers get low cost homes with individuality and charm. Live as free, independent citizens in their own homes



POPULAR Rivercliff Manor home, as detailed below, with attractive side porch.

SMALL HOMES such as these are being built in great numbers by private builders for our defense workers.

NO government subsidy needed.

THEY HELP PAY taxes instead of increasing government costs.

THOUSANDS of private building firms have the men, the organizations and the ability to build defense homes, and they can do the job better and cheaper than it can be done by the government.

the owner desires to finish off additional rooms.

So popular were these houses at the \$36 per month figure that more than 50 were built and sold in four months. The tract has 230 lots.

When asked to comment as to why defense workers preferred Rivercliff Manor homes to the government

projects, William R. Gleason said they liked the individualism and the personal contacts the private builder can give.

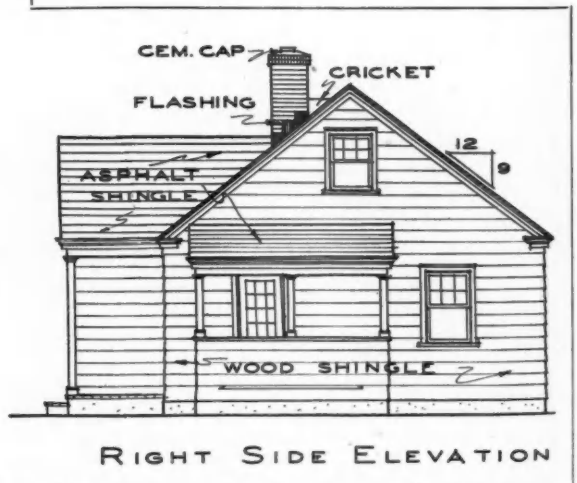
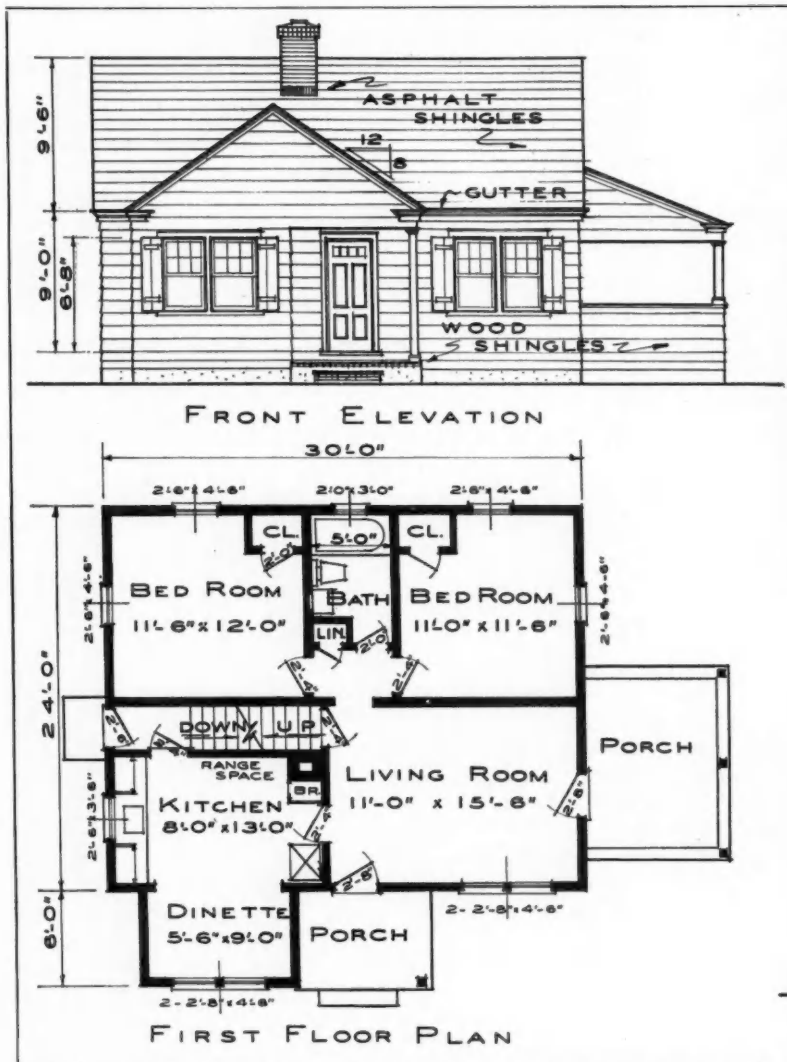
"The private builder is in a far better position to provide really well built homes," he said. "Every subcontractor is local and can be depended on for a good job and quick service. Materials, too, are all purchased locally.

"We can give buyers more individualism in the planning of their homes than any government project. We can give them eight different types of houses with individual color schemes and other personalized items.

"People also appreciate the personal service they get from a private builder—more than anything possible on a government project. The workmen on our job from the ditch digger on up are more concerned with doing a good job quickly under the direct supervision of the builder than they would be under some big government agency.

"We try to make the sale of a house a pleasant experience for both the seller and the purchaser.

"We don't have the government red tape, and we can get things done quickly and more efficiently."



DETAILED PLAN of typical 24' x 30' Rivercliff Manor home at Milford, Conn. House has full basement, winter air conditioning, 11' x 15' 6" living room. Sells for \$36 per month, including taxes, interest, amortization and insurance.

CONSTRUCTION
view of street of
Mills & Sons Title
VI small defense
homes. Fireproof
masonry construc-
tion, quality materi-
als and morale-
building comfort are
highlights of design.



Emergency Homes Must Not Be Shoddy

Mills & Sons show how top quality can be planned and built into minimum size homes; rush 400-unit program near Chicago defense plant.

By R. E. Sangster

IF, AS IS generally conceded, a background of comfortable living conditions boosts the quality and volume of production done by our industrial defense workers, certainly some of those to be employed in Buick's new aviation engine plant now being built in Melrose Park, Ill., will be doing their best to strengthen Uncle Sam's air power. As a contribution toward this goal, Mills & Sons, 51-year-old Chicago building firm, are rushing to completion near this defense plant the first of 400 small apartment-like homes which are going to be "tops" in quality. Needless to say, sales are ahead of deliveries.

These super-defense homes received official approval in the form of the first commitments issued in the area by FHA under Title VI. Complete details, including many departures from standard construction and new advanced engineering methods of brick and concrete construction, were worked out with government officials in the paper stages of the project. All features of planning were carefully considered so that the finished prod-

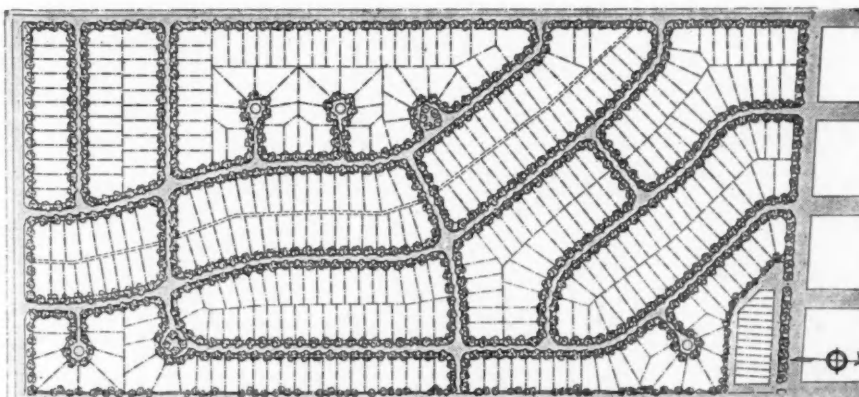
uct would represent the last word in compact fireproof units which would be easy to maintain, afford minimum operating costs and provide maximum comfort.

All phases of planning, building and equipping these little homes were constantly considered in the light of the best quality that could be built into them. The site itself was given the name "Westbrook" and, as shown in the plot plan below, will have paved streets winding through the tract so that many of the lots front on cul-de-sac. They will average 50 by 135 feet, with all utilities installed for health protection and comfort—sewers, water, gas and electricity.

The houses themselves will present a pleasing, harmonious grouping through a number of variations of exterior arrangement, setting back across deep front lawns and tied together with Colonial fences. Flagstone walks and attractive landscaping will complete the homelike atmosphere of this model community of defense workers.

In planning the basic room arrangement, Architect Richard Powers allowed adequate floor area for each of the living functions but eliminated all waste space. This, together with the complete insulation consisting of hollow insulating masonry walls, glass wool filled ceilings, and storm sash, makes automatic gas heating systems economical.

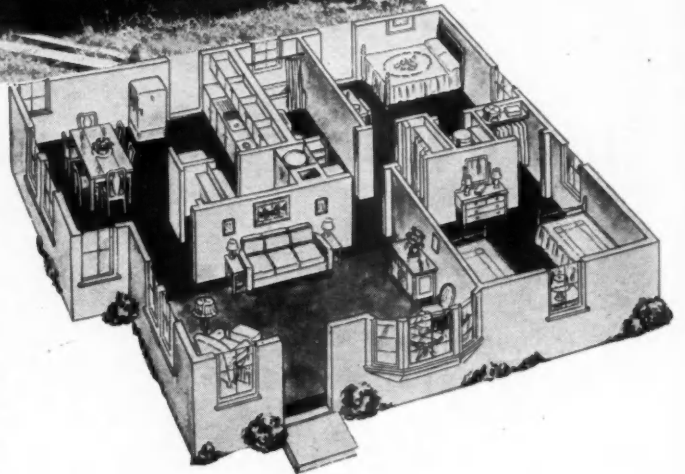
Incidentally, these little gas-fired Coraire winter conditioning units are small enough to fit in the base of the linen closet and still do a complete job of heating, air distribution, filtering, humidifying, summer circulation and ionizing to eliminate all odors. There are no basements, but the five closets, attic storage space reached by a Bessler disappearing stair, and a special "double" garage (one half for car,



PLOT PLAN of "Westbrook"—even smallest units should have properly laid out sites.



THE basic house, as viewed at the left, presents a compact four room and bath arrangement with remarkable living qualities, as indicated in plan sketched below.



other half for storage and work space), provide for ample storage of all kinds and reduce the amount of housework. Special equipment to further add to living comfort includes the installation of Bendix DeLuxe washing machines and ventilating fans in the kitchens. These features give the units an apartment-like simplicity but retain the advantages of detached houses.

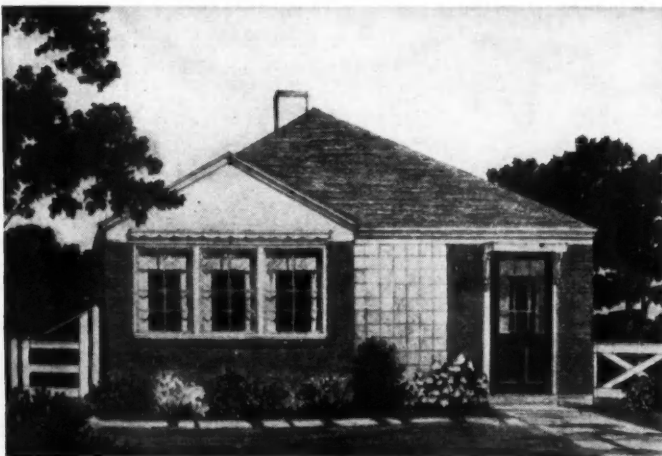
Two of the alternate exterior sketches are reproduced below and use the floor plan shown on the opposite page, turned so that the dinette faces the front. Such details as bays, varying roof lines, glass block panels, etc., give numerous other variations. In all, there are adequate light, ventilation and living comfort. Rear screened porches have been added to some.

Quality "Specs" That Speak for Themselves

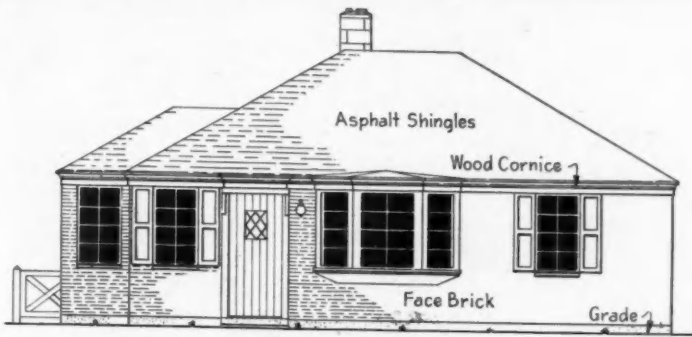
Naturally, in times like these, when speed is considered of first importance in providing homes for defense workers, many poorly conceived and badly built small houses are bound to result until the first frenzy of home production is past. This is the period when such examples as Mills' "Westbrook" are valuable to show what can be done to contribute to the long-range program of better housing for Americans down to the smallest home unit. The best proof of the thorough job being done here will be found in careful study of the construction details opposite, and the following condensed specifications (original "specs" covered 21 pages—certainly an indication of thorough planning!).

CONCRETE WORK: Contractor shall be careful not to excavate for footings below the depth shown on the drawings, and if he inadvertently excavates in any part or place below the depth shown on drawings, such extra depth shall be filled with concrete of the strength and mixture specified herein for concrete walls and footings—at his expense. All cement used shall be fresh portland cement unless otherwise directed in writing by owner. Concrete shall be thoroughly rammed and spaded and tamped into place.

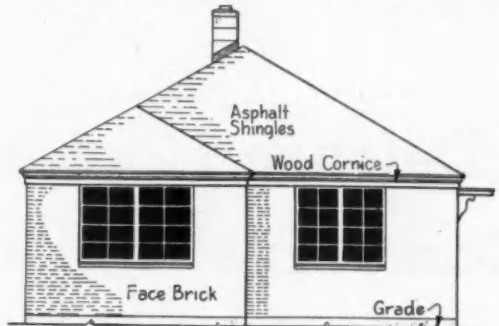
Preparation of lot for foundation and floor slab: The concrete contractor shall excavate as required to install footings of 1-3-5 mix as shown on plans and install well-made mixed concrete, "Waylite," or equal, blocks from top of footing to a height as shown on plans; the top course of said concrete blocks to be solid as indicated on plans. The concrete contractor also has the option (only by securing approval from General Contractor) to pour concrete walls of size and dimension as shown on section drawing
(Continued to page 139)



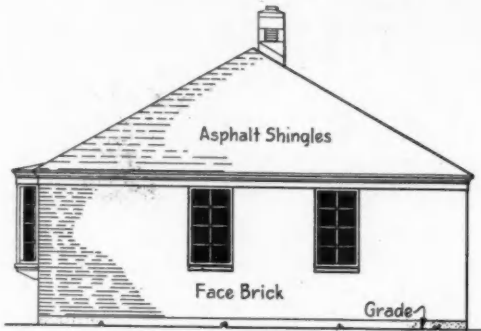
TWO of the many variations possible by turning plan and changing roof lines and other details.



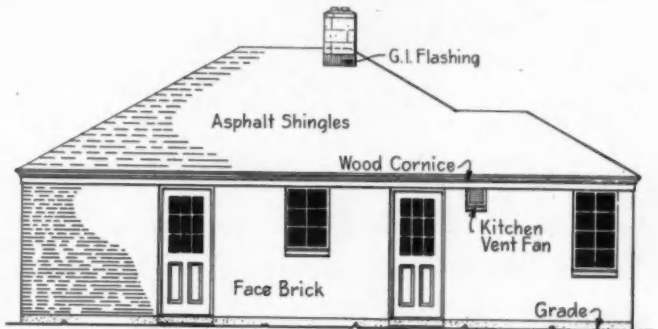
FRONT ELEVATION



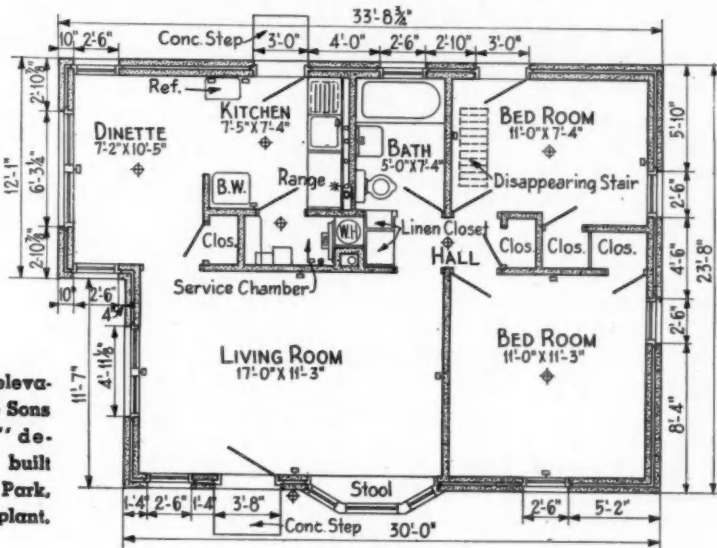
LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION

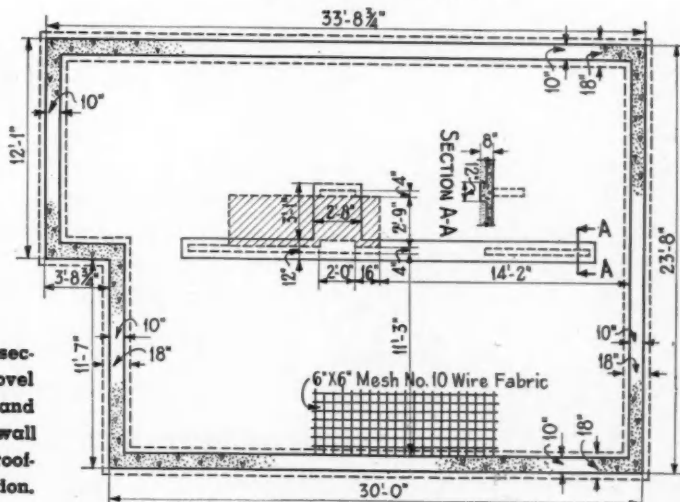


REAR ELEVATION



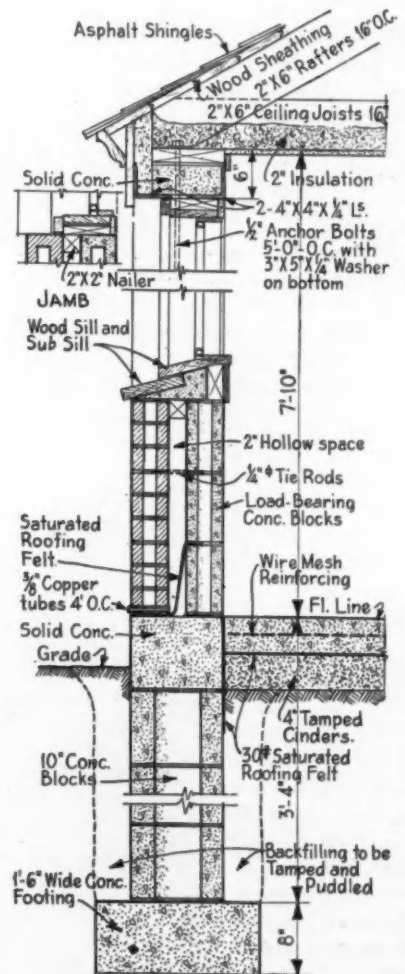
FIRST FLOOR PLAN

PLANS and elevations of Mills & Sons "Westbrook" defense home built near Melrose Park, Ill., aviation plant.



BASEMENT PLAN

TYPICAL wall section showing novel foundation, slab and hollow masonry wall used in fireproof-type construction.



TYPICAL WALL SECTION

Defense Homes Can Have Appeal and Glamour

Texas builder unable to fill the demand for his Title VI "glass accented" homes near Fort Worth



DOWN in Ft. Worth, Tex., Joe Driskell, a contractor who keeps the fingers of one hand on the pulse of Mr. and Mrs. America to know what they desire in a home and swings his hammer with the other one, is having difficulty trying to satisfy the heavy demand for his houses. With 30 dwellings completed or under construction August 1, he will have over 100 owner-occupied by the end of this year. His pace has been slowed by a scarcity of labor, or he would have many more families under their own roofs by Christmas-time.

Sold in most cases under Title II of the FHA for a 10 per cent down payment and \$25.50 a month, the homes may also be purchased under Title VI which does not require a 10 per cent initial payment if the contractor will accept a note for that sum. However, Mr.

Driskell requires a down payment of at least \$200 on places bought under Title VI, which is in effect in Ft. Worth area, one of the communities designated by the federal government as a "defense area" facing acute shortage of residential units.

Mr. Driskell gives credit for the popularity and salability of his houses to the carrying out of a long-felt "hunch" that even moderate-priced places can have special features which make them more distinctive and appealing. He has joined the nation-wide program for better housing sponsored by Libbey-Owens-Ford Glass Co. during the past year, and each of the homes erected in Western Hills addition is Designed for Happiness with Glass.

The builder has achieved his desire to dress up his homes for the surprisingly low additional outlay of \$50



ABOVE. Builder Driskell watches the installation of generous sized double-hung sash in a typical Western Hills home; one of the exterior treatments of the three standard plans shown at the right.



TYPICAL kitchen is the pride and pleasure of this young bride; she and her husband recently became owners of a Driskell Western Hills small home and enjoy the added value features which lend glamour and appeal.

for glass items. The high value which persons inspecting the houses placed on these features made the sale prices including 50x120-foot lots seem very modest.

Interior Glass Features Varied

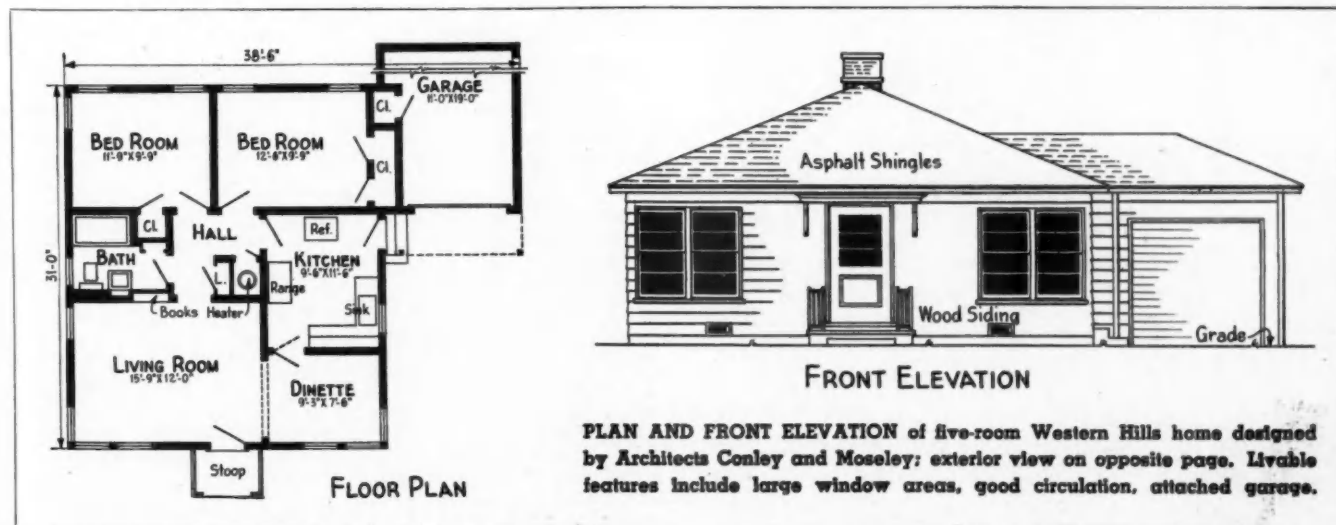
To assure a variety of elevations and different interior uses of glass, two architects, Leonard Conley and M. M. Moseley, both of Ft. Worth, were employed and three plans used. The residences which resulted possess variations in roof lines and window and door placements that give them individuality.

The appeal of the Western Hills homes is evidenced by their ready sale. Ft. Worth needs well built houses for the families of 15,000 workers of Consolidated Aircraft Company's bomber plant. Buyers of Mr. Driskell's

places have been pleased that he has not taken advantage of the shortage situation by merely erecting four walls and a roof, but rather has more than done his part and supplied comfortable homes with glass niceties not ordinarily included in residences below the \$8,000 price class. The dwellings are being snapped up while under construction, and a long list of buyers is awaiting completion of others.

"The use of glass in small homes has proved of considerable value to me," Mr. Driskell says. "The classification of interiors is definitely raised to a higher standard than anything previously used, and the public has responded to the beautiful arrangement of mirrors. The features are definitely of more value than their cost. We used the \$50 glass package, and it is regarded as more

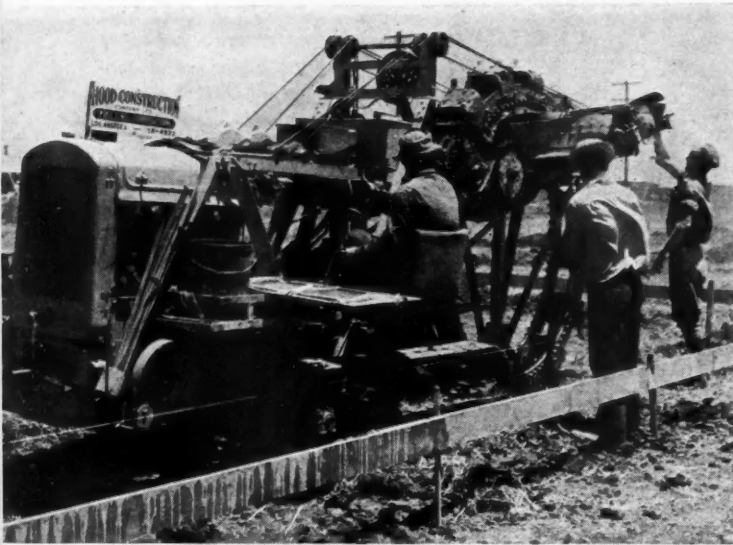
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PLAN AND FRONT ELEVATION of five-room Western Hills home designed by Architects Conley and Moseley; exterior view on opposite page. Livable features include large window areas, good circulation, attached garage.

Power Equipment Helps in Defense Rush

Mass production methods used on large private project to turn out hundreds of homes for aviation workers near Inglewood, Calif.



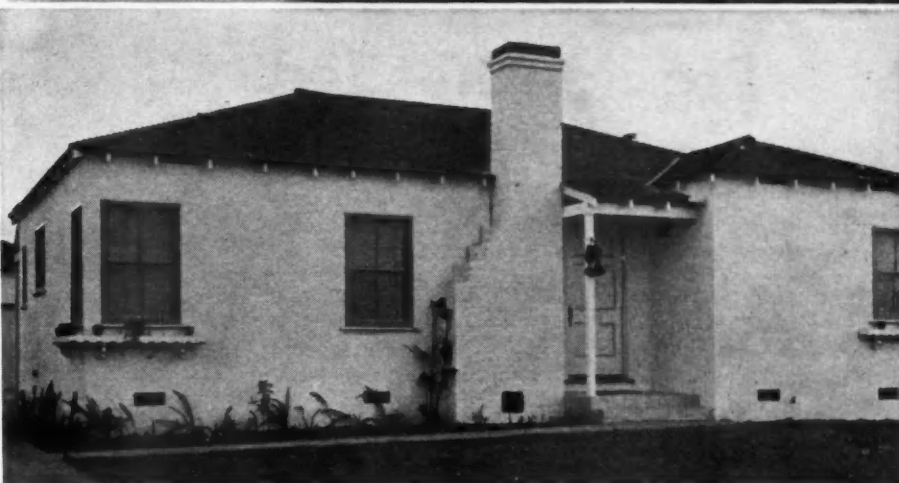
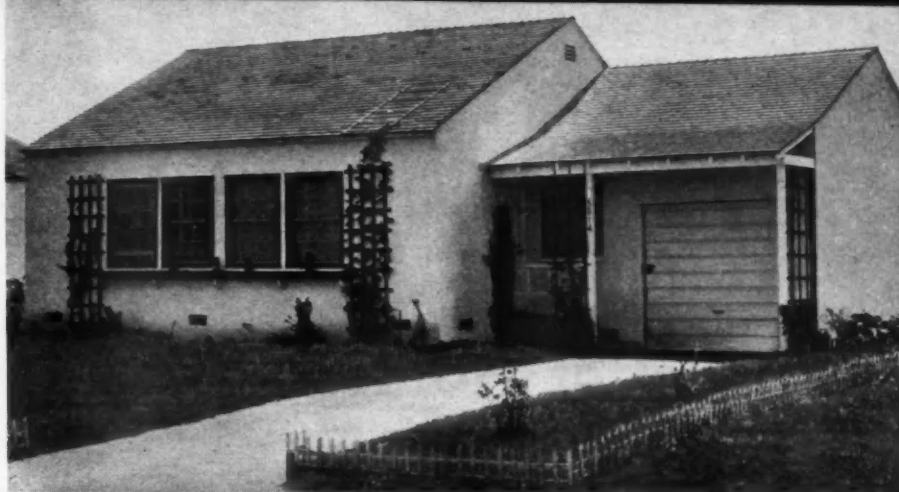
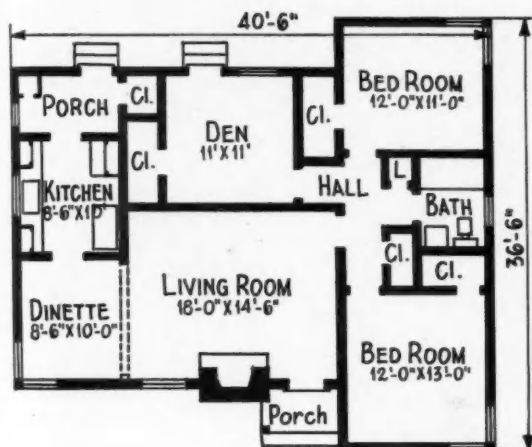
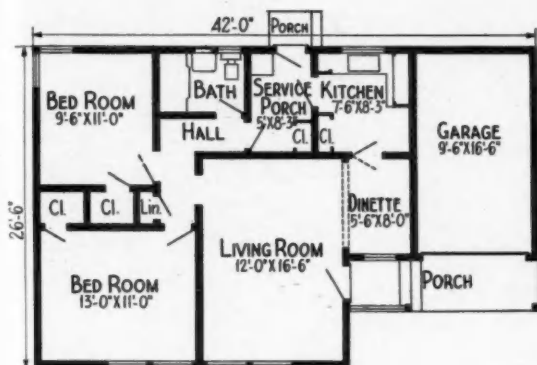
CONFRONTED with the task of providing immediate housing for the thousands of workers in the near-by North American, Douglas (El Segundo), Northrup and other airplane and accessory plants working on huge national defense contracts, and at the same time avoiding the duplication of design long since rejected by all home-loving Californians, an enterprising Los Angeles realtor-builder solved the problem in an interesting and revolutionary manner, with power equipment playing a major role. Pictured on these pages are some of the highlights.

With sufficient acreage in their development for approximately 1500 52' x 135' lots, Inglewood Properties, Inc., developers of Del Aire, south and west of Inglewood, a suburb of Los Angeles, and immediately adjacent to the above mentioned industrial plants and the great new Los Angeles Municipal Airport, ignored orthodox subdividing methods and started from scratch to develop a planned residential community.

Because they had owned the property for over 40 years, had secured full FHA approval and had established their own construction department, the sponsors of Del Aire were enabled to sell 2-bedroom houses containing approximately 840 square feet for \$162 down, \$33 per month for 8 months and the balance in monthly installments of \$21.25 each on a 25-year FHA Title II loan. Three-bedroom houses of 1100 square feet are being sold on terms that include an initial payment of \$200; \$40 per month for 8 months and \$25.50 per month for the balance of the 25-year contract. All monthly payments include taxes, insurance, interest and principal.

CONSTRUCTION VIEWS, top to bottom: This trench digger excavates for foundation of a six-room Del Aire home in less than three hours; truck mixers pour the average foundation in one hour; one mixing and plastering crew handle two or more adjoining houses simultaneously to speed up work; Del Aire's own millwork plant on the site saves time and salvages much material otherwise wasted; below, painting crew with guns paints three six-room houses a day.





TWO TYPICAL Del Aire homes in five- and six-room sizes; planned so that attached garages, fireplaces, etc., are optional.

Because the property is in the center of a Defense Area, the owners have evolved an interesting adaptation of the National Defense Housing Act Title VI loan, under the terms of which homes are being offered for as little as \$95.00 down; \$33.00 per month until FHA equity has been established then dropping to approximately \$22.60 per month for the balance of the loan. Bonus provisions provide incentive for faster pay-off of equity.

Qualified appraisers state that they are impressed with the savings effected by the Company's quantity-production operations and that they consider Del Aire homes splendid examples of what the application of such modern methods can accomplish in low-cost housing.

Before announcing the project, the Del Aire organization had its architects create thirty-six basic single-family dwellings. A variety of floor plans was developed that could be combined with any of these designs, thus giving home-owners what amounts to scores of individually-designed homes from which to choose. This accomplished the double purpose of giving the prospective owner a home that incorporates his own ideas and that exactly meets his own specific requirements, and at the same time eliminated the possibility of monotonous duplication of design.

Six hundred homes had been completed and sold by midsummer, and an addition 700 are under construction.

Accomplishing this noteworthy feat has been no bed of roses, and has caused many a headache that would have discouraged a less courageous organization than Inglewood Properties, Inc. At the outset they determined to discard many practices, methods and traditions for years sacred to the building industry. They borrowed a page from the book of their neighboring airplane manufacturers and went in for mass production, using the same basic "assembly line" tactics. Old-timers said it couldn't be done without resorting to the "identical quintuplets,"

job-lot houses of duplicated design that Americans hate with almost as much fervor as they do the regimentation of the dictatorships.

The Del Aire people decided early in the game that organization was the only solution, so they recruited architects, draftsmen, contractors, supervisors, superintendents and coordinators, and welded them into a crew that would do credit to a field marshal and his staff. Every move of the 800 Del Aire workers and the flow of materials were as carefully timed and synchronized as a war lord's blitzkrieg.

In order to protect themselves and their customers from rising material costs and to eliminate the delivery delays that might upset their highly-perfected schedules, Inglewood Properties bought all needed materials months in advance of actual construction and stored them in their own warehouses, whence they are delivered directly to the job by company-owned trucks.

Co-ordinating deliveries to the job with the production schedule was a big job; converting and processing materials to their many uses was another. Prefabrication was used wherever possible. Machines and equipment to speed up such time-consuming jobs as grading, foundation-digging and concrete-mixing had to be adapted to new uses.

Trench-diggers were used to dig foundations with the result that a foundation of uniform depth and width for a six-room house is completed in less than three hours. After concrete foundation forms are set up and the reinforcing steel placed, the concrete is poured directly from giant mixers that did the actual mixing of cement, sand and water en route from the gravel pit.

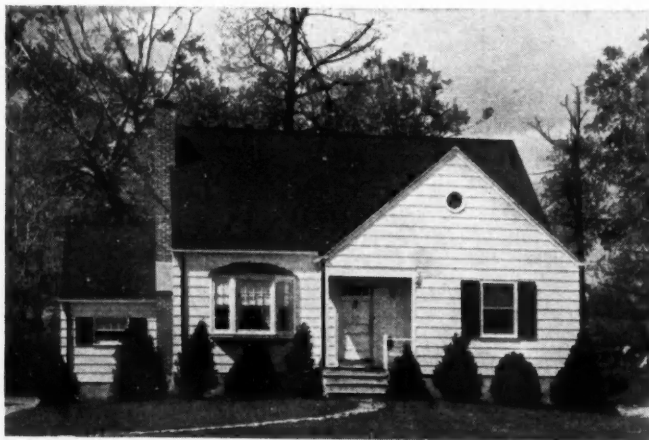
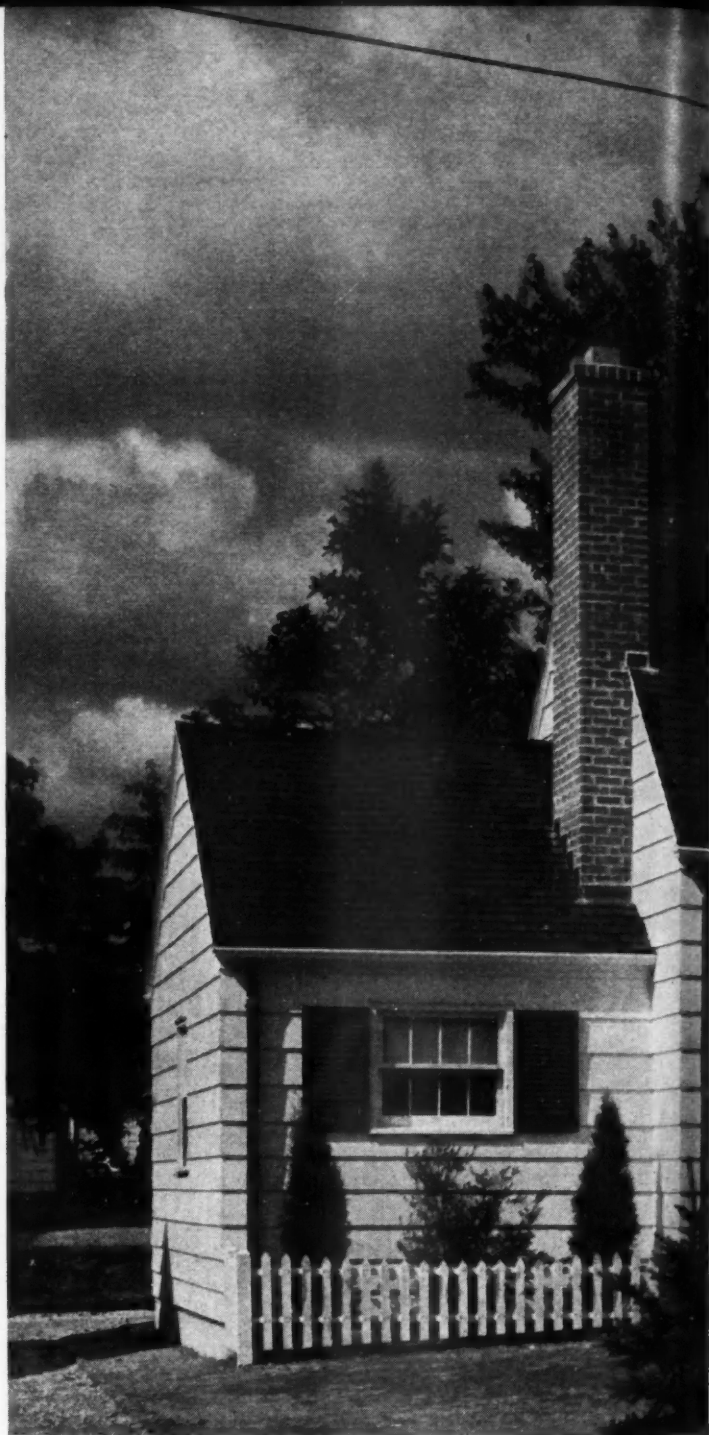
And so it goes in every phase of this "assembly line" production of homes in California's Del Aire. The Company maintains its own saw mill and plumbing shop in the

(Continued to page 146)

Better Homes ALSO Provide Needed Housing

ALTHOUGH present priority rulings set a top price limit of \$6,000 on defense homes coming under OPM, dwellings of the size and class on these pages, and even larger, are also needed. These designs might possibly be built within this limit in a few areas provided some corners are cut. However, this is certainly no time to build "cheap" housing, and no one will deny that homes larger than the average minimum type of defense house **MUST** be provided for those having large families and for those defense executives who will be the spark plugs in our defense machine.

The homes shown here, typical of this important classification, are built to order in Gustave Feuerstein's Colonial Park, Port Chester, New York. The basic plan for the three was developed by Architect Arthur Vickers to provide easy access, cross ventilation and roughed-in provision for extra rooms. Construction is wood frame with red cedar shingles on the exterior and Rocklath and plaster as inside finish. Equipment includes one-pipe steam heating system with convector type radiators, and complete built-in kitchen units including refrigerators and ranges.



THESE TWO attractive homes, and the one above, present exterior versions of the floor plan shown directly opposite. They are all built in Colonial Park Development of Port Chester, N.Y., and were designed by Architect Arthur Vickers, White Plains, N.Y.



THESE basic floor plans of Bulder Gustave Feuerstein's three trim Colonial homes on these pages present a good six- or seven-room arrangement with center hall and unfinished second floor bedroom and bath. Basement is unexcavated under the garage and bedrooms.

Bohannon's Hillsdale

Head of Builders Institute demonstrates quality small home planning and building by U. S. private enterprise. Has built 85, plans 60 more



HILLSDALE HOMES arranged around cul-de-sac street.



BOHANNON

our children not to be afraid to admit that their fathers are home builders."

That Bohannon is sincere in what he has been saying about quality work is illustrated in his own subdivision, Hillsdale, in San Mateo, near San Francisco.

Bohannon's own job also well illustrates what intelligent private builders are doing to meet the present housing shortage without government subsidy.

Bohannon has set a high standard for land planning, architectural design and quality construction in his moderate-priced home development. The houses, which are in the \$6,000 to \$6,750 price range, are above average in substantial construction. Streets are broad and well laid out in the modern cul-de-sac arrangement that eliminates traffic accidents and makes life safer for children. The architectural design is unusually good in houses of this price range, and of particular interest are the simple California ranch house designs selected.

In other words, Dave Bohannon has been "practicing what he preaches," and in Hillsdale thus far 85 houses have been built and 60 more are planned—which is pretty good proof that quality work and intelligent planning do pay.

For many years Bohannon has been one of the San Francisco area's largest builders but specialized mostly in prices in the upper incomes.

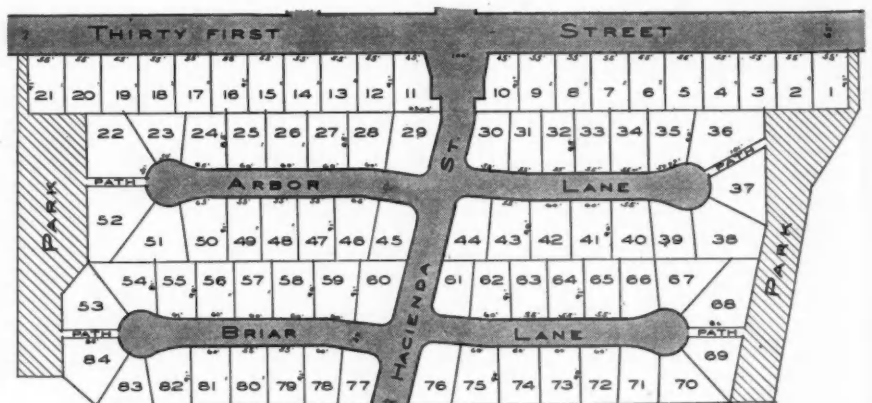
BIG, broad-shouldered Dave Bohannon, president of Home Builders Institute of America, is one of the foremost advocates of quality home building methods. In frequent talks to building groups he has stressed again and again the importance of higher standards for builders and for the residential building industry. "We want to live as respected citizens in our communities—to stand for lasting quality and ideals," he says. "We want

He saw the trend to lower-priced houses, however, but felt that most of the work being done was poorly planned. He decided to embark on a subdivision in the \$6,000 range, aimed at people with education and a good social background—people who would appreciate good design and attractive surroundings.

After long negotiation he was able to acquire options on the 800-acre Murray estate in San Mateo. A master plan was made up for the entire 800 acres, providing ultimately for a community of 4,000 houses. However, Bohannon started out with an actual purchase of 65 acres. The master plan was prepared by Ronald L. Campbell, nationally known planning engineer, and includes provision for a shopping center, parks and playgrounds, and a cul-de-sac arrangement of streets to eliminate traffic accidents, and particularly danger to children.

After extensive study, Bohannon and his advisers selected a typical lot size of 60 feet wide by 90 feet deep—a size that gives a broad front but does not waste land in unnecessary and unused depth. He gets better than 5 lots to the acre. Each cul-de-sac (see plan) has about 16 lots.

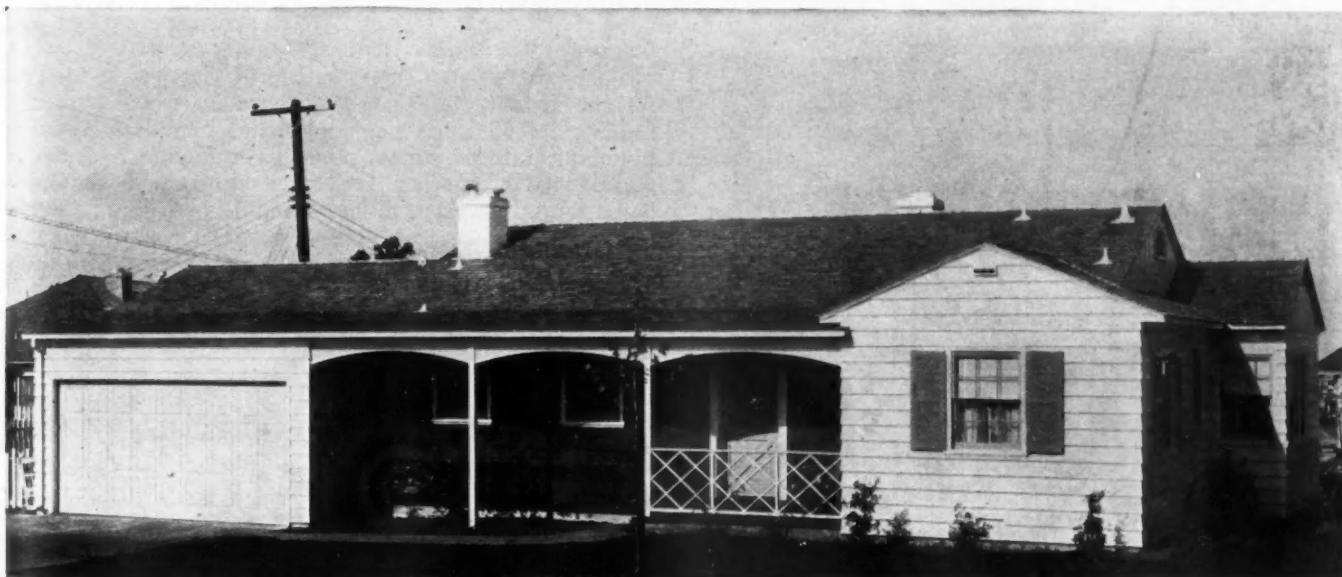
Arrangements were made with leading residential architects to design groups of houses with charm, artistic color schemes and a thoroughly modern plan. The first groups were designed by Williams and Wastell, who



HILLSDALE PLOT PLAN shows cul-de-sac street that reduces traffic accidents. Average lots 60 x 90 feet, about 5 to the acre.



CALIFORNIA ranch-house style homes attractively spaced on wide plots.

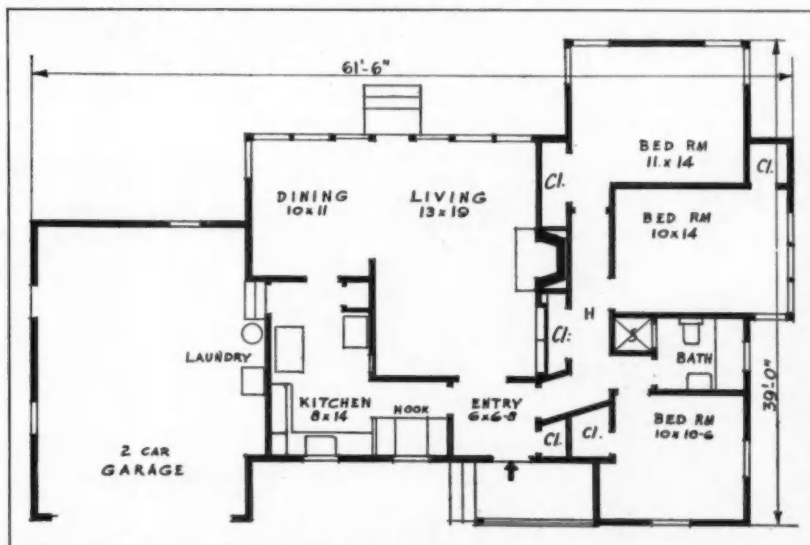


THREE-BEDROOM, low-cost Hillsdale home has fine lines, attractive front porch detail.

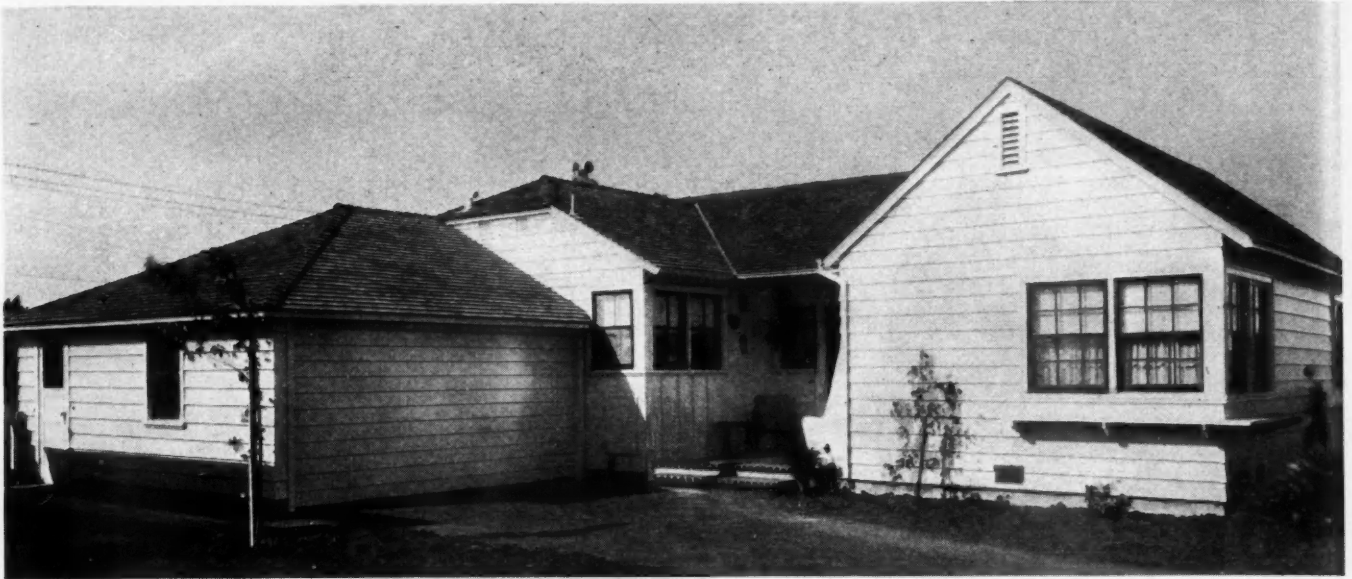
developed a standardized plan, using modules which permitted extensive mass production methods in the cutting of lumber and in the repetition of various installation operations.

The typical Hillsdale homes are of five and six rooms, bungalow style, with living rooms opening out upon a rear garden or patio. The five-room plan contains approximately 1100 square feet of floor space and an additional 279 in the attached garage, which also houses the laundry and heating equipment. The cubage is 2,370 excluding garage. The original financing setup (which may have changed recently, due to price increases) was \$550 down and \$39.90 a month on a 25-year, 4½ per cent Prudential mortgage.

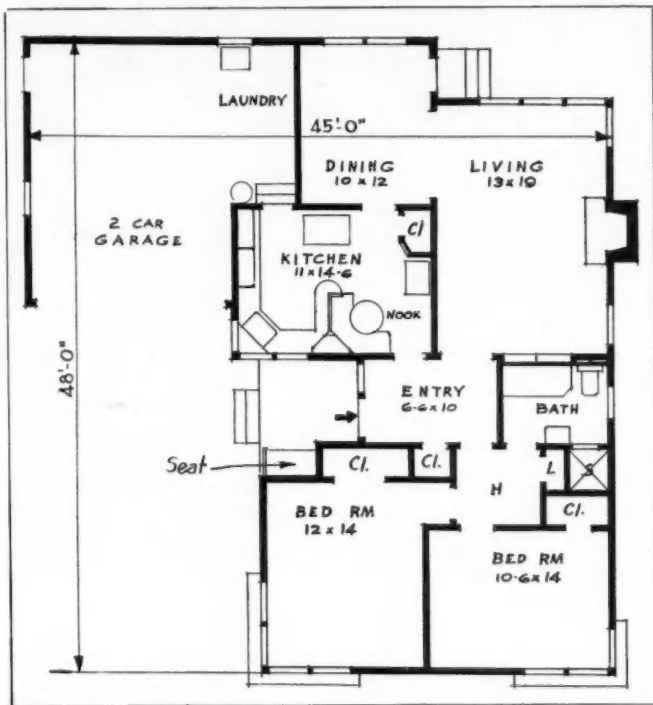
Bohannon's specifications are thorough and complete. These are basementless houses with 16-inch reinforced concrete foundations. Ground surface under the floors is sealed with a 3-inch layer of



TYPICAL Hillsdale floor plan has spacious "open" arrangement of rooms, ample closets, good circulation, good cross ventilation. Rear of house opens on patio.



TWO-BEDROOM Hillsdale plan has garage at front with one-piece overhead-type door.

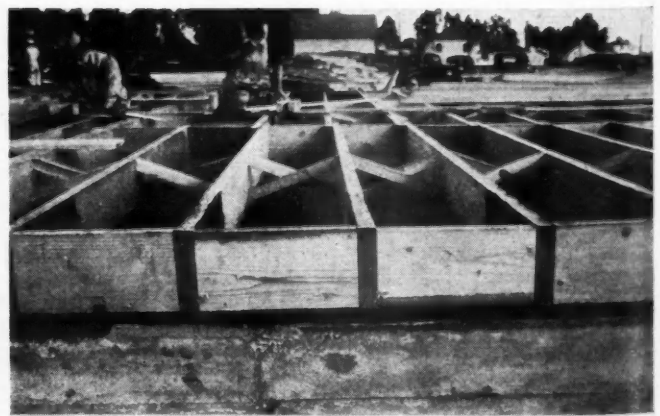


KITCHEN entrance is in laundry. Dining and living rooms face rear.

cinder concrete. Sills and joists are termite-proof and damp-proof. The structural lumber is No. 1 select grade Douglas fir. Exteriors are of Certigrade Oregon red cedar shingles and select grade redwood siding. Other materials and equipment include Standard Sanitary plumbing fixtures, copper pipes, flashing, window screens and downspouts; select Tennessee white oak floors; tiled baths with full tile stall shower and glass door; Corbin locks and hardware; Red Seal certified electric wiring; American Radiator gas-fired warm air system; USG sheetrock walls and ceilings; upholstered seats in breakfast nook; electric exhaust fan in kitchen; Venetian blinds; flush-type lighting; planning and landscaping by a prominent landscape architect.

Subsidiary Does Actual Building

Minimum streets in Hillsdale are 24 feet wide and arterials 32 feet or more. Streets are of 6-inch hot asphalt with suburban rolled concrete curbs 3 feet wide. Actual construction is performed by a subsidiary building firm, Suburban Builders, Inc., who maintain complete control of the job and high quality standards by employing their own workmen throughout, including painters. The only subcontracts let are for plumbing, tile setting and street paving. Sales are handled by the realtor firm of Fox and Carskadon on a regular 5 per cent commission basis.



SUBSTANTIAL FOUNDATION, creosoted sills and plates. Ground in basementless house is covered with layer of cinder concrete. Floor framing is more than ample.

THESE four old-time row houses located in what was a fashionable section of the South Side of Chicago during the Exposition of 1893 have recently been completely overhauled inside to provide twelve livable modern apartment units.



Once Row Houses—Now Apartments

Modernization becomes important part of defense housing program

ONE kind of project which can be multiplied many times over throughout the nation to add to the supply of usable housing and help relieve the defense housing needs is typified in the row house structure shown above. There are thousands of such well built old-timers in the various cities, most of which are vital defense areas, so that the conversion of them into smaller rental units provides needed housing for industrial workers, with considerable savings in time, labor, materials and money.

While this primary purpose is being served, slum areas

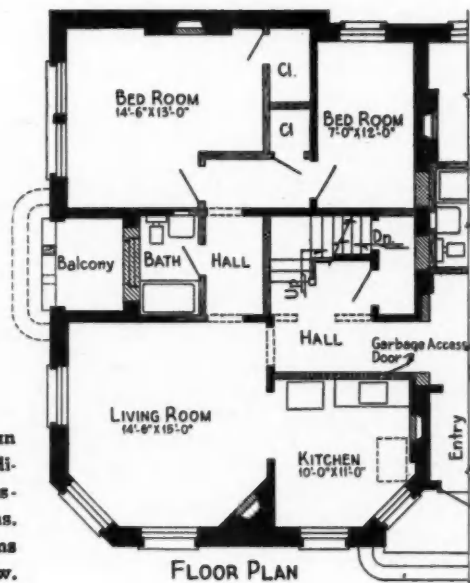
can be reclaimed, deterioration of neighborhoods can be checked, and usable, taxable property returned to the assessment lists—all desirable benefits which will continue after the present emergency is past.

In some cases, these projects can be of such large scope that neighborhood associations of civic minded citizens can be formed to promote a number of individual modernizations which will together cover a wide area. Occasionally rezoning is necessary to change from one type of residential accommodation to another, and joint effort is frequently more effective in putting through such changes.

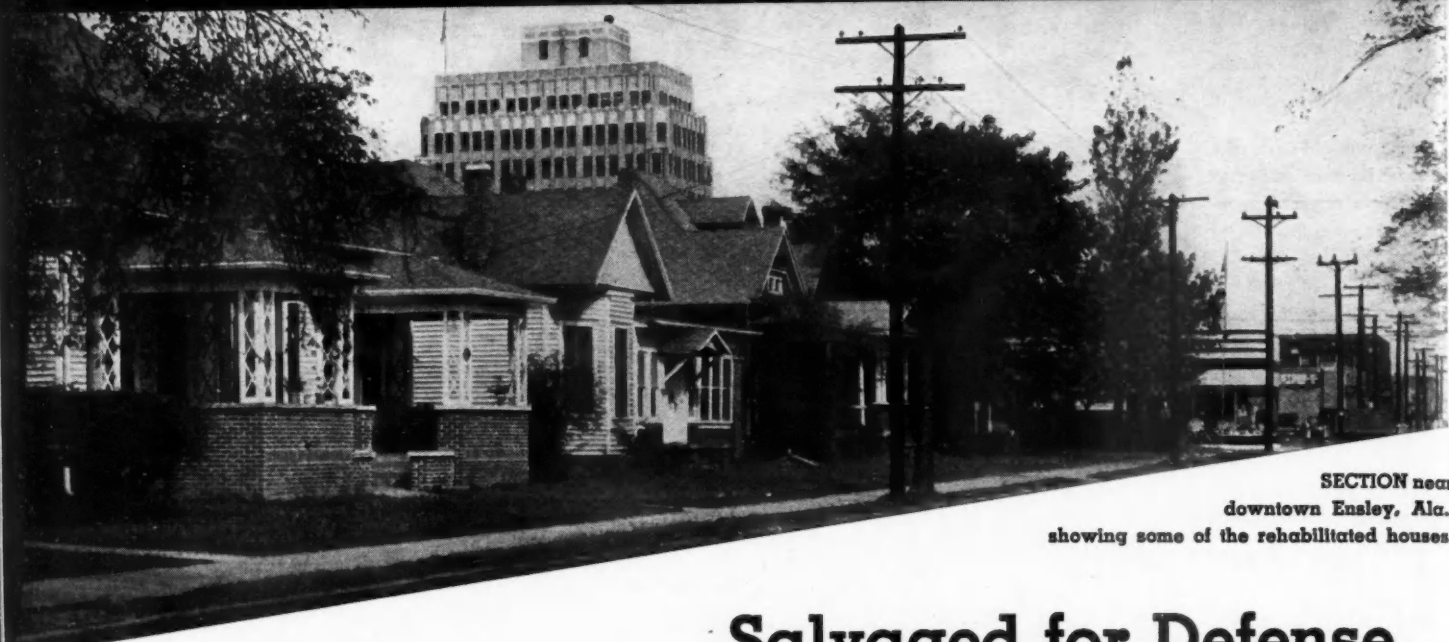
Remodeling the old-timer, as shown on this page and located on the South Side of Chicago, resulted from the efforts of a group of persons organized as the Oakland Rehabilitation Corporation, including such men as Newton C. Farr, past president of the National Association of Real Estate Boards; George T. Horton, chairman of the Chicago Plan Commission; Frank A. Hecht, president of the West Central Association; and Morton Bodfish, vice chairman of the Chicago Plan Commission.

The transformation of this property, which consisted of four individual homes, each of which had about eleven rooms arranged on three floors, into twelve apartments of 3½ and 4 rooms required principally interior changes, such as new plumbing fixtures and bath, heating facilities, new kitchens and electric fixtures. Built in 1890, it is structurally sound and needed only tuck pointing and painting on the outside. As shown in the typical floor plan, a reasonably small amount of partition changes had to be made.

This revitalization has transformed what had been four old homes, two of which stood vacant, into modern livable housing for twelve families in the lower income brackets.



TYPICAL floor plan shows changes indicated by cross-hatched partitions. Baths and kitchens are completely new.



SECTION near downtown Ensley, Ala., showing some of the rehabilitated houses.

Salvaged for Defense

IN THESE hectic days of intensive searching for the quickest and most economical means of providing much needed additional housing for defense workers in new and old industrial areas, much emphasis has been laid on the salvaging of old properties for rehabilitation and the conversion of larger homes and apartments into smaller units.

Now under the new OPM priority plan for defense housing, well planned programs of rehabilitation and conversion that offer speedy and thrifty means of providing many of these necessary dwellings are to be given top rating (see leading article).

"Conversion of structurally sound units into quarters for two or more families or boarders and lodgers promises to provide accommodations in the quickest time and will not make rents or costs of ownership excessive," has been pointed out by one FHA state director.

National Program Already Under Way

The new Federal Housing Administration drive, inaugurated this fall (details in September *American Builder*) with the following four additional important objectives in view anticipated today's housing problems:

1. To save valuable time and further the defense effort.
2. To conserve vital and strategic materials.
3. To give first place in the field of consumer credit to more worth while and lasting property improvements, rather than non-essentials.
4. To avoid hasty new construction which might be of doubtful value after the emergency.

Many such programs are well under way throughout the country by private building corporations and individuals, and serve as good examples of what can be accomplished to provide this emergency housing to supplement the increasing volume of new home units under the defense program.

For instance, whether to remodel or tear down was the problem presented recently to the Ramsay-McCormick interests, owners of some 40 rundown houses, most of them in the twilight zone between business and first class residential in Ensley, an industrial suburb of Birmingham, Ala.

While the section was zoned for business, it wasn't ready for business, except that a few of the lots were suitably located for parking purposes. This section, where large steel and iron operations of a U.S. Steel

Instead of the wreckage of 40 rundown houses in an Alabama steel town, a rehabilitation program provides industrial workers with convenient housing units

subsidiary are located, was one of the worst hit in the United States by the depression of the early thirties. Vacancies in dwelling property increased. Many of the houses in question had been boarded up for several years and were in bad decay. Added to the problem, the city came along and condemned some of them as fire hazards as well as eyesores.

By the end of 1939 and in 1940 rental conditions began to improve, thus offering more favorable conditions for reconditioning the houses. Even then there was some temptation to raze the houses to escape taxation on the improvements. But with armament orders in-

BELOW, the house before remodeling was boarded up and even the front porch had been torn away, making it look like a hopeless job to convert into the decent housing at right at reasonable cost.



creasing, rents continued to advance until it became evident that by putting the dwellings in first class condition they could be rented for enough to pay for the improvements in from 3 to 7 years.

The Ensley Company was commissioned to rehabilitate the properties and this it did at a cost of \$1,500 to \$2,500 per house. The houses were pretty well scattered in various blocks, and as work began on them, prospective tenants began to ask about possibilities of renting them. One of the noteworthy developments was that other property owners were encouraged to remodel also, with the result that whole blocks took on an improved appearance. Thus private owners on their own initiative did what it has taken the government to do in some areas. The section was already blessed with wide paved streets and sidewalks, nice shade trees, flowers and shrubbery; all that was needed was a restoration of the dwellings themselves, most of which had long passed out of the hands of the original builders and owners.

An example will serve to show the transformation wrought as pictured herewith. It was a house about 40 years old, with a typical hallway down the center, and located within about 3 blocks of the post office. It had been vacant and boarded up about 7 years, and hence in a bad state of repair.

This house was remodeled into two modern apartments at a cost of \$2,406.97. Everything from the ground up was reworked. The brick piers were relocated and pointed up where necessary. Decayed floor joists were replaced and new pine floors laid, sanded and polished. The roof structure was reworked and a new roof applied. The weatherboarding was replaced where decayed and the house painted. The new floor plan for two separate apartments called for the moving of two interior walls and the building of two others. The former hallway down the center of the house was thrown into room space. New attractive fireplaces were built, also two bathrooms, each with modern fixtures and enamel tile board walls. New electric light fixtures were installed. A new sink was installed in the kitchen, also an automatic gas water heater.

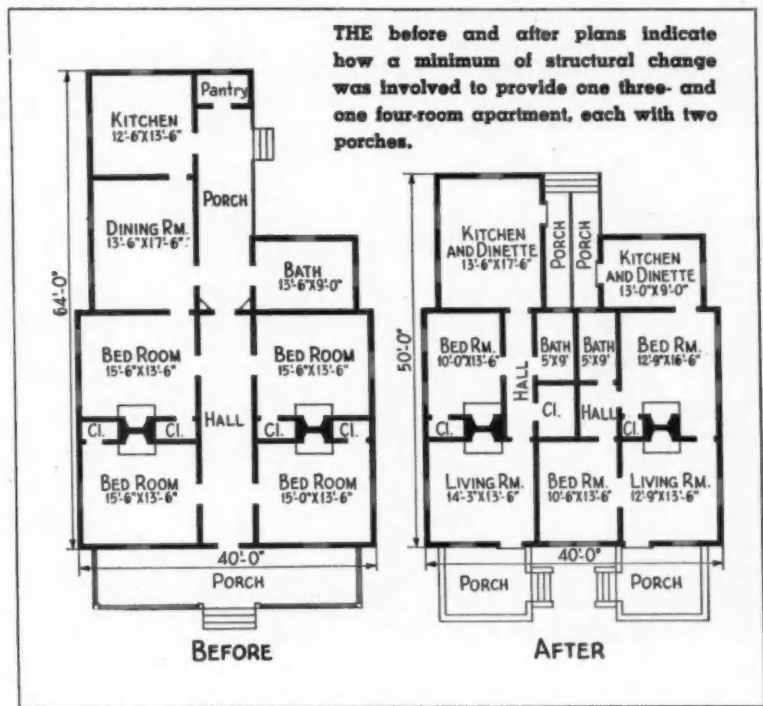
Each of the two apartments was readily rented at \$22.50 per month or a total income

of \$540 per year; each would quickly rent today for more.

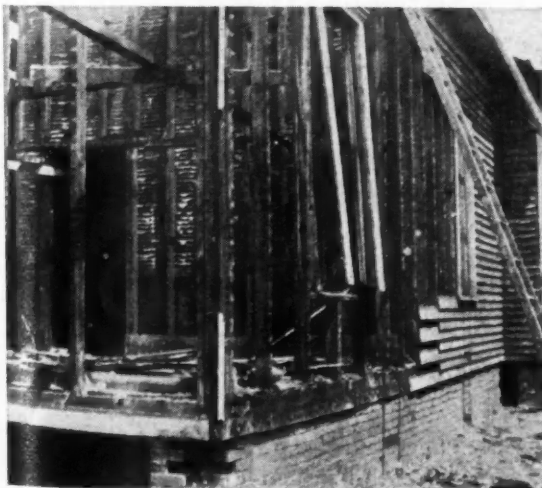
"Since our remodeling program we are glad to say that we do not now have one vacancy in these houses," said K. D. McMillan, who handled the job for the Ramsay-McCormick interests. We have solved for the time being what to do with this property around the fringe of the business section. It certainly is not ready for business now and may never be, neither is it in a section where a man would build a home. But for rental property it has many advantages. It is in walking distance of many jobs, as well as schools, stores, etc. Furthermore, rents are more reasonable than can be found farther out in the newer sections.

"Of course the problem presented itself to us of how long we can expect to rent the remodeled properties. This we could not answer except to say that we have every assurance that it will be longer than necessary to pay back our investment for the remodeling. Of that we can almost be sure. We recall the case of one tenant who gave us a five-year lease on a house with the understanding we would recondition it for him. The 5 year's rent will more than take care of the investment.

"In addition to the dollars and cents value we feel we have made quite a contribution to the community."



DURING reconstruction, a portion of the rear was torn away, as shown below, together with the view of the completed job—two livable units instead of one wreck.



TO THE EDITOR:

The following is released to newspapers of July 5.

July 1, 1941.

AMERICAN BUILDER

Building Labor Ample for Homes and Defense Construction

readily migrate nor change of defense work.

“And the records of Labor show that, while earners in the construction March, 1941, was 1,650,000, over March, 1940, nevertheless decrease in building trades 28,000 from February to March the Social Security Board

Chicago, July 5.—There is a backlog on home building labor shortage material

Survey Shows Enough Labor And Material

CHICAGO, Aug. 9.—Scouting the probability of any serious shortages of these materials in the labor for home building, both in the “academia area” and elsewhere, American Builder magazine has

TO THE EDITOR:

The following is released to newspapers of August 6.

July 31, 1941.

Home Building “Bottleneck” Likely

the places that amaze

August 29, 1941.

AMERICAN BUILDER

TO THE EDITOR:

The following is released to newspapers of September 3.

AMERICAN BUILDER

Priority for Home Building Urged

Chicago, Sept. 3.—Noting that builders are running into shortages and “price creepers” in some materials and equipment necessary to complete their home building contracts, American Builder in its September issue chooses bet

This Clipping From CHICAGO ILL. TRIBUNE

AUG 10 1941

EDITOR DENIES MATERIALS AND MEN ARE SCARCE

Warns of Move to Hurt Private Industry.

BY AL CHASE. (Real Estate Edition)

Political propaganda, it is back of much of the current talk in Washington about bottlenecks and shortages in building materials and labor and much of it is belatedly solely to create sentiment against private industry.



This Clipping From NEW YORK, N.Y. HERALD TRIBUNE

SEP 3 - 1941

Home Building Urged to Meet National Lack

Builders Run Into Price Hikes in Materials. Magazine Asserts

Builders are running into price hikes and equipment shortages in their home building. American Builder magazine asserts that everybody

This Clipping From NEW YORK, N.Y. TIMES

SEP 3 - 1941 PRIORITY IS URGED FOR NEW DWELLINGS

Builders' Magazine Draws Attention to the Need for 2,500,000 Home Units

WASHINGTON MEETING ON Period Construction Stabilizer for Rent

numbers that will rival the country has of men, material or—se thousands of men going. the ability protection

Home Building Defense Information Widely Reprinted by Leading Newspapers

HELPFUL information concerning the importance of home building in national defense has been distributed in large volume during the past three months by the *American Builder*, and has been very widely quoted and commented upon by influential newspapers.

The distribution of press releases by this publication has covered every daily newspaper in the United States and many of the weeklies and monthlies. Supplementing these, our highly regarded “Building Outlook Letter” has gone out from time to time to manufacturers, dealers, sales managers, chambers of commerce and others

who control policies and influence public opinion. This distribution of timely information has been in the interest of sound thinking and fair treatment for the great nation-wide building industry as an essential part of national defense.

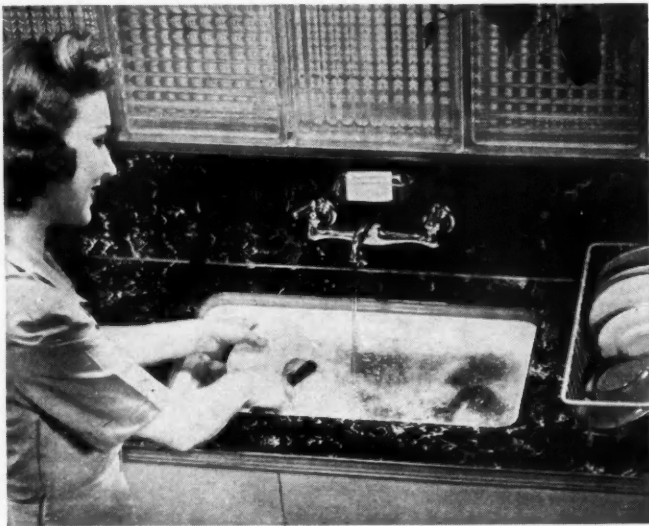
Clippings from all over the country have come back to the *American Builder* office, that indicate the use of this material in newspapers covering most of the important cities and county seat towns and reaching a readership among the general public of about 25 million. Just a few of these clippings have been mounted and are re-

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 98 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to manufacturers at addresses given, mentioning your profession, occupation or business connection with building industry.

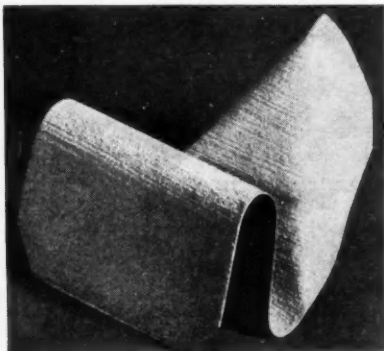
WHAT'S NEW IN BUILDING MATERIALS

AB719 Tenite, extruded in continuous lengths, replaces metal strips for sink and shelf edgings in this modern kitchen installation. The new Tenite trim is washable, durable, and easy to apply. It has a lustrous, colorful finish.



TENITE moulding by R. D. Werner Co., New York City, brightens kitchen sink by Lakeville Mfg. Co., Lindenhurst, N. Y.

AB720 Wet-X-Hale is a new oil base portland cement paint or plastic available in white and numerous colors to be applied by brush, spray gun or trowel. It protects and preserves steel,



WET-X-HALE on galvanized steel, bent without cracking.

wood, masonry, fiber board and other surfaces, becoming harder with age yet retaining its flexibility. It is furnished in paste form to be reduced by contractor.

AB721 The Flintkote Co., New York City, is offering timely assistance to its dealers and their contractor and carpenter customers all through the country on the new FHA campaign under Title I for modernization and repair, particularly the conversion of old, large homes or apartments in the defense areas into smaller family units. A 6-page broadside in red, white and blue, "A Challenge and Opportunity," makes clear five easy steps to bigger business in today's repair market where defense calls for home repair. A number of well worded sales letters are also furnished, together with appropriate advertising copy for local newspapers, local publicity releases, etc.

AB722 "Ponds for Livestock Watering" is a new illustrated data sheet of 8 pages from the Portland Cement Assn., Chicago. It shows the rural builder and the farmer how to build earth dams and concrete spillways, and how to lay out and handle a job of this kind. Concrete stock watering tanks of several sorts are also covered in this bulletin.

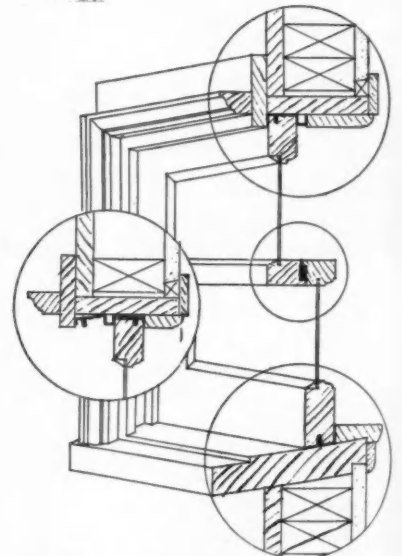
AB723 A new 6-page data sheet from The Wilbur & Williams Co., Boston, Mass., features its line of "Penetrating Protective Paints," which are said to cut practical painting time from hours to minutes. Totrust, the rust preventive oil paint for metal; Bondlite for interior walls and ceilings; Exterior Bondlite; Staincure; Dampcoat Enamel; and Dye-Crete are covered in this circular.

AB724 "Barber Scores Again!" is a new big wall hanger and broadside from Barber Asphalt Corp., Barber, N. J., featuring the Barber Phoenix brick-like siding in rolls. Interesting before and after views are illustrated of both homes and business buildings.

AB725 "A Guide to Store and Shop Uses of Western Pines" has been issued by Western Pine Assn., Yeon Bldg., Portland, Ore., for architects, builders and dealers, to assist them in store and shop styling and remodeling. This is a portfolio of 16 pages presenting more than 80 photographs of good business interiors. This is a gold mine of valuable suggestions.

AB726 The new "Smooth-On Handbook," prepared by Smooth-on Mfg. Co., Jersey City, N. J., is a vest-pocket size book of 40 pages with 170 diagrams and simple concise instructions on sealing cracks in castings, stopping leaks in apparatus, tightening loose fixtures and parts of equipment, making tight pipe joints, patching concrete floors and walls, waterproofing cisterns, etc.

AB727 Easy Glide Mfg. Co., Inc., 5450 Grand River Ave., Detroit, has developed an Easy-Lift window which has two spring bronze channel jambs to take up automatically all expansion and contraction of the wooden sash, shutting out cold, heat, wind, water, dust and dirt. Special bronze headers, double-hook check rails, water-lipped sill strips



DETAILS of Easy Glide metal channels.

and dust blocks are provided to complete the weathertightness of the window. These new metal units will fit any window frames and sash requiring no pulleys or weights or balances. They can be installed also in old windows for modernizing.

Readers Service Department Continued to Page 96

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 98

Why Take LESS Than ALL that Rō-Way GIVES?

Rō-Way Gives "Crow's Foot" Outer Bearing Support
Rigidly holds the chain sheave wheel in permanent alignment. No twist . . . no sag to cause friction.

Rō-Way Gives "Ro-To Live" Spring
A powerful Floating Torsion Spring (used on some models), gives perfect balanced lifting power, and ends side-drift and binding.

Rō-Way Gives "Zip-Lock" Adjustment
Used on Ro-Way Doors having Twin Torsion Spring Power. Permits instant easy adjustment of spring tension.

Rō-Way Gives "Tailor Made" Springs
Each spring is individually made for the Ro-Way Door on which it is used. Each is power-metered to the weight of the door.

Rō-Way Gives Parkerized and Painted Hardware
Ro-Way Hardware and Tracks are given this well known protection against rust and corrosion.

Rō-Way OVERHEAD TYPE DOORS

Especially since there is no extra cost to you

When you are selecting Doors for Residential, Industrial or Commercial use, be sure to see what Ro-Way offers. Do this for two reasons . . .

- 1st. These modern Doors of the Overhead Type offer you surprising advances in design and mechanical improvements.
- 2nd. It's "3 to 1" that Ro-Way will save you money . . .
 - by giving you added values without any increase in cost.
 - by making possible a lower installation cost, or
 - by meeting your requirements with a less expensive model of door than you have been considering.

So, by all means, see what Ro-Way offers and get all that only Ro-Way gives.

NATIONWIDE SERVICE

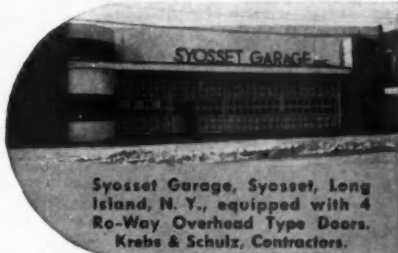
Ro-Way Distributors are located in principal cities and provide competent installation engineers to assure prompt service, and the satisfactory operation of any Ro-Way Door you select for Residential, Commercial or Industrial use.

Write for Free Ro-Way Door Folders, Prices and Complete Information.

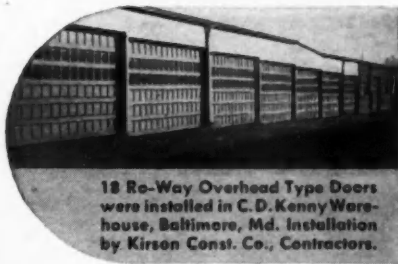
ROWE MANUFACTURING CO.
734 Holton Street Galesburg, Ill.



Attached Residence Garage with Ro-Way Door.



Syosset Garage, Syosset, Long Island, N. Y., equipped with 4 Ro-Way Overhead Type Doors. Krebs & Schulz, Contractors.



18 Ro-Way Overhead Type Doors were installed in C. D. Kenny Warehouse, Baltimore, Md. Installation by Kirson Const. Co., Contractors.

ROWE MANUFACTURING CO.,
734 Holton St., Galesburg, Ill.
Gentlemen: Please send me Free Descriptive Folder and Prices on Ro-Way Overhead Type Doors.

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

There's a Ro-Way for every Door way!

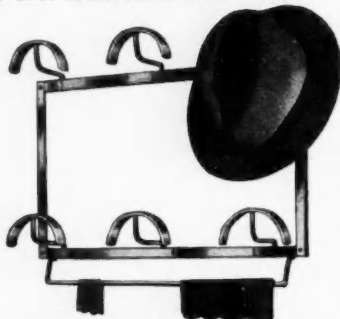
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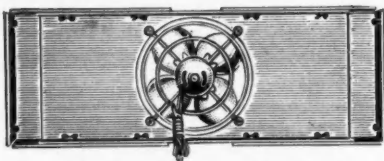
EQUIPMENT ITEMS FOR MODERN BUILDINGS

AB728 A new style hat holder is a popular item in the line of K-Venience clothes closet fixtures developed by Knappe & Vogt Mfg. Co., Grand Rapids, Mich. Attached to the inside of the wardrobe door it accommodates 6 hats.



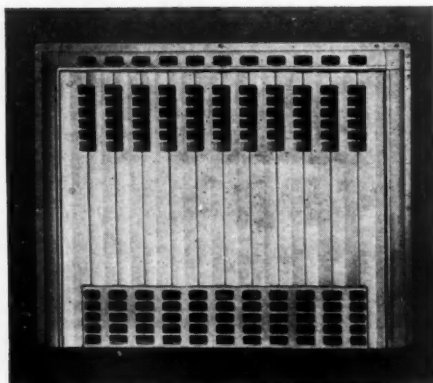
K-V hat holder for closet door.

AB729 Emerson Electric Mfg. Co., St. Louis, Mo., has brought out a new "Emerson Junior" model kitchen ventilating fan with metal mounting panels. In two sizes, the 10" fan is mounted in panel adjustable from 23" to 36".



NEW Emerson Junior window fan.

AB730 The Richmond Radiator Co., Inc., Uniontown, Pa., offers the "Richvar" convector type cast iron radiator, durable in construction, modern in appearance, space-saving, and efficient. It can be used for recessed or free standing installation.



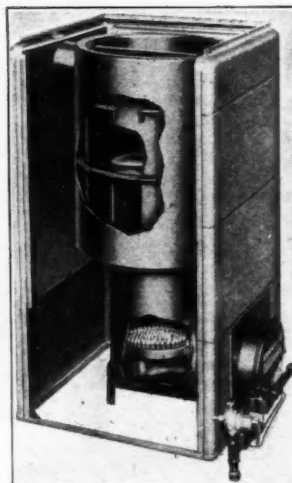
"RICHVAR" convector cast iron radiator.

AB731 The Florence Stove Co., Gardner, Mass., offers a compact model gas range suited to small homes. It has many features usually found only in much larger ranges. It has balanced top with four standard burners equipped with automatic lighters. Oven is thermostatically controlled and fully insulated.



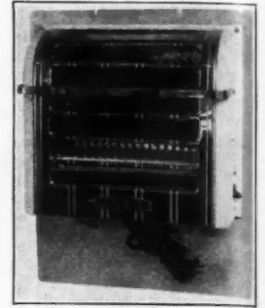
FLORENCE gas range model 3231.

AB732 L. J. Mueller Furnace Co., Milwaukee, Wis., has introduced a new gas fired gravity furnace, Series G, available in two styles, square and round cased. It has an all welded heavy steel drum and radiator with extra long flue travel. These furnaces come in one size only, 67,500 b.t.u. output per hour.



NEW Mueller gas fired furnace.

AB733 Economaster Products Co., Shelbyville, Tenn., offers an electric wall heater as illustrated, its model E.W. It is finished in ivory or in brown wrinkled finish with chrome front.



NEW model Economaster wall heater—electrical.

AB734 The Sperzel Sanitary Seat Co., Metropolitan Life Bldg., Minneapolis, Minn., has developed a new sanitary seat especially for public rest rooms, manufacturing plants, etc. It consists of two bakelite seat pads attached to a plastic covered steel rod. A spring raises the seat away from the bowl when it is not in use. This new sanitary seat is easily attached to any standard bowl. The entire assembly is easily cleaned and is rugged enough to withstand public use.



SPERZEL self-raising sanitary seat.

AB735 "Expander," a brand new idea for multiplying closet space, is introduced in a new 4-page data sheet from Expander, Inc., 221 W. 57th St., New York City. Expander units can be installed easily, quickly and inexpensively in existing homes, apartments, hotels, hospitals, etc., and offer a vast opportunity for useful and interesting innovations to the architect or designer of new structures.

AB736 "Manual on the Selection, Installation, Operation of Home Water Systems" has been prepared by Fairbanks-Morse & Co., Chicago. It is a 24-page data book discussing the fundamentals of shallow well pressure water systems as needed to make most country and farm homes modern according to present day standards. Deep well pumps, plumbing and sewage disposal are also covered in this new manual.

AB737 "Modine Convectors," technical catalog 241-A, is a 32-page well illustrated data book from Modine Mfg. Co., Racine, Wis. The new line of Modine convectors is fully described and illustrated and practical information on every phase of convector heating helpful to architects, builders and heating contractors will be found in this book.

AB738 The Lucke leak proof tub hanger, developed by William B. Lucke, Inc., Wilmette, Ill., and now very widely used, is illustrated and described in a new 8-page handbook.

Readers Service Department Continued to Page 98

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 98

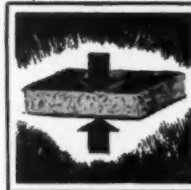


**"THEY'VE UPPED EVERYTHING
ON Balsam-Wool
BUT THE PRICE!"**

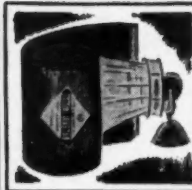
● "Yes—Balsam-Wool—always the pacemaker in insulation value—is now more than ever in a class by itself! Today the new Double-Value Balsam-Wool is available in Standard (formerly ½-inch) and Double-Thick (formerly 1-inch)—with greater efficiency—greater thickness—greater moisture protection. It's a greater Balsam-Wool than ever—but there's no increase in price!"

Give your customers the added protection of Double-Value Balsam-Wool—the insulation with a proved record of perfect performance in more than 250,000 homes. Protect their investment—guard their comfort—with Balsam-Wool, aristocrat of insulation. Full facts and figures are yours on request.

**EVERY HOMEOWNER WILL APPRECIATE
THESE BALSAM-WOOL DOUBLE-VALUES**



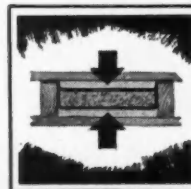
DOUBLE sealing—the high efficiency Balsam-Wool mat is completely sealed in a tough, protective covering.



DOUBLE wind barriers—stop wind infiltration—prevent chilly drafts—greater warmth near floor.



DOUBLE bonding—Balsam-Wool is bonded securely to both liners to prevent settling or packing down.



DOUBLE air spaces—to increase insulation efficiency—to allow breathing space in the walls.



DOUBLE moisture liners—providing an efficient and lasting moisture barrier. Mat thickness scientifically designed for moisture protection.



DOUBLE fastening—Balsam-Wool is doubly fastened in place to eliminate settling. Balsam-Wool is fire and termite-resistant.

BALSAM-WOOL

BALSAM-WOOL... Products of Weyerhaeuser... NU-WOOD

WOOD CONVERSION COMPANY
Dept. 119-10, First National Bank Bldg.
St. Paul, Minnesota

Gentlemen: Please send me complete information about the NEW DOUBLE-THICK and Standard Balsam-Wool.

Name.....

Address.....

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

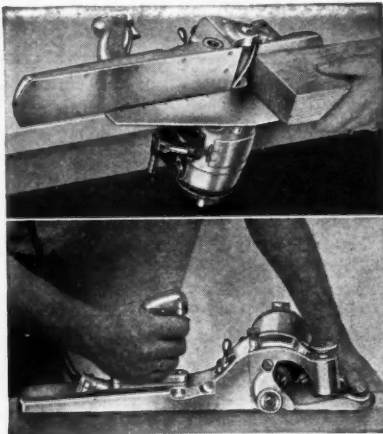
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SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

NEW MODELS, POWER EQUIPMENT & TOOLS

AB739 This light but powerful 1 h.p. electric plane, from R. L. Carter Div., The Stanley Works, New Britain, Conn., is used to fit doors, sash, screens, storm windows, transoms and other woodwork up to 2½" wide. The cutter is

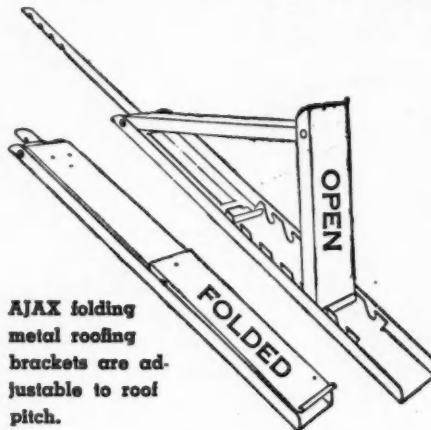


CARTER J5 power plane.

of the spiral type and is driven at 18,000 revolutions per minute, which means that it will cut against the grain as well as with the grain and will leave a smooth surface. Because of its high speed spiral cutter this plane will not splinter out the edges of the work. On the front of the plane is a graduated dial with which the depth of cut can be quickly adjusted for paper thin or heavy cuts up to 3/16", even while a cut is being made. The adjustable fence can be set for straight or bevel cuts up to 45 degrees. A

bench bracket is provided for setting up the plane for jointer work. The cutter can be kept sharpened at all times by use of the grinding attachment furnished.

AB740 A good many roofers are acquainted with the Ajax roofing bracket, developed by the Ajax Building Bracket Co., Cleveland Heights, O. Originally patented almost 35 years ago, they have been much improved recently and



AJAX folding metal roofing brackets are adjustable to roof pitch.

now provide a safe, comfortable staging for all roof work. They are strongly made of metal and fold compactly when not in use. Notches give proper adjustment to various roof pitches from lowest to highest including mansard and Dutch Colonial steep roofs. The folding feature of these roofing brackets is well liked by builders and roofing contractors.

AB741 Wodack Electric Tool Corp., West Huron St., Chicago, is out with an attractive 8-page, 2-color catalog No. 45, featuring "Electric Tools for Construction, Installation, Production, Maintenance." Twelve types of Wodack portable electric drills, 15 electric grinders, the "Do-All" combination electric hammer and drill and other Wodack electric tools and accessories are illustrated and described.

AB742 "The Fast, Modern Way to Drill," a new bulletin showing the latest ¼" capacity small, light one-hand electric drills, has just been issued by the Independent Pneumatic Tool Co., Chicago. It presents 6 pages of information and specifications on Thor drills for every industrial application.

AB743 Fred W. Wappat portable electric handsaws are illustrated and described in a new 4-page, 2-color circular from his factory at 7325 Penn Ave., Pittsburgh, Pa. A new Wappat radial saw guide is featured and explained in this well-illustrated circular.

AB744 The 50th anniversary issue of "The Rex World" has been brought out by the Chain Belt Co., Milwaukee. It is an impressive rotogravure magazine of 16 pages containing much interesting history and record of present attainments.

AB745 An ingenious tile marker for plasterers for imitation tile finish in bathrooms and kitchens has been developed by the Lloyd Floor & Wall Tile Co., Kansas City, Mo., and it is known



NEW tile marking tool cuts clean joints.

as the Goldblatt deluxe tile marker. Notice how the plaster comes through that keen, sharp blade in a steady, uniform stream. Each handle has two blades, one to cut half round joints and the other V joints.

AB746 The Sterling convertible level, model No. 40, is illustrated and described in a new 6-page folder from Warren-Knight Co., 136 N. 12th St., Philadelphia. This instrument can be used as a level or a transit and is offered on a free trial to architects, builders, contractors, engineers, etc.

AB747 "Modern Equipment for the Drafting Room" is a neat little 8-page folder from David White Co., Milwaukee, featuring T-squares, drawing boards, drawing tables, drafting stools, draftsman's carrying case, etc. Better and more complete shop drawings speed up production and cut down costs; good drafting equipment like this will help the draftsmen.

CLIP AND MAIL TO CHICAGO

Reader Service Department
American Builder,
105 W. Adams St., Chicago, Ill.

(October, 1941)

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers

Name

Street

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

OCCUPATION*

*Please note that occupation must be stated if full service is to be given

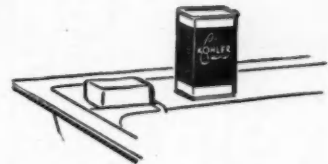
Kohler offers new and exclusive TWIN FALLS Laundry Tray



CHECK THESE 5 POINTS



Gleaming, easy-to-clean, acid-resisting enamel—on rigid one-piece cast iron.



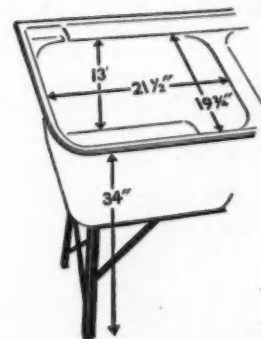
Full-length 3½-inch general-purpose ledge. Soap dish for each tub.



Flat, smooth surfaces with rounded corners—safe for delicate fabrics.



Long swing-spout mixer fitting with threaded end for hose connection.



Length over rim is 48 inches; width 25 inches. K-6750-A.

MODERN laundry convenience— to help sell your new homes

THE Twin Falls is the ONLY one-piece enameled cast-iron laundry fixture with built-in ledge. Notice the ample space for soap and cleansers—the big, roomy, easy-to-clean tubs. This modern, brightly enameled, free-standing fixture is just the thing for the first-floor laundry, as well as for the laundry in the basement.

Depend on Kohler good design and good value to impress prospects, build confidence and clinch sales. Kohler offers first quality only, always fairly priced. All parts are built, assembled and shipped at one central point, under rigid quality control. Kohler quality costs no more. . . Kohler Co. Founded 1873. Kohler, Wisconsin.

KOHLER OF KOHLER

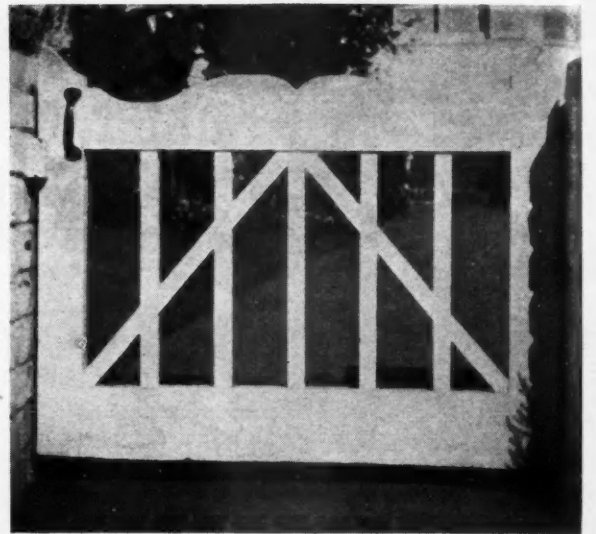
PLANNED PLUMBING AND HEATING

How to Build Two Attractive Garden or Entrance Gates

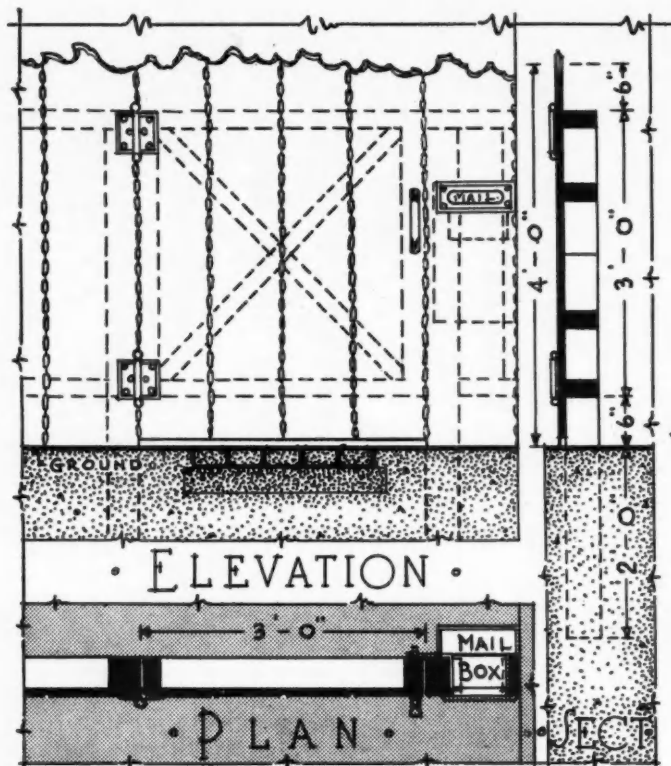
California Redwood Association Offers Suggestions and Bills of Material for Their Construction

WITH the continued popularity of stylized and harmonizing garden and entrance gates, the two designs presented here will offer wide application to present home type. One is rustic, the other more formal; they were prepared by the California Redwood Association.

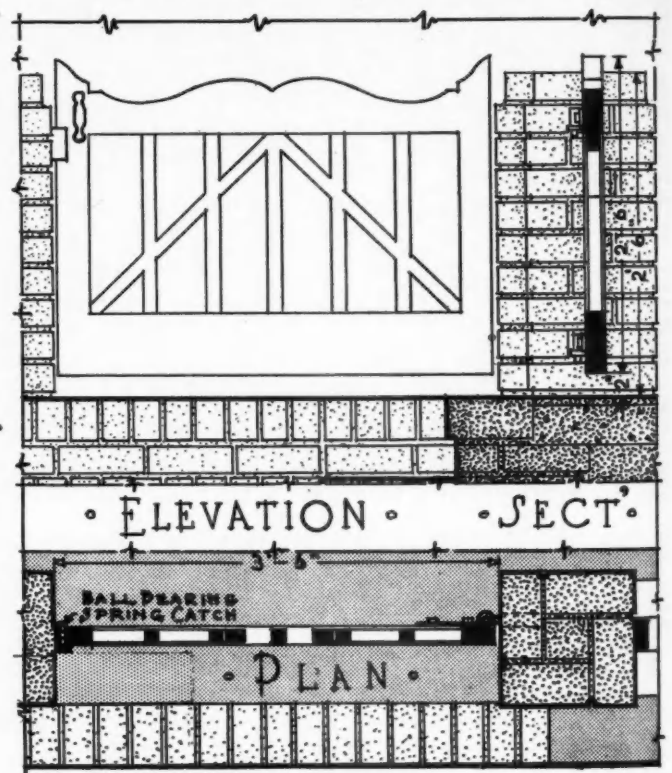
While the first gate shown was designed particularly for use with a fence of similarly antique character, it is also suitable for use in a plan where hedges or walls form the main body of the enclosure. The outline at the top may be cut with a bandsaw and the irregular edges may be formed with a small hand-saw, chisel or gouge. Redwood used in this manner will weather to a deep red in the first year or two of service, and eventually to a silver gray. At any stage in this weathering



DESIGN 2: Attractive in connection with Colonial styles.



DESIGN 1: Weathered rustic gate with built-in mail box.



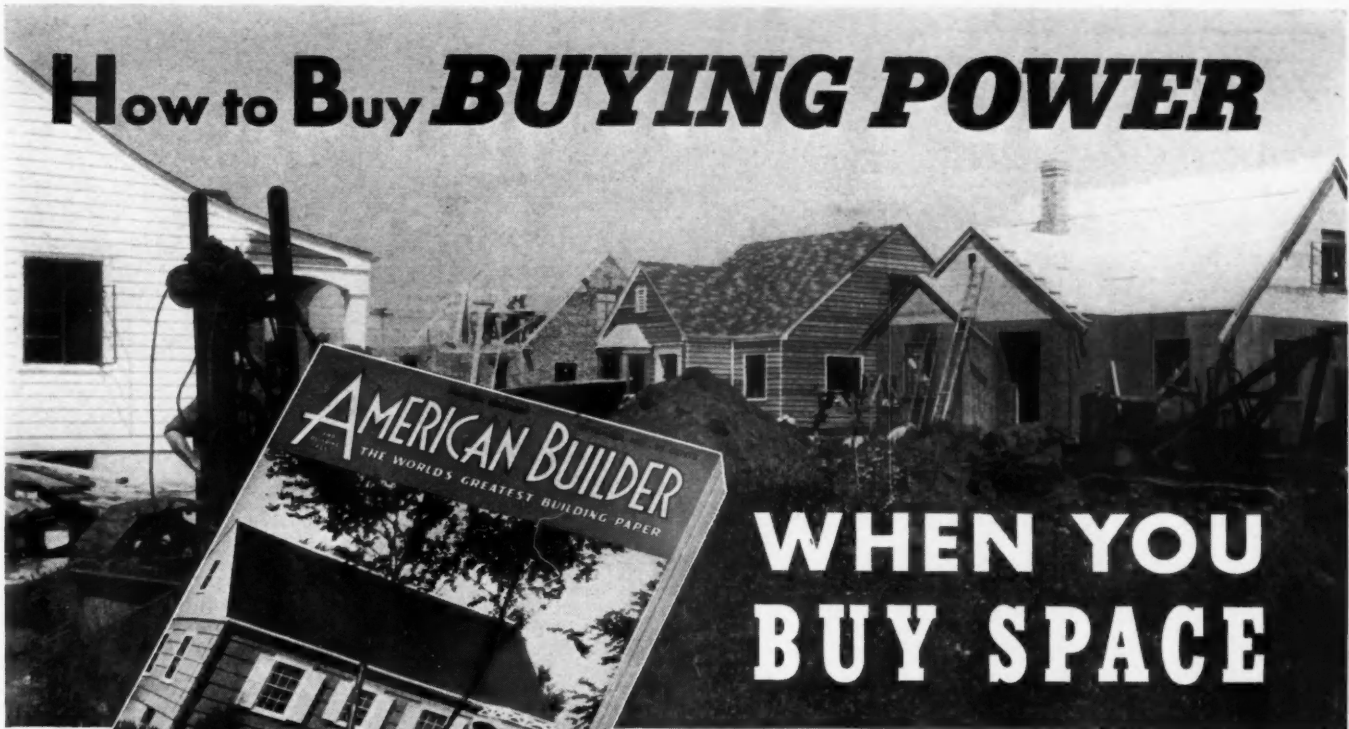
process, its color will be suitable to the antique character of the design. The following redwood materials will be needed:

2 horizontal rails.....	2" x 4" x 3'-0" S4S
2 vertical rails.....	2" x 4" x 3'-0" S4S
2 cross rails.....	2" x 4" x 4'-0" S4S
2 posts.....	4" x 4" x 7'-0" S4S
4 boards.....	1" x 10" x 4'-6" S4S

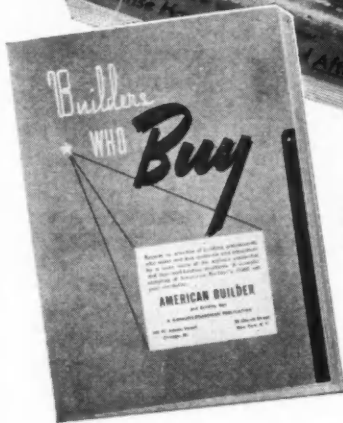
For a quite decorative gate, the one shown above presents the same appearance from both sides. The ends of the two side framing members and the top rail may be cut with a bandsaw. In building the gate, place the vertical pickets first, then cut diagonal pieces to fit. Besides their decorative value, they serve as bracing members for the gate to prevent sagging. For each such gate, the redwood materials needed are:

2 pcs. horizontal rails—2" x 6" x 3'-6" S4S T&G and glued to vertical rails.
2 pcs. vertical rails—2" x 4" x 2'-6" S4S ends cut as shown, grooved to receive tongue of horizontal rails.
1 square—1-11/16" x 1-11/16" x 12'-0" S4S St. Mldg. No. 1622.
1 block gate stop—2" x 6" x 3" S4S cut to form stop as indicated.

How to Buy **BUYING POWER**



**WHEN YOU
BUY SPACE**



Send for your copy of this 24-page booklet, "Builders Who Buy." There's no obligation.

HERE are new facts about building markets; facts that assure successful advertising campaigns in the building field because they show how to buy *Buying Power* when you buy space. "Builders Who Buy," a new market study by AMERICAN BUILDER, shows that building is national in scope but local in application. Each of thousands of cities and towns is served by a group of active local men. AMERICAN BUILDER market studies reveal why building is big business, and why no handful of building professionals of a single vocation can possibly control buying for all building projects in all places at all times.

AMERICAN BUILDER is a broad-coverage publication, edited for and read by all types of building professionals. Its readers create and control buying for thousands of projects each year. They are located in cities and towns of all sizes. They include all major vocational classifications and provide every essential service—building sites, planning, specifying, construction, financing, maintenance, remodeling, and distribution of materials and equipment. AMERICAN BUILDER readers have *Buying Power*.

AMERICAN BUILDER is the only publication with more than 60 years of successful, continuous service to the building industry. Its circulation—more than 70,000 net paid—is large enough to cover the field adequately, effectively, economically, profitably, yet not so large as to be wasteful. Collectively AMERICAN BUILDER readers are responsible for more than 70 per cent of the nation's residential and light-load-bearing construction, and comprise the most important buying audience in the building industry.

But the proof of the pudding is to ask the advertisers. When results are compared—actual sales from advertising inquiries—it's AMERICAN BUILDER every time.

When Planning Schedules

Get additional information about special features of these issues:

JANUARY—Forecast and Preview Number
Includes a statistical record of the year's building by types of structures, and a forecast for the year ahead, plus valuable new data on trends in construction methods, materials, equipment, types of structures, building costs and design.

APRIL—Spring Building and Directory Issue
Includes an annual directory section, "Buyers' Guide and Trade Name Index," with a conveniently arranged classified directory, and an alphabetical list of building-product trade names with the names of manufacturers.

OCTOBER—Fall Design and Planning Issue
Published at the height of the autumn building season. A timely editorial theme designed to increase building is featured.

Plan a stronger-than-usual presentation of your sales story in the January, April and October issues of AMERICAN BUILDER through use of extra space, bleed, or an extra color. Ask your AMERICAN BUILDER representative, or write for detailed information.



AMERICAN BUILDER
AND BUILDING AGE

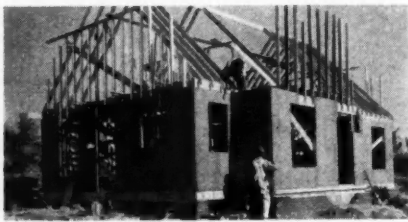
A Simmons-Boardman Publication

CHICAGO, ILLINOIS
105 W. Adams Street

NEW YORK, N. Y.
30 Church Street



THIS NAME IDENTIFIES A COMPLETE LINE OF QUALITY BUILDING INSULATION . . . SHEATHING, LATH, INTERIOR FINISH



TEMSEAL SHEATHING

Sealed with a double coating of asphalt and kraft paper, this double seal prolongs the efficient life of the insulation by protecting it against infiltration of air and moisture. Comes in large boards, easily cut, quickly nailed in place, with a bracing strength equal to wood sheathing, an unusually stiff, rigid wall construction.



TEMLOK LATH

Provides a superior plaster base *plus* efficient insulation in one low-cost material, quickly installed in one operation. Boards are shiplapped on long edges, scoop beveled on all four edges. This helps to assure finished plaster walls which are both smooth and strong. Time is saved on the job, and a more efficient installation results.



TEMLOK DE LUXE

For use as a decorative interior finish. Several smart pastel shades in panel, plank, and board form. Also reflects light efficiently and helps to quiet noise. See "Sweet's" for complete facts, or write now for FREE booklet. Armstrong Cork Co., 979 Concord St., Lancaster, Pennsylvania.



ARMSTRONG'S TEMLOK INSULATION

De Luxe Interior Finishes • Lath • Sheathing • Hardboards • Monowall

ON & OFF the RECORD

Views and Comments

by *Structor*

DEFENSIVE WATERS—The Washington low-down is that 23 more cantonments costing about \$20,000,000 each or a total of about a half-billion dollars will be started shortly.

I asked an official, "Why?"

"To take care of that expeditionary force we will have to send," he said.

"But where?" I asked.

"Oh, to protect our 'defensive waters' near the Suez Canal," he replied.

That's a typical example of the tongue-in-cheek attitude in Washington and lots of other places. They find it difficult to talk about our "defensive waters" without a smirk.

CONGRESS NOT NEEDED—Additional cantonments can be built without Congressional approval, I am told, as long as the administration can get enough money, which appears to be easy. They can build additional cantonments and occupy them merely by spreading the men out a little more or leaving some of the present ones empty temporarily. In addition to cantonments the government will probably build airports, "defense highways" extending through both Canada and Mexico, shore establishments and defense plant expansions.

NON-DEFENSE AREAS—There will be plenty of protests, and rightly so, when builders and other small business men who are not in defense areas begin to learn what the defense program's squeeze on vital materials is going to mean to them. OPM's priority announcement for housing in defense areas is encouraging—if it doesn't get bogged down in red tape—to private builders in defense areas who are allotted 200,000 houses in the next six months. "But what about me?" says the builder and the home owner who doesn't happen to be in a defense area.

For the time being it won't be too bad because there is still a whole lot of material in stock and available. If the war goes on indefinitely, it is going to be harder and harder to get metals and unless the people, the "forgotten men" in non-defense areas, make themselves and their problems heard, they may have difficulty even getting material to make essential repairs.

OPM'S JOB—Personally I don't think OPM officials have any idea what job they are attacking when they attempt to issue a priority order for every building project in defense areas. They are accustomed to dealing with large firms, but under the new order they will have to deal with 20,000 or 30,000 small firms engaged in modernizing, repairs and building of new homes. Boy, what a crowd of assistants the OPM regional offices are going to have to put on their staff just to read the flood of applications they are going to get!

FHA was pretty canny in passing on responsibility to OPM for granting priorities. I predict this system is going to wind up as one of the unholiest messes of red tape, delay, confusion and name-calling ever seen.

GOLD-PLATED KNOBS—There's lots of gold in them thar Kaintucky hills and the country is overloaded with silver. We can't get copper and other metals for important items in the home. So why not gold-plated door knobs, silver-coated wire (an excellent conductor) and gold-plated toilet fixtures? Well, why not?

If our Russian comrades can rate marble subway stations, the least we can do for American workers is let them have gold-plated door knobs.

PLATINUM PAN—This idea of using our gold and silver for home hardware may not be so crazy as you think. My learned professor friend says that platinum was first used by peasants in the Ural Mountains for frying pans. It made a damn good pan, too.

(Continued to page 104)

Stand Right Here With Your Prospects...



...when you want to close the sale

HERE'S the spot where many a sale is made, or lost—right in the kitchen! As a builder, you know how much an attractive kitchen like this helps in selling a house. But do you also know what an important part the linoleum floor plays in the success of such a kitchen?

This is particularly true when the floor is Armstrong's Linoleum. Prospective home buyers know that Armstrong's is the quality name in linoleum. Nearly 25 years of powerful national advertising has impressed this fact on the minds of the American public. Naturally, then, when you point to the floor and say, "This is Armstrong's Linoleum," prospects know immediately that you build with quality materials.

When you go even further and show them features like Armstrong's

Cove Base for easy cleaning, and practical Armstrong's Linoleum on sink and counter tops, then buyers know you've built a modern home.

Yes, this decorative, smooth surface flooring does give your houses real talking points . . . real extras that lead to sales. When used in kitchens, bathrooms, or other rooms, resilient Armstrong's Linoleum provides years of color, comfort, and chore-free cleaning.

If you're not already reaping the sales benefits of Armstrong's Lino-

WATCH EYES LIGHT UP when prospects see a kitchen like this . . . smartly set off with a decorative floor of Armstrong's Linoleum. Pattern here is Blue and Yellow Embossed Linoleum No. 5700 with flash type cove base. Work surfaces are Black No. 27. Walls are washable Armstrong's Daisy Yellow Linowall.

. . .

leum, why not start doing so now? Cost is reasonable . . . installation quick . . . satisfaction sure. Get the facts in "Sweet's"; or write direct to Armstrong Cork Company, Floor Division, 1218 State St., Lancaster, Pa.



ARMSTRONG'S FLOORS LINOLEUM

Rubber Tile - Linotile (Oil-Bonded) - Asphalt Tile - Cork Tile - Linowall Wall Covering



Band Saws SNAP LESS

when you work with the
WESTERN PINES*

Fewer bands to buy . . . less time out for making replacements . . . speed, ease and accuracy in following your scribing. These are a few of the economies that come from the even grain and soft texture of the Western Pines!

Well seasoned . . . expertly milled . . . and carefully graded, the Western Pines also offer time-saving workability on every phase of the job—plus a finished result that can stand up to the closest inspection!

Ask for and get Western Pines from Association mills!

WESTERN PINE ASSOCIATION

YEON BUILDING



PORTLAND, OREGON

*Idaho White Pine *Ponderosa Pine *Sugar Pine

—————*These Are The Western Pines—————

On & Off the Record

(Continued from page 102)

BUILDING BOOTLEGGERS?—A vicious aspect of the present material shortage is that it's once more bringing back the bootlegger. The story is told of builders, turned down in their request for materials from their usual sources of supply, later getting an anonymous telephone call.

"Sure I can get you the stuff," the anonymous voice assures the hard-pressed builder. It goes without saying that the price is sky high. Some have fallen for the racket and gotten materials delivered by truck after dark, cash before unloading.

This type of thing must not be allowed to continue, and I doubt that even the men who do it realize what it is getting them into. Bootlegging liquor was one thing, but it happens in this case the buyer is paying more than a decent rate, and he will be the first one to turn informer. He may make a deal to get certain things in a hurry; but when he has time to reflect about how he has been robbed, he will usually be anxious to pass on information that will put the bootlegger in jail. And that is where he belongs.

HELLUVA BIG BACK YARD—In all of the current controversy about steel capacity and defense needs, no one seems to have accounted for the wide discrepancy between known defense capacity and known defense uses which leaves 60,000,000 tons or so for domestic civilian uses.

"It must be around somewhere," a steel man told me, "unless someone has a Helluva big back yard!"

CONFUSION TWICE CONFUSED—The OPM housing priority plan was delayed many weeks due to a terrific inter-department argument about who should do what and how. Involved in housing besides OPM are numerous housing agencies and of course, the big four of FHA, FWA, Home Loan Bank Board and Palmer's Housing Coordinator's Office.

Each of these agencies had its own publicity department busting to break the news first. Because OPM was running the show, they expected to release the story first, but with hundreds of multigraphed copies of Nelson's order floating around the various departments it was a hard thing to control. In the confusion someone forgot to tell the Home Loan Board that the story was not to be released. They sent out advance and incorrect releases to a large number of financial institutions. Their release was made September 12 whereas OPM's official release was made September 19. A lot of people are sore about that.

As it is, the various agencies involved seem to each have retained some sort of a finger in the priority pie. Ultimate decisions on the housing priorities are supposed to be made by a regional priorities board on which are represented OPM, FHA, Home Loan Bank Board and Palmer's office. It doesn't take an efficiency expert to guess what will happen on these boards when they are besieged by thousands—and I mean thousands—of builders, and begin to get calls from Congressmen. It will be confusion twice confused.

SMALL PLANT EXPANSION—One place builders can look for a big increase is in small plants and factories engaged in sub-contracting defense orders. It is estimated that a billion dollars will be spent in plant expansion next year and a large part of that will be in connection with smaller plants. Here's work for some of the thousands of smaller building firms who may be having trouble in getting residential materials. These plant expansions will have top priority ratings for building materials and because the larger contracting firms are already overloaded with big government jobs, they offer a good field for small builders.

NAILS—The current nail shortage may effect a revolutionary change in American life. Think of the average home owner without a nail to hold when he hits his thumb with a hammer, and picture the problem of tire repair firms who no longer will have punctures to repair. Already a learned architect has published a treatise to the effect that the shortage of nails may result in an era of glued-up houses. Well, it's a fast moving and perplexing world we live in and perhaps we had better all just go out and live in caves.

REVIEW of the NEWS

Statistics, Associations, Agencies

Building Volume at Record High; August Residential Construction 51% Above '40

N AUGUST, total building contracts awarded in the 37 states east of the Rockies totaled \$760,233,000, the highest for any month on record, according to F. W. Dodge figures.

Residential building of \$231,529,000 was 51 per cent above August, 1940, and larger than any month since April, 1929. Non-residential building reached a record high level of \$286,741,000—141 per cent above August, 1940, and 12 per cent above its previously high month of June, 1928, when it had an award volume of \$255,901,000.

Statistics for the four classes of construction are as follows:

	August, 1941	August, 1940	July, 1941
Residential.....	\$231,529,000	\$152,988,000	\$205,049,000
Non-Residential.....	286,741,000	119,189,000	220,612,000
Public Works.....	134,054,000	119,358,000	101,074,000
Utilities.....	107,909,000	23,406,000	50,657,000

\$760,233,000* \$414,941,000 \$577,392,000†

*August, 1941, includes \$399,600,000 of defense construction.

†July, 1941, includes \$241,000,000 of defense construction.

For the first fifteen days of September, residential construction totaled \$59,953,000; non-residential, \$38,082,000; public works, \$33,459,000; utilities, \$16,028,000—all totaling \$147,522,000.

Nonresidential Buildings Up 69% in 1940

NONRESIDENTIAL buildings comprised 39 per cent of the total permit valuations in 1940 as contrasted with only 29 per cent in 1939. The increase of over 69 per cent in the total permit valuation for this class of construction was accompanied by a rise of only 5 per cent in the number of buildings.

The greatest increase in permit valuations between 1939 and 1940—682 per cent—was for factories and workshops. The number of new factory buildings, however, increased less than 29 per cent. Factory construction not only showed the most improvement, but was also the most important single class of nonresidential building in 1940, accounting for almost \$374,000,000 of the \$1,050,000,000 total for all nonresidential building in this year. Although permit valuations for factory buildings were higher during each of the first 7 months of 1940 than they had been during the corresponding months of 1939, it was not until August that the very marked increases took place.

The number and permit valuation of the various types of buildings for which permits were issued in the 2,397 cities during 1939 and 1940 are shown in the table.

Permit Valuation and Number of Various Types of Nonresidential Buildings for Which Permits Were Issued in 2,397 Identical Cities, 1939 and 1940

Type of building	Permit valuation			Buildings		
	Amount		Per- cent of change	Number		Per- cent of change
	1940	1939		1940	1939	
Nonresidential buildings.....	1,050,535,554	620,810,862	+69.2	142,914	135,945	+5.1
Amusement buildings.....	29,913,657	25,446,389	+17.6	1,732	1,644	+5.4
Churches.....	18,561,805	16,303,797	+13.8	1,161	1,014	+14.5
Factories and workshops.....	373,811,273	47,773,560	+682.5	3,531	2,740	+28.9
Public garages.....	9,196,302	8,535,329	+7.7	1,207	1,131	+6.7
Private garages.....	23,743,763	22,026,575	+7.8	92,733	87,805	+5.6
Service stations.....	20,651,003	18,403,828	+12.2	5,326	4,858	+9.6
Institutions.....	53,907,380	44,829,855	+20.2	293	1306	-4.2
Office buildings.....	35,549,911	20,491,339	+73.5	715	513	+39.4
Public buildings.....	229,319,934	105,998,068	+116.3	873	573	+52.4
Public works and utilities.....	69,373,438	57,493,576	+20.7	964	737	+22.5
Schools and libraries.....	55,641,916	145,465,589	-61.7	566	942	-39.9
Sheds.....	5,163,063	5,281,147	-2.2	15,480	17,315	-10.7
Stables and barns.....	825,751	728,098	+13.4	568	684	-17.0
Stores and warehouses.....	121,200,969	99,597,844	+21.7	13,965	12,406	+12.6
All other.....	3,675,389	2,435,868	+50.9	3,820	3,227	+18.4
Additions, alterations, and repairs						
On residential buildings.....	348,030,818	353,807,093	-1.6	421,216	412,000	+2.1
Housekeeping dwellings.....	141,030,229	132,991,100	+6.0	316,811	304,713	+4.0
Nonhousekeeping dwellings.....	4,733,301	4,551,381	+4.0	1,979	2,258	-12.4
On nonresidential buildings.....	202,267,288	216,264,612	-6.5	102,436	103,638	-3.0

TRU-FIT

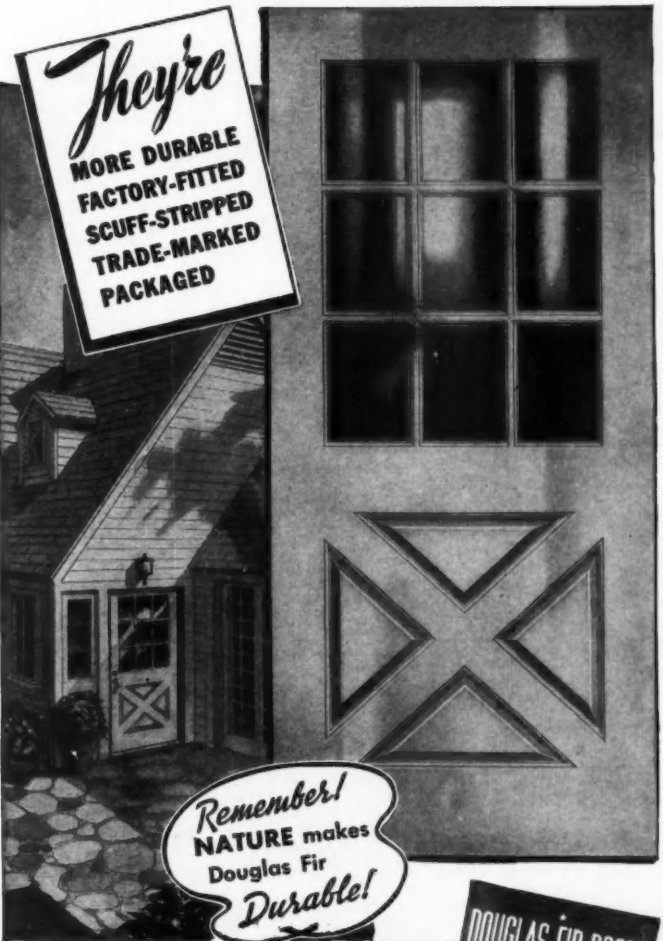
Durable Douglas Fir Entrance Doors

Time proves their Beauty more than skin deep!

● Tru-Fit Douglas Fir Entrance Doors—like sterling silver—are the same high quality inside as outside. They're manufactured only of all-heartwood, vertical-grain, old-growth Douglas fir... *the wood made durable by nature.* They're fabricated only by master craftsmen in strict accordance with U. S. Commercial Standard CS91-41. They are available in 27 distinctive designs to suit every style and size of home.

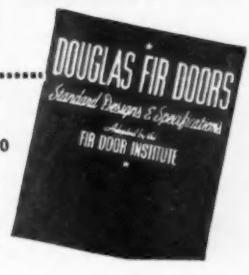
This isn't all! They come to you pre-fitted.* Scuff strips and protective packaging assure the delivery of a door to your job as clean and as perfect as it left the mill. Tru-Fit Douglas Fir Entrance Doors cost you no more than other good doors, but they save you time and work. They give superior performance. Their beauty lasts. Order one from your lumber dealer for the next house you build.

*You can order all stock Douglas fir doors pre-fitted at slight extra cost and grade-marked.

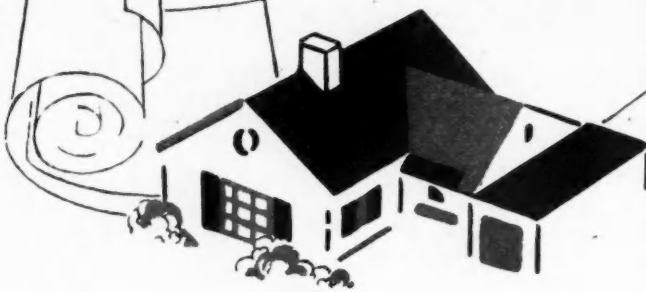


Send for FREE COLOR CATALOG
FIR DOOR INSTITUTE, Tacoma, Wn.
Please send me stock fir door catalog No. 2000

Name _____
Address _____
City _____ State _____



Plan for health

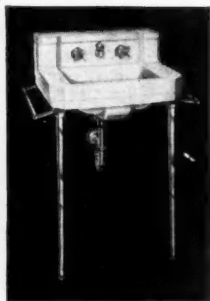


with CASE GLISTENING FIXTURES

For you there is special meaning in the cry now heard on America's home front—"Guard your health!" Many ways of safeguarding health are in your hands. One of the most effectual, you employ every time you specify Case quality plumbing fixtures. Underneath the glistening, easy-to-clean beauty of Case fixtures is the long-lasting utility of *twice-fired* vitreous china and efficient mechanism. In calling for Case you provide the maximum of health protection so essential in bathrooms today. Available in 60 colors and white... distributed nationally by plumbing supply wholesalers. Write to Dept. L-101, W. A. Case & Son Mfg. Co., Buffalo, N. Y.



The famous *one-piece* T/N Water Closet protects health—with atmospherically vented, non-siphoning ballcock—strong yet quiet flushing action—non-overflow. An exclusive patented Case fixture.



The new WILMINGTON Lavatory with hidden overflow and splash control.



The DE LUXE Water Saver stands only 27" high, with tank clear of walls. Combining efficient flushing action with low water consumption, it is a product of the finest *twice-fired* vitreous china.



DISTINCTIVE PLUMBING FIXTURES

Exceptions in Credit Regulations Made to Cover Defense Modernizations

COPIES of forms and procedures which will clear the way for the extension of credit for the repair and remodeling of homes in defense areas have been distributed to all Federal Reserve Banks and Branches by the Division of Defense Housing Coordination.

The forms and procedures will implement exceptions to Federal Reserve consumer credit regulations as contained in Section 6 (e) (2). This provides that the limitations on installment credit, even when not excepted under other provisions, shall not apply when the proceeds are to be used to finance the remodeling or rehabilitation of any dwelling which the Defense Housing Coordinator shall designate as being for "defense housing" as defined by the Coordinator.

In announcing the procedures making this section operative, Charles F. Palmer, Coordinator of Defense Housing, pointed out that no application for an exception under the credit regulations would be granted unless it involved the remodeling or rehabilitation of a dwelling.

- (a) located in an area where an acute housing shortage exists or impedes by reason of national defense activity;
- (b) suitable in location, rent, or price, for persons engaged in national defense activities in the area;
- (c) reasonable preference in occupancy in which will be given to defense workers; and
- (d) the number of habitable dwelling units in which will be increased thereby.

Any person proposing remodeling or rehabilitation conforming to the above requirements, Mr. Palmer said, could, if unable to undertake such work without an exception, make application to the Coordinator by completing a form entitled "Application for Designation of Remodeling or Rehabilitation as Defense Housing for Exception under Regulation W." This form is now available at any Federal Reserve Bank or branch.

In order that the Coordinator may determine whether or not the applicant for credit will require priorities aid to secure materials with the proceeds of his loan, there has also been provided a separate form entitled "Information Regarding Material and Equipment Entering into Defense Housing Remodeling and Rehabilitation." This form should be completed and submitted along with the application for designation unless the applicant is certain no priorities aid is necessary, in which case the application or designation should so indicate.

It was pointed out that in many localities local housing committees or Homes Registration Offices working in cooperation with the Division of Defense Housing Coordination and other governmental housing agencies are encouraging remodeling and rehabilitation campaigns for defense housing purposes. Approval by the Coordinator of any application will be expedited if application forms are accompanied by evidence that the proposed work is approved by the local group.

Mortgage Figures Announced

AN INCREASE of 20.7 per cent in urban home financing was shown during July, 1941, over the same month last year, economists of the Federal Home Loan Bank Board have announced.

Home mortgages under \$20,000 recorded in July by all types of lenders numbered 151,100, and amounted to \$443,039,000, bringing the national total for the first seven months of 1941 to 929,841 mortgages—valued at \$2,660,904,000—a record exceeding any other comparable period for over a decade.

Compared with home mortgage business for the January-July period of 1940, these figures indicate an 18 per cent gain in dollar volume of mortgages so far recorded during 1941, and a 13.2 per cent increase in number.

Savings and loan associations, the largest home mortgage lending group in the nation, again led all types of lenders by making loans totaling \$142,695,000—32.2 per cent of all July recordings. This figure reflects a 20 per cent increase over July, 1940, in the amount of home mortgages financed by savings and loan associations throughout the country.

Banks and trust companies formed the second largest group in mortgage financing for July with \$108,555,000; and individual mortgage lenders were third with \$71,456,000.

The size of the average mortgage loan steadily is rising, accord-

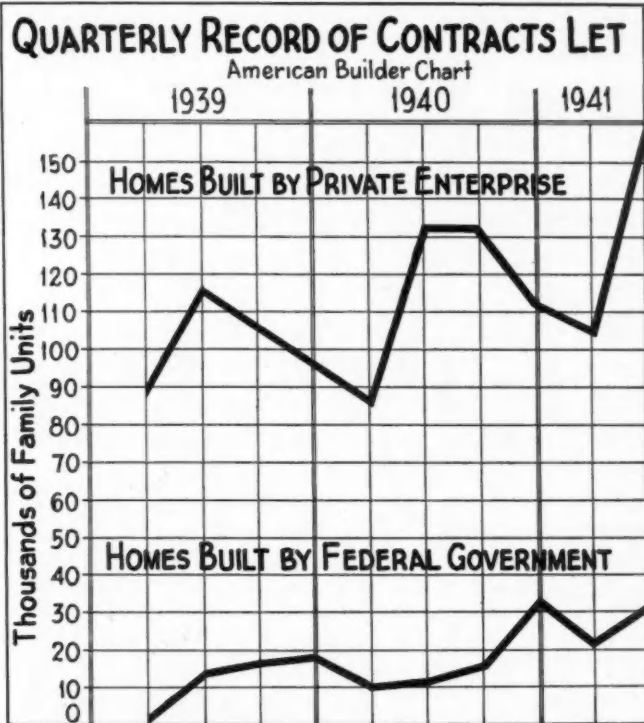
ing to Bank Board economists, who point out that whereas 1939's average mortgage loan was \$2,705, 1940's amounted to \$2,743—an increase of \$38—and that loans in 1941 average \$2,862, an increase of \$119 over 1940. Factors chiefly responsible for the upward trend are rising construction costs and mounting real estate values, and the general use of higher percentage loans.

Compiled by the Bank Board's Division of Research and Statistics with the cooperation of regional Federal Home Loan Bank presidents, savings and loan officials throughout the country, the American Title Association, and the Mortgage Bankers Association, the following figures show the nation's urban mortgage recordings up to \$20,000 each during July:

	Number	Amount	Per cent of total amount
Savings and loan associations.....	51,882	\$142,695,000	32.2%
Insurance companies.....	7,602	37,262,000	8.4
Banks and trust companies.....	32,343	108,555,000	24.5
Mutual savings banks.....	5,469	21,080,000	4.8
Individuals	35,634	71,456,000	16.1
Other mortgagees	18,180	61,991,000	14.0
Total	151,110	\$443,039,000	100.0

Private Enterprise Is Furnishing 90 Per Cent of New Homes

FIGURES compiled by the Bureau of Labor Statistics, U. S. Department of Labor, show the number of family units of new residential construction for which contracts were let to be built by private enterprise using private funds and to be built by the several agencies of the federal government using public funds. This record quarterly for the past 2½ years is shown graphically



in the accompanying chart reproduced above and by figures in detail in the following table.

NUMBER OF FAMILY UNITS		
From Bureau of Labor Statistics, U. S. Dept. of Labor		
	No. Homes Built by Private Enterprise (Private Funds)	No. Homes Built by Federal Govt. (Public Funds)
1st Quart. 1939.....	90,538	4,816
2nd Quart. 1939.....	113,436	14,721
3rd Quart. 1939.....	106,339	17,926
4th Quart. 1939.....	98,145	19,079
1st Quart. 1940.....	88,907	10,415
2nd Quart. 1940.....	132,426	11,001
3rd Quart. 1940.....	132,896	17,379
4th Quart. 1940.....	112,238	34,379
1st Quart. 1941.....	106,579	22,185
2nd Quart. 1941.....	158,295	31,378

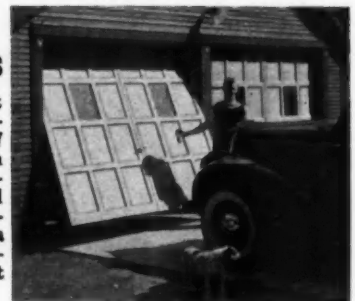
Introducing No. 21 OVER-THE-TOP[®] COMPLETE GARAGE DOOR FOR DOUBLE-WIDTH OPENINGS



The new Frantz Garage Door Unit No. 21 is designed for two-car garages that do not have a "center post" . . . for OPENINGS 16 feet wide by 7 feet high. It's the only unit (door and hardware, complete) of this kind on the market. Made in 4 tongued-and-grooved sections, the door is joined in one solid unit by special truss angles at top and bottom. All holes are bored for bolts. Operation is practically automatic . . . release the handle and door rises overhead of its own accord. Best news of all . . . the No. 21 is easy on the pocketbook.

NO. 10 MOST POPULAR FOR STANDARD OPENINGS

Here's the inexpensive, yet highly efficient unit (for garage openings 8 feet wide by 7 feet high) that created such a sensation when it was presented a year ago. Offers all the advantages of "Over-the-Top" Door Equipment plus a prefitted door. (For 8' x 6'-6" openings refer to Unit No. 7.)



Builders! Write for full facts on the newest Frantz contribution to garage door convenience (Unit No. 21) and the various other types of "Over-the-Top" Door Equipment.

FRANTZ MANUFACTURING CO.
Dept. AB Sterling, Ill.

FRANTZ

Guaranteed BUILDWARE



WILL YOUR DEFENSE CONSTRUCTION NEED DEFENDING TOMORROW?

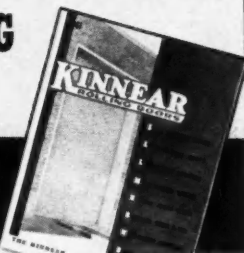
Right now, with everyone clamoring for quick results, it would be easy to skimp on quality and get by . . . to take risky shortcuts . . . to omit beneath-the-surface extras that make for lasting value . . . to use substitutes indiscriminately . . . or to use "Emergency" as an excuse for slipshod methods. But tomorrow, when emergency will no longer be an excuse for anything, today's buildings will still be around to make or break the reputations of those who built them. When that time comes, will your clients put you on the defensive because of shortcomings in your defense-time construction?

One way to be sure of clients' approval, *today and tomorrow*, is to install Kinnear Doors in every service opening. Kinnear's reputation for quality has been built and maintained over nearly half a century, and you can be sure that this reputation will be carefully guarded under *all* conditions.

In Emergency or Normalcy
DEPEND ON KINNEAR FOR QUALITY

- STEEL ROLLING DOORS
- LABELED FIRE DOORS
- LABELED FIRE SHUTTERS
- METAL ROLLING GRILLES
- RoL-TOP DOORS
IN WOOD OR STEEL
- BIFOLDING DOOR
IN WOOD OR STEEL

WOOD ROLLING PARTITIONS
DOOR OPERATING EQUIPMENT



Saving Ways in Doorways
KINNEAR
 ROLLING DOORS

THE KINNEAR MANUFACTURING CO.
 1560-80 FIELDS AVENUE
 COLUMBUS OHIO

NEW PRIVATE CONSTRUCTION IN U. S.¹

(Millions of dollars)

Year	Nonresidential Building										Total* Private Nonresidential Building	Farm* Construction (includes repairs)	Total* Private Construction
	Residential Nonfarm	Commercial	Factory*	Religious and Memorial	Educational	Social and Recreational	Hospital and Institutional	Miscellaneous	Total* Nonresidential	Deduct Non-residential Building by Utilities Inc. included in Col. 9			
1920	1,610	657	1,249	60	24	119	33	n.a.	2,142	39	2,103	865	4,578
1921	1,760	600	1,386	77	35	136	49	n.a.	1,933	32	1,901	415	3,438
1922	2,833	645	533	112	66	151	58	n.a.	1,585	37	1,528	495	4,858
1923	3,757	764	613	127	90	146	63	n.a.	1,793	63	1,720	613	6,100
1924	4,300	779	471	141	98	149	89	n.a.	1,707	80	1,627	583	6,510
1925	4,584	990	585	117	117	227	87	n.a.	1,915	110	1,805	589	7,233
1926	4,591	815	702	192	117	231	92	n.a.	2,084	75	2,009	571	7,771
1927	4,259	1,177	702	194	114	287	117	n.a.	2,068	67	2,001	643	7,485
1928	3,981	1,206	702	183	116	255	110	n.a.	2,068	66	2,002	825	7,214
1929	3,424	1,187	830	151	122	187	108	n.a.	2,085	84	2,001	631	6,566
1930	2,195	898	519	125	120	134	88	n.a.	1,984	86	1,898	431	4,514
1931	1,396	582	214	89	101	112	54	n.a.	1,562	55	1,497	257	2,759
1932	1,641	582	214	89	101	112	54	n.a.	1,562	55	1,497	257	2,759
1933	1,353	641	83	49	49	64	32	n.a.	989	22	947	140	1,087
1934	1,78	135	188	27	17	16	15	n.a.	427	10	417	194	611
1935	272	157	178	25	34	31	15	n.a.	482	12	457	219	676
1936	533	196	160	25	37	28	12	n.a.	409	12	397	540	1,330
1937	1,101	255	254	33	51	49	20	n.a.	714	12	698	553	1,251
1938	1,530	369	503	42	40	83	27	n.a.	1,051	29	1,022	413	1,435
1939	1,515	292	191	48	40	83	24	n.a.	707	24	683	364	1,047
1940	2,063	353	428	53	41	67	25	n.a.	998	32	966	468**	3,517**

*Revised. **Preliminary-subject to revision. n.a. Not available.
¹Residential nonfarm: estimate based on data compiled by Bureau of Labor Statistics; Nonresidential building estimated by Department of Commerce; Farm construction estimated by Bureau of Agricultural Economics.

Total Private Construction

TWO points of special significance stand out in the construction summary figures, in the adjacent column, recently released by the Bureau of Labor Statistics, U. S. Dept. of Labor, Washington, D. C. The first is the huge size and volume of normal, private enterprise building in the United States—an average of seven billion dollars annually for the seven year period 1923-1929. The second is the steady revival, or "come-back," in private building from 1933 to the present time. From a low of \$925 million in 1933 the impressive advance to over \$3½ billion had been made up to the beginning of the current year; and this total, though substantial, is just one half the average of each of the seven good years of the late 20's.

The "Steamboat" Home in New Orleans

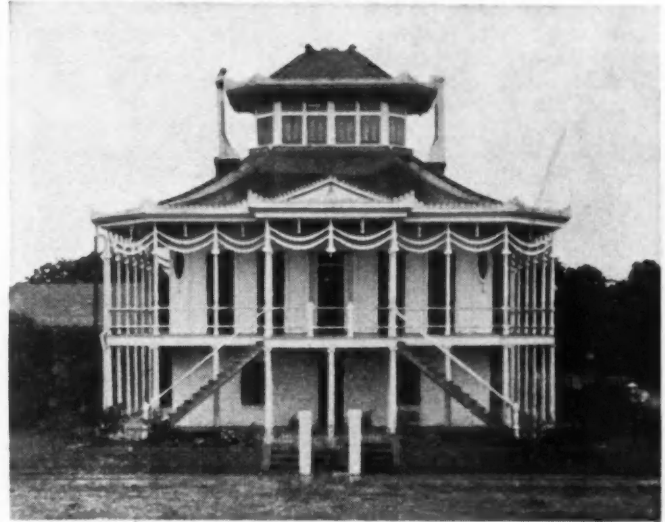
BUILT at the bottom of one of the massive levees of the Mississippi River at New Orleans, its broad encircling gallery giving a wide view of the swirling river, it is one of the strangest architectural oddities in the United States, a home constructed to imitate the bridge of one of the old-time river packets.

Designed by Captain W. B. Doullut, bar pilot, engineer and owner of a shipyard, the unique home was erected at the turn of the twentieth century and since then has become a landmark along the river-front in downtown New Orleans. When his son married a few years later, he built his residence along the same lines not far away. The two buildings, standing but a stone's throw from each other, attract a great deal of attention from natives and visitors alike.

The original home is slightly rectangular in shape, and with the exception of the windows which are painted green is all white. A cool veranda completely encircles the bottom floor and above it is the columned gallery. A curious feature of that gallery is the "bead-work," graduated wooden balls hanging from column to column, and typical of the decorations at one time seen on the old river boats.

The roof rises from the second story and slopes up on all sides to a cupola set in the center. This cupola is modeled after the

pilot rooms on the packets and is enclosed in glass windows on all sides. The roof of the cupola is fringed with "ginger-bread" decorations reminiscent of those found on the now almost completely vanished river steamers.



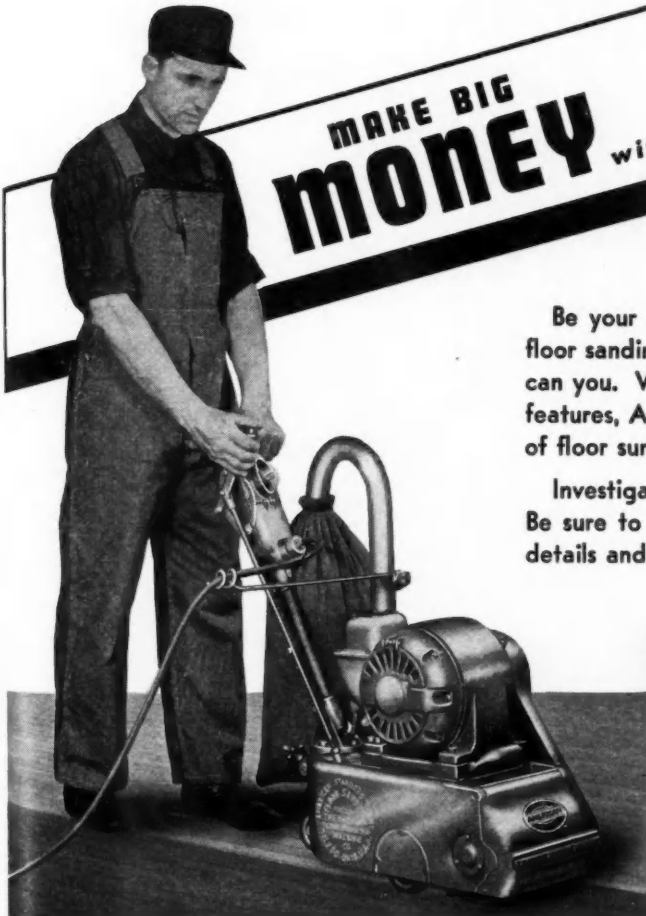
"STEAMBOAT" house on New Orleans river front.

Speedwall System Used at Bremerton

ANOTHER record for prefabrication has been set by the Speedwall Company, Seattle, Wash., which has just completed delivery of walls for 150 duplex buildings for the USHA defense housing projects at Eastpark, Bremerton, Wash.

These 300 5-room housing units have gone up in the space of two months and the walls have been erected at the rate of a

(Continued to page 110)



MAKE BIG MONEY

with an **AMERICAN FLOOR SANDER**

Be your own boss and make big money with an American floor sanding machine. Hundreds of men are doing it and so can you. With the many outstanding time and money-saving features, American machines for years have been the favorite of floor surfacing men.

Investigate the wonderful possibilities of this work today. Be sure to sign and send in the coupon below for complete details and prices—no cost or obligation to you.

AMERICAN FLOOR SURFACING MACHINE COMPANY

511 SO. ST. CLAIR ST. TOLEDO, OHIO

Gentlemen:

Send complete details and prices without cost.

I want to go into floor surfacing business.

I would use sander in my contracting business.

Name

Street

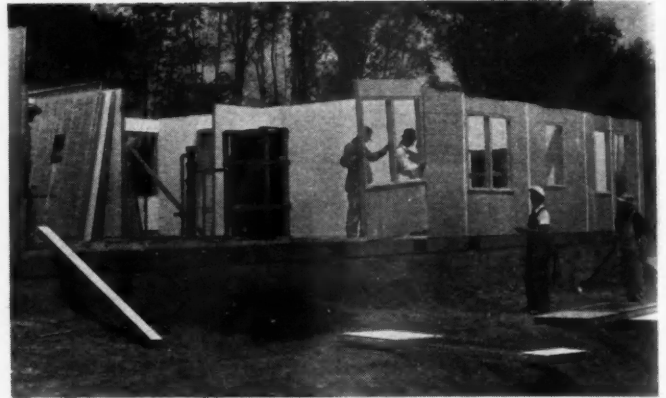
City State

*Residential renter estimates based on data compiled by Bureau of Labor Statistics; Nonresidential building estimated by Department of Commerce; Farm construction estimated by Bureau of Agricultural Economics.

(Continued from page 109)

complete vertical set-up for one house per 12 man-hours. The first duplex building was delivered June 6, double walls, partitions and ceilings arriving at the site by truck direct from the Speedwall Company via ferry across the Sound. Walls for four complete duplex buildings were shunted off the manufacturing assembly every day and delivered to the project. In the pre-fabrication, the Speedwall Company utilized its own Speedwall plywood . . . the cotton fabric covered style for the interior surfaces, the bare exterior grade for exterior walls.

The houses are of three different types of floor plan and of two different sizes, 24' x 64' and 24' x 52'. Roofing is standard sheet mineral surface asphalt. All floors are fir with linoleum in kitchen and bathrooms. Exterior painting is with three coats of lead and oil. Interior is with two coats of lead and oil in bathroom and kitchen and one coat of resin emulsion paint in living room and bedrooms. It is worth noting that because of the fabric covering on the Speedwall interior walls, one less coat of paint was permitted by the housing authorities.



DUPLEX housing units at Bremerton, Wash., quickly erected, using Speedwall prefabricated walls; completed units below at left.



S. R. Swiss Heads Toledo Realtors

LEE J. GOLDMAN, President of the Toledo Board of Realtors, announces that its Trustees, at a special meeting, appointed S. Robert Swiss to serve as Executive Secretary of the Board on a full time basis, effective immediately.

Mr. Swiss, a resident of Toledo for the past 18 years, has been closely identified with the development of major sales, merchandising, publicity and advertising programs, while serving as Account Executive and Vice President of United States Advertising Corporation.

Quoting Mr. Swiss, he said: "It is our objective and plan to enlarge the scope of operations of the Toledo Board of Realtors, and to make it a body that will more adequately represent the true size and economic, as well as the financial importance of the real estate and allied industries in all of their varied phases in Lucas County."

VENTO CHAMPION

Recognized as the

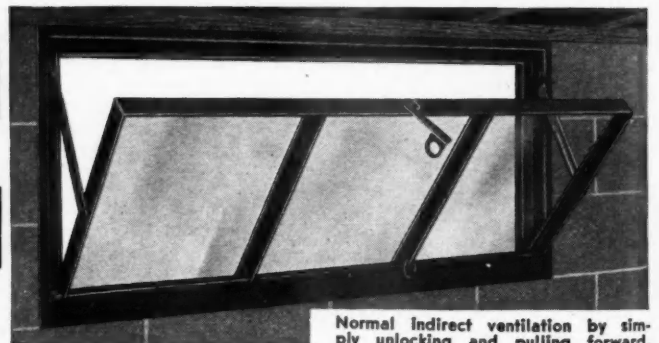
Ace of Basement Windows

Talk shop with any of your fellow contractors who are using VENTO CHAMPIONS and they will tell you that there is nothing in the basement window field that compares favorably with the VENTO CHAMPION. And they'll tell you, too, that the use of these windows is a sure-fire means of capitalizing on the present-day keen interest in more livable basements. The perfect ventilation that its two-way operation affords, the easy, non-sticking operation of its perfectly balanced ventilator, its puttyless glazing, and many other superiorities are a joy to the heart of the prospect and give your entire proposition a worthwhile lift. Why be satisfied with anything less when VENTO CHAMPIONS cost you not one cent more than other first line windows!

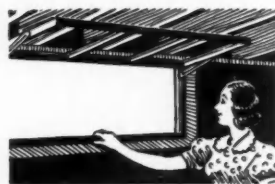
Ask your dealer to show them to you or write for descriptive literature.

V

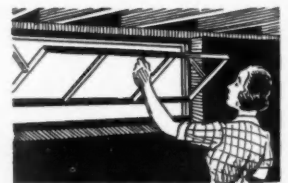
VENTO STEEL PRODUCTS COMPANY, MUSKEGON, MICHIGAN



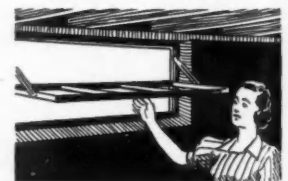
Normal indirect ventilation by simply unlocking and pulling forward.



Window opens from either top or bottom. Ventilator may also be quickly and easily removed.



Any degree of ventilation may be obtained by slight downward pull on ventilator.



Ventilator is perfectly balanced and always works easily.

VENTO manufactures a complete line of steel sash to ideally suit every building requirement and enjoys an enviable reputation for dealer cooperation.

Plumbing Industry Turns to Plastics for Shower Stalls

A SHOWER cabinet made of plastic panels is the newest contribution of the plumbing industry to the conservation of iron and steel needed in the national defense program.

The wall panels of the shower cabinet are made of impregnated plastic covered with a triple coat of enamel baked on at a temperature of 300 degrees. Tests have shown, according to the manufacturer, that panels of this material will not absorb water, do not rust, and are acid-resisting.

The only steel used in the construction of the cabinets is a heavy gauge steel for the four uprights and the top frame.

The plastic shower cabinet is made in three standard sizes with interchangeable side panels. Like all-steel cabinets, it is shipped knocked down and is easily assembled at the point of installation. All parts interlock to form a sturdy, solid, leak-proof unit. Another distinctive feature of the plastic shower cabinet is the fact that no nuts or bolts are used in the assembly of the unit.

While one manufacturer offers a shower cabinet made of fibrous plastic, another has developed a shower head made of thermal plastic. Another innovation is a closet seat with a plastic core and plastic finish. Plastics are also being used for faucets and handles for retractable rinsing sprays on kitchen sinks. Plastics made their initial appearance in the plumbing and heating industries some years ago as handles for valves and washers for faucets.

"My Old Kentucky Home" Now Better Preserved

FEW SHRINES that are dear to all Americans are being better preserved than the home of Stephen Foster where he wrote his immortal song, "My Old Kentucky Home." Located in Bardstown, Kentucky, in the midst of that beautiful blue grass country, it is not difficult to imagine how this stately old mansion could inspire him to put his innermost thoughts about home into words.

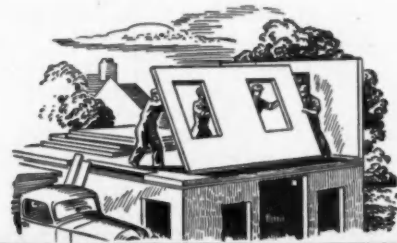
The house was built in 1795 by Judge John Rowan. The bricks came from England and were landed at Newport News, Virginia. From there they were brought over Indian trails to Kentucky in the winter on sledges, drawn by oxen.

In 1922 the house was purchased for \$65,000—raised in small sums by Kentuckians and descendants of Kentuckians in all parts of the country and by others who gave for the love of the song or in memory of Stephen Foster. It was sold to the State upon the condition that it should be forever preserved as a state shrine of "Home."

As soon as it was purchased, the work of restoration was begun. A period of 146 years is a long time for interior woodwork to withstand the ravages of climatic changes such as dryness and moisture, heat and cold. Fortunately, much of the old beauty of the woodwork could be restored. But to retain that beauty, those in charge realized that much depends on the atmospheric conditions to which the woodwork is exposed. In winter proper humidity is essential. In summer circulating air must be provided to guard against excessive moisture. After careful consideration of these requirements, Kentuckians purchased a Holland furnace installation as "the heart of this home of homes."



"FEDERAL HILL"—Where Stephen Collins Foster wrote his immortal song, "My Old Kentucky Home."



PREFABRICATION

proved by Defense Housing
gives you

KNOWN COSTS . . SURE PROFITS



Thousands of homes are now building, all over the country, to house defense workers—both military and civilian. This spectacle is making a tremendous impression on thousands of potential home owners. These comfortable... attractive... *livable* homes demonstrate forcefully to your prospects the complete practicability of prefabrication. They impress on these prospects all the advantages of this up-to-the-minute construction method.

Precision-Built Construction—pioneered by Homasote Company in 1935, and proved by \$6,000,000 of architect-designed *private* homes—is the obvious leader in the field of prefabrication. Its advantages of speed... quality... economy and permanence recommend it to builders. Precision-Built Construction—tested by the Bureau of Standards—has been made possible by the use of Homasote, the oldest and strongest insulating board on the market.

Homasote comes in large sheets (up to 8' x 14'), a factor which adds strength—and also prevents ugly batten strips and wall joints. Its use eliminates the dangers and annoyance of chipping, cracking and falling plaster. Precision-Built Homes are solid, snug buildings

—with low maintenance costs. They are thoroughly insulated, requiring only the smallest heating units.

With the completion of the National Defense Program, 67 fabricating plants—located in all sections of the country—will supply builders with Precision-Built Homes for private construction. Then, more than ever before, Precision-Built Construction will represent increased earnings, with lower costs, servicing an ever-broadening market. You will know your complete costs before you begin every job... your profits will be assured.

Today, Homasote wholesalers and retailers are cheerfully cooperating with the Defense Program—at personal



sacrifice. We are operating on a 24-hour, 6 1/2-day week, and are increasing our production facilities as rapidly as possible—in order to do our part in the Defense Program. HOMASOTE COMPANY, Trenton, New Jersey.

Weatherproof
HOMASOTE
Insulating and Building Board

Construction Industry Conference Scheduled for Nov. 6 and 7

WHAT is the 1942 outlook for contractors, builders and the suppliers of their materials in view of dislocations caused by rapidly expanding defense demands on the building industry?

To answer that question—vital to the nation's builders—the fifth annual Construction Industry Conference will be held in Washington, November 6 and 7, under the sponsorship of the Construction and Civic Development Department of the Chamber of Commerce of the United States.

Following a recent meeting of the program committee charged with completing arrangements for the conference, committee chairman Ernest T. Trigg, president of the National Paint, Varnish and Lacquer Association, announced that top-ranking government defense officials as well as leaders from private industry would address the conference. Subjects to be discussed at the meeting will include analyses of problems facing the industry in the defense construction program and in the adaptation of civilian construction to emergency conditions.

Mr. Trigg said that his committee also expected leading labor representatives of the construction industries to attend the meeting, adding that the contributions from labor delegates were very helpful at last year's conference.

The general aim of the conference, he asserted, will be to provide the building industry with a broad picture, specific in detail, of what is ahead for construction.

Annual Realtor Convention at Detroit in November

CONCERNED with all the many facets of real estate's relation to the defense program, the coming annual convention of the National Association of Real Estate Boards, meeting in Detroit at the Book-Cadillac and Statler hotels, November 4-7 inclusive, will have on its agenda, both in discussion of business methods and in recommendation for action, these among other matters of public importance: the keeping of a balanced rent situation; the

maintenance of needed home building under coming priorities; the search for substitute materials for home building to replace those going onto the critical list; remodeling of existing residential as well as existing industrial structures to utilize them for defense needs, so avoiding ghost towns to come; maintenance of sound appraisal of real estate values in a changing world; the repercussions of war preparedness and its aftermath on incomes, on ownership, on the tax structure, on national industrial distribution, on the growth of cities; accelerated need for city replanning.

19th Annual Convention Pacific Coast Building Officials Conference

INSPIRED by the theme "Preparing for City Defense in America," delegates to the 19th Annual Convention of the Pacific Coast Building Officials Conference are meeting at Hotel Mar Monte, Santa Barbara, September 30 to October 3, with Lyman L. Pope, chief building inspector of that city, acting as convention host. L. A. Ferris, assistant city engineer, Reno, Nevada, president of the organization, is presiding at all meetings.

The current world situation has influenced the planning of the program in a major way, the keynote being struck by a representative of Director of Defense LaGuardia's office as the featured speaker at the opening general session. Major William J. Fox, chief engineer, Department of Building and Safety, Los Angeles County, leads a symposium on the subject of "The Defense Program and the Building Official."

A feature of wide interest on the closing day of the convention is the Round Table led by L. A. Ferris on the subject "A National Building Code," at which time George N. Thompson, chief of the Division of Codes and Specifications of the United States Department of Commerce, Bureau of Standards, participates actively in the discussions.

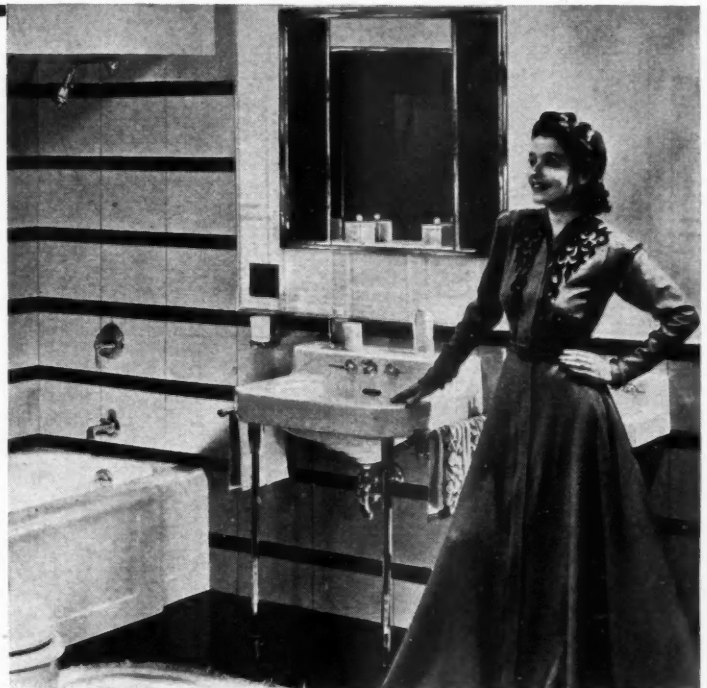
The Pacific Coast Building Officials Conference, as the name implies, is an organization of building officials. Its primary work is that of maintaining and promoting the Uniform Building Code, building ordinance in effect in 295 cities throughout the United States.

MIAMI CABINET ENSEMBLES

MAKE YOUR BATHROOMS THE SHOW ROOMS OF YOUR HOUSES

MIAMI Cabinet Ensembles incorporate the highest quality plate glass mirrors—frames of polished chrome—the artistry of modern lighting . . . provide extra recessed shelves for towels—space for the private supplies of individuals—advanced features that widen their usefulness and enhance their beauty.

After all, fine bathrooms *deserve* MIAMI Cabinets. They lead the world in originality. Offer a wider selection of styles—over 140 distinctive models. Install MIAMI Cabinets and Accessories for more beautiful bathrooms. Send for Catalog. Address Dept. AB.



BATHROOM BY KOHLER
Cabinet is The Miami Imperial

The Imperial is the most luxurious cabinet in the line. Large recessed center mirror flanked by spacious side cabinets. Indirect lighting. Chrome frame around entire cabinet.

MIAMI CABINET DIVISION • THE PHILIP CAREY MFG. CO. MIDDLETOWN, OHIO

Compact Heating Equipment Aids in Metal Conservation

THE TREND in heating equipment in recent years has been toward lighter and more compact units, thus reducing the tonnage of iron and steel required, and releasing metal vital to national defense, the Plumbing and Heating Industries Bureau points out.

Radiators are 40 per cent smaller and boilers are less bulky, thus conserving metal. The advent of the small, midget-size boilers and the tiny junior-size radiators is typical of the trend toward compactness in the heating industry.

Convectors neatly tucked in the walls are so designed that the maximum of heating surface is obtained with the minimum of metal.

Particularly significant in connection with the conservation of raw materials are the innovations in the design of the piping for hot water heating plants. With the advent of forced circulation, heating contractors have found it possible not only to use pipe of much smaller diameter but to use single-main systems instead of double mains. By means of special fittings, the hot water which flows to the radiator and the colder water which returns to the boiler are made to flow through the same pipe.

The trend toward compactness in heating plants has been accentuated by the more general use of insulation in the walls and ceilings of houses.

New boilers and radiators are more efficient and more economical than older models and for this reason the replacement of equipment which uses excessive fuel is advisable in the interest of economy and fuel conservation.

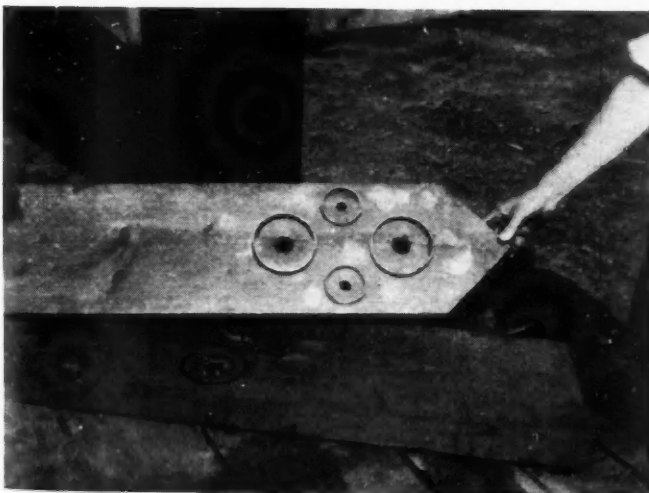
Big 4 Railroad Tests Treated, Prefabricated Timber

AN interesting experiment at the American Creosoting Company's Indianapolis plant, prominent railroad engineers recently satisfied themselves that prefabricated timber may be effectively treated without appreciable distortion.

The Big Four had under consideration using Teco-connected, prefabricated timber roof trusses in its Bellefontaine, Ohio, roundhouse, but the engineers were fearful that treating might cause irregular swelling in pre-grooved and pre-bored timbers.

The test, which settled all doubts, consisted of taking full-sized members of one complete timber joint, designed for the Bellefontaine roundhouse, cutting the ends of the members to exact shape, boring all necessary bolt holes and grooves for ring connectors. These timbers were then subjected to creosoting in accordance with the standard practice of the American Creosoting Company for railroad timbers . . . in this case approximately ten pounds of oil per cubic foot of lumber, applied at 50 to 60 pounds of pressure. The lumber used was structural grade yellow pine in accordance with A.R.E.A. specifications.

Examination after treatment revealed practically no irregularity in the grooves due to swelling. Grooves were about 1/32" to 1/16" larger in diameter across the grain than parallel to the grain, a negligible distortion, so slight that no further fabrication was necessary to assure easy assembly.

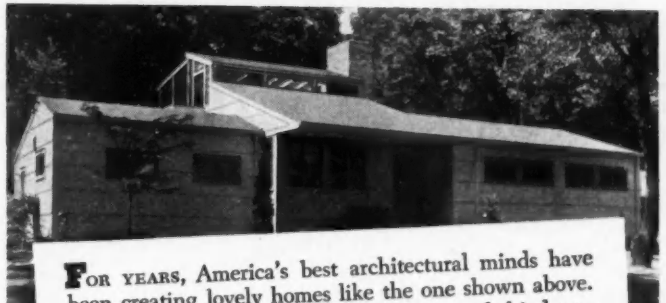


TRUSS timbers bored for connectors and then creosote-treated.



WHEN UNCLE SAM NEEDS HOUSES IN A HURRY . . .

PRESWOOD* GOES TO WORK!



FOR YEARS, America's best architectural minds have been creating lovely homes like the one shown above. Many architects, including the designers of this beautiful house, used Tempered Presdwood, the durable Masonite* wood-fibre hardboard, for all-weather outside walls. In this marvelous modern material they found light weight combined with tremendous structural strength . . . an extra-hard, marble-smooth and grainless moisture-resistant surface.



UNCLE SAM is building Tempered Presdwood houses too. (And his needs come first these days.) In fact, for the hundreds of buildings the Government is sprinkling across the country to house additional radio facilities for the nation's increasing air traffic, Tempered Presdwood is the standard material for outside walls. And many of the prefabricated houses the Government is rushing to completion for defense workers and service men employ Tempered Presdwood inside as well as outside. If Masonite Corporation or your Masonite dealer cannot supply all your normal needs, it is because these as well as many other National Emergency requirements are being so ably filled by Tempered Presdwood.



MASONITE PRESWOOD PRODUCTS

The Wonder Woods of a Thousand Uses • Sold by Lumber Dealers Everywhere

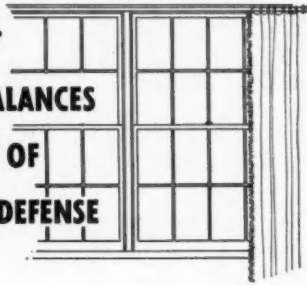
*TRADE-MARK REG. U. S. PAT. OFF. "MASONITE" IDENTIFIES ALL PRODUCTS MARKETED BY MASONITE CORPORATION. COPYRIGHT 1941, MASONITE CORP.

MASONITE CORPORATION, Dept. AB-10, 111 W. Washington St., Chicago, Illinois
I would like to examine Masonite Tempered Presdwood. Please forward a sample without cost.

Name _____
Address _____
City _____ State _____

If you live in Canada, address Masonite Company of Canada, Ltd., Gatineau, Que.

EVERY HOUSE BUILT
WITH PULLMAN BALANCES
SAVES 334 POUNDS OF
IRON AND STEEL FOR DEFENSE



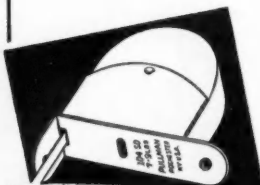
IT'S the patriotic duty of everybody in the building industry to help the United States save iron and steel for defense. How important are windows? An estimated 600,000 dwelling units will be built within a year. Figuring 15 openings per house, 225,000,000 pounds of iron and steel would be required for weights, chains and pulleys, if that construction were used. Pullman Balances for the same houses would weigh 24,600,000 pounds. That shows an obvious way to save 200,000,000 pounds, as well as the men, machines, and transportation facilities required to fabricate and ship it. Enough for three first line battleships—or 2,500 40-ton tanks. Just from windows!

PULLMAN BALANCES MEAN
BETTER CONSTRUCTION
AT LESS COST, TOO

When you offer homes with double-hung wood windows, Pullman-balanced, you save steel for America, and you offer the modern better construction. With Pullman Balances, you use the wanted narrow trim. You get smooth counterbalanced action, quick, easy installation, simpler plank construction, guaranteed performance.



Take your customers to the nearest dealer who features a demonstration unit of a Pullman-balanced window. You see and show the advantages of this modern low cost window construction.



Specify Window Units with
PULLMAN Sash Balances

Heating Interests to Meet in Philadelphia

LEADING manufacturers of heating, ventilating and air conditioning equipment are making active preparations to cooperate in the 7th International Heating & Ventilating Exposition, in Philadelphia, which has taken on greatly increased importance because of the urgency of the national war-conditioning effort. The exposition will be held in Commercial Museum, January 26-30, next.

It is a biennial event, held under the management of the International Exposition Company, of New York, of which Charles F. Roth is president, and early bookings are the rule. This year the attitude of a majority of exhibitors is reflected by the fact that as of September 1, 80% of the available space has already been allocated.

Coincident with the dates of the exposition, the American Society of Heating and Ventilating Engineers will convene its 48th Annual Meeting, which is expected to be the biggest and most important in the Society's history. The National Warm Air Heating & Air Conditioning Association and other organizations are also planning to hold meetings at the same time.

Hughes Fights Proposed Tax on Electric Appliances

TESTIFYING before the Senate Finance Committee regarding the proposed Excise Tax Bill (HR 5417), George A. Hughes, Chairman of the Board of the Hotpoint Company, pointed out what appears to be unintentional discrimination against electric stoves in that section of the bill covering electric appliances, and against electric water heaters, mentioned specifically in the bill.

Mr. Hughes suggested that the draftsmen of the bill, having referred to the 1939 census of manufacturers, had, without realizing it, included certain necessary items of electric equipment because the census classifies them as "electric appliances." He asked that the intended bill be clarified to show whether it is intended to put a tax on all cook stoves, regardless of the fuel they use. He added that the Office of Civilian Supply is applying their requirements to the stove industry as a whole.

Two alternatives were suggested by Mr. Hughes as means of eliminating the apparent discrimination against electric stoves: (1) that the clause in question be changed to read: "Electric table appliances of the type used for household cooking, warming, or keeping warm, food or beverages for consumption on the premises"; or, (2) that a much lower tax on all cook stoves replace the 10% tax on electric cook stoves. He pointed out that the latter course could materially increase revenue from the bill without imposing unfair burdens on individual manufacturers and the buying public.

In connection with that section of the bill applying to electric water heaters, Mr. Hughes said: "If it is necessary to produce revenue from taxing household hot water supply systems or appliances, then please apply the same percentage of tax to all kinds." He pointed out that discriminatory tax on electric water heaters would provide the Government with only little more than 1/3 of the total revenue available from an equal tax applying to all water heaters. He explained to the Committee that electric water heaters are no more a luxury device than are other forms of water heating apparatus, and showed how their safe, efficient and low cost operation make them a practical necessity.

Mr. Hughes showed further that the bill as now drafted discriminates against the public welfare. He said: "For example, I believe you will be interested to know there are over 8 1/2 million homes wired for electricity which do not have city gas. Should these homes be penalized, compared with their urban cousins?"

He referred specifically to those twenty cities where the Committee Senators have their homes, three of which have no city gas, and in all of which the cost of electric cooking is low.

Mr. Hughes called attention to the fact that the entire rural electrification program would be handicapped by a discriminatory tax on electric ranges and water heaters.

He pointed out that use of electric ranges should be encouraged in time of national emergency because:

- (1) They save time and labor, conserve vitamins in foods; are safe, clean, and economical.
- (2) They use less steel and iron by weight than other types of stoves.
- (3) They conserve transportation facilities—40% use electricity generated by water power, thus saving hauling other fuels.


Private Enterprise Building 88% of New Homes

THE PRIVATE building dollar, as contrasted with the subsidy of public treasury funds, has provided for 88 per cent of the new residential building in urban areas of the United States, including defense-crowded cities and towns, the first five months of this year. These figures are cited by Morton Bodfish, Chicago, executive vice president of the United States Savings and Loan League, as evidence of the thorough support which savings and loan associations and other private sources of mortgage funds are giving to the Defense program.

He emphasized that many localities where defense contracts have been awarded are not faced with any housing shortages or with any government-financed housing units to date because of the big job done by the private building industry, from the financing source on along to the sub-contractor in those localities.

In May private money was responsible for 91.4 per cent of the new home building, the largest slice it had furnished in any of the first five months of the year.

Mr. Bodfish recalled that \$636,683,000 was spent on building new shelter in cities above 2,500 in population between January 1 and June 1, and that it provided 176,750 new places to live. Private sources of money supplied \$560,209,000 and 151,094 of these units of shelter.



We Appeal to You OUR PRESIDENT

You talk direct to us, the people, when you have matters of vital importance to the welfare of our country. Now we, some of the people, wish to talk direct to you on an issue of vital importance, not only to us, but to many millions of others and to the success of our country's "all-out" defense crusade for democracy. We appeal to you to see to it that the building of small homes for private ownership is kept alive during the defense period insofar as such building serves defense.

Our livelihood comes from home building. But it reaches far beyond our selfish interest. It dips down deep into the very roots of the American way of life which, under your leadership, we are creating ourselves to defend. It is part and parcel of personal liberty. It is home ownership and family life. It is life to a place of American living. It is a place where the things men willingly fight for.

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NIAGARA FRONTIER BUILDERS' ASSOCIATION

ABOVE is a small reproduction of a good sized advertisement which ran in two Buffalo, N.Y., newspapers as the first of a campaign by The Niagara Frontier Builders' Association of that city to show the importance of private home building to defense.



HUTTIG WINDOWS

TRADE MARK
REGISTERED!

RED-E-FIT ROT-PROOF -REZISTAL- TREATED

WILL PASS
ANY
INSPECTION!

Made of Ponderosa Pine

GUARANTEED FOR 25 YEARS AGAINST ROT AND DECAY!

In these days of Long Term Loans for home building, long life windows are essential. Inspections are rigid. Huttig Red-E-Fit Rot-Proof Windows with special treatment (identified by brand shown above) meet the most exacting requirements. This special treatment prevents absorption of excessive moisture—protects against wet weather and high humidity—prevents excessive swelling that causes "sticking" windows—eliminates undue shrinkage and expansion—prevents blue stain or black mould from developing—protects against all types of decay, also Termites.

Painting cost is reduced because this special Huttig treat serves as a preliminary priming coat and gives full protection until regular paint coats are applied. You can identify these windows by the above trade mark electrically branded on each sash.

Ask your Dealer or write us for free descriptive literature.



Get a FREE copy of "OPEN HOUSE." This 32-page book will help you sell homes with Ponderosa Pine Woodwork.

HUTTIG MFG. COMPANY

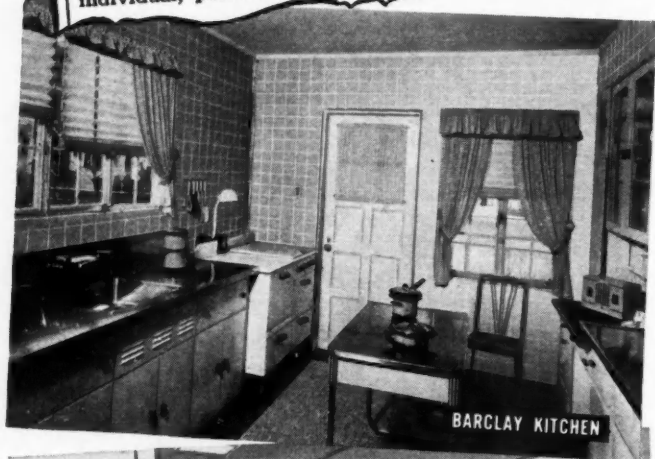
Muscatine Iowa

PLASTIC-COATED WALLBOARD A DEFENSE NEED

BARCLAY A "PREFABRICATED WALL"

Filling a vital need for efficient building materials, Barclay has developed a tileboard that is a low-cost, virtually prefabricated wall or ceiling! In Defense Housing, especially, Barclay Tileboard means a factory-finished wallboard that is easily and simply installed with extreme speed—and with minimum labor!

Barclay's plastic-coated, glass-like surface has been toughened to give years of enduring service. It eliminates constant redecoration . . . does away with ever-recurring cracked walls and ceilings! Made in 3 attractive surface patterns and a wide variety of color combinations, Barclay makes even the standard-plan home individual, personal!



BARCLAY SPEEDS DEFENSE HOUSING
 Kitchen above: Yellow & White Tileboard; Yellow Panelboard ceiling. Bathroom: gleaming White Panelboard on right wall, shower & ceiling; Royal-Bl. over tub.

Progressive Building Material Dealers everywhere stock Barclay Tileboard!
 Our Catalog in SWEET'S is Up-to-Date!



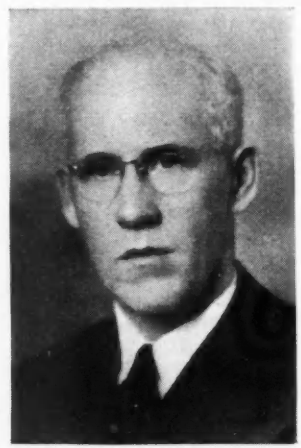
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 BRONX, NEW YORK

Housing in the Post-War Era

By Paul Endicott*

President United States Savings and Loan League

IT IS common talk today that we are going to live in a different world after the war, as if everyone would be doing something different from his present occupation for a living when peace comes. There are millions of us in businesses of one sort or another, however, who would rather keep the jobs we have. It has been my observation that men involved in building, whether in selling building supplies or in contracting and actual building in all its ramifications, enjoy their occupation. They like it, just as I like the running of a financial institution which lends money for people to buy and build homes.



PAUL ENDICOTT

Therefore, suppose we take a look at the present and the future of building as an industry composed of the many small, independent units which now characterize it, of the men who relish this job of selling, and of creating homes. That kind of a building industry depends on the continued domination of the housing field by private enterprise. The big 400 to 500-unit government housing project doesn't do much to increase the business of the material dealers in the community in which it is built, except for odds and ends here and there which somebody forgot to order from the big retailers or wholesalers who handled the job. If a local contractor should happen to get one of these contracts he finds himself so surrounded and entangled by the red-tape of plans made by a staff several hundred miles away and by the arbitrary decisions and unavoidable delays of such a set-up that his profits dwindle and he begins to doubt the wisdom of having taken the job at all. He isn't too likely to try it twice.

All this has not been a very serious menace to the individual units of the building industry to date. After all during the seventeen months between January 1, 1940 and May 1, 1941, private residential construction accounted for \$1,766,163,000 of contracts, while public construction was doing only \$273,521,000. By number of units, we have seen private enterprise putting up new shelter for 599,302 families while public construction accounted for less than a seventh of that number. Public housing has not been sufficient in most localities these last few years to make itself felt seriously by the community builder.

But there is a real reason why we should think more about this today. Some influential and persistent people are planning a different situation after the war. All you need do is to study the plans of the people who are most "housing-conscious" in this country. They have elaborate visions for the post-war period, for rehousing America, for taking up the slack in employment which will come after the armament boom dies down by spending billions on new places to live. Building these new residential units for people to buy and occupy as owners isn't very prominent in their thinking. Already the enthusiasts about public housing feel that the middle third of the population, middle as to income and standard of living, that is, will have to be housed at least partially by public construction.

This, as we all know, is the entering wedge which they hope to drive in order eventually to put all of that middle third of the population in government-owned housing projects which provide, with subsidies from the public, not only housing accommodations but elaborate plans for living arrangements all the way from organization of clubs and recreational facilities to tenant training. They are planning a giant housing program which will be embodied in multi-unit affairs, which means materials ordered in large quantities from central sources, and building directed from Washington even if by way of the local housing authority. If this program is actually let loose on the country, the builder and the building materials merchant will really find that the world is mighty different after the war.

This doesn't have to happen. Just because some people with influence and tenacity are planning something is no reason why people who are in fact much more numerous and who think dif-

ferently shouldn't be planning an opposite attack. It does seem rather imperative, though, that those who do not want the public housing plan to eventuate should be thinking and organizing and cooperating with others who have the same idea. The goal of such thinking and planning would be an alternate plan for housing after the war, an alternate plan for private enterprise to do as big a job of taking up the slack in employment, of keeping money in circulation, of putting people in better places to live as public housing ever could.

There are many elements which have to go into such a plan. Certainly the keeping of financing costs low is imperative if any private enterprise system is going to succeed with the American people in the future. I mean not only the direct costs of financing such as interest and commissions, even service charges. I refer also to the incidental or hidden costs of outmoded mortgage systems, with their refinancing charges and such. The monthly cost of home ownership must be maintained at a low level through long term loans without necessarily involving the credit of the United States government to guarantee the lender against loss. In a period when the resources of the country have been strained to new limits to provide armaments over a number of years, it would seem necessary to relieve the government of any expenses or risks in connection with the private financing of home ownership. That is one of the goals which any private enterprise plan for post-war home building should keep ever before it. For a third thing, the plan of private enterprise must come to grips with the problem of instability in the real estate market. Machinery should be included which will be effective in eliminating booms, for that is a corollary to eliminating depressions. And we in the building business know that depressions are fertile ground for attacks on private enterprise, unjustified though they may be.

This era will demand of private enterprise methods of producing housing better and more cheaply. Of course this problem has confronted the industry for many years past and some headway has been made here and there in solving it. But the answer is still not in sight. Ideas such as maintaining an annual wage in the building trades in order to reduce the cost of production have not been exhausted, have not been thoroughly studied or experimented with, as a matter of fact. Certainly a basic philosophy to be

tried out in such a period of demand for less expensive home building is the dependence on a reasonable return to the building industry based on volume all along the line, rather than on high mark-ups for large profits on small volume.

This very much needed program for post-war private enterprise housing must also face the problem that some buildings in this country have lived too long and can easily approach the slum status. An effective way to enforce sanitary codes for dwelling units would put economic pressure on the owners either to tear those houses down or to completely rehabilitate them. A search for such an effective piece of machinery should be under way right now.

Let's remember that private enterprise has been accused of blindness to the obvious sequence of events, in years that have passed. The accusation, if justified, is by no means inherent in the system. Private enterprise in the building industry can plan ahead, cooperate, swing its many units into logical, strategic action and save the great majority of the communities in America from public housing. But it will have to have a plan. It will have to act as a unit. It will need to be willing to put up a fight and make some sacrifices if need be to preserve something we think is an essential part of the American way of life.

*Mr. Endicott is president of the \$8,000,000 Home-Builders' Loan Association, Pomona, Calif., in addition to being 1941 president of the national organization.

"Experimental Homes" Projected by USHA

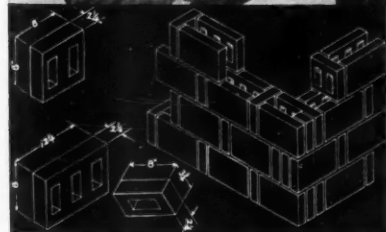
MOVABLE closets, built-in bunks, curtain tracks in ceilings, and second floor balconies are some of the unusual features incorporated in plans for twelve experimental homes to be built for defense workers at Bethlehem, Pa.

The project, being developed with Lanham Act funds under United States Housing Authority supervision, will occupy part of the site on which the "Parkridge Homes" defense project of 168 dwellings is now under construction.

The experimental project will consist of two one-story, one-family dwellings, one two-story, four-family structure and one two-story, six-family building. All will be of wood frame construction with flat roofs and asbestos siding.

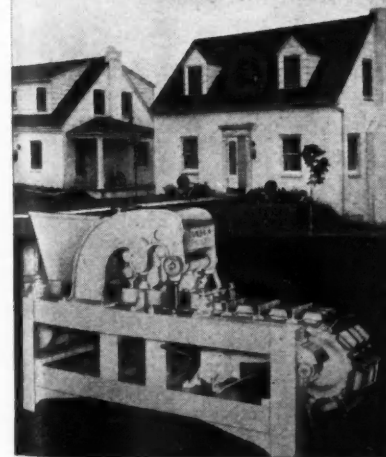


How Sumpter Solves HIGH PRICES AND MATERIAL SHORTAGES



Are you hampered by delays, rising material prices, uncertain quality? Mr. W. A. Sumpter solved these problems by producing his own materials.

He makes DUNBRIK a lighter weight, lower cost brick of greater strength, lower absorption, and DUNSTONE a double and triple brick that enables him to build fire and vermin proof walls at cost level of frame. Many of today's largest Defense Projects are using millions of DUNBRIK and DUNSTONE.



You, too, can solve your problems and increase your building profit. We will equip you with a modern line production plant that can be operated with a small crew. You use local raw materials available in every locality, and make products in a range of over forty beautiful colors, shades and textures.

Modest investment starts you. Terms can be arranged, and your territory will be protected by franchise. Write or wire today for free books that tell the complete story.

W. E. DUNN MFG. CO.

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HOPE'S

BONDERIZED STEEL

HOLFORD

CASEMENTS



RESIDENCE LONG ISLAND, N. Y. HOLLIS HILLS, INC.
Ira Bernkopf, Builder Lester Maxon, Arch't.

FOR SMALL HOME BUILDING
AND LOW COST HOUSING



BLUE GRASS PARK AND ASPENDALE PROJECTS
LEXINGTON, KY. U. S. HOUSING AUTHORITY

MANY BUILDERS ARE NOW EXPERIENCED IN THE USE OF HOPE'S HOLFORD CASEMENTS IN LARGE BUILDING OPERATIONS BOTH FOR APARTMENT DWELLINGS AND FOR THE BUILDING OF SMALL HOME SUBDIVISIONS. ● THESE BUILDERS KNOW THAT HOLFORD CASEMENTS GIVE MORE SATISFACTION TO THE OWNER OR OCCUPANT AND THAT COSTS ARE LOWER THAN OTHER TYPES OF CONSTRUCTION. THERE ARE SAVINGS BOTH IN THE PURCHASE PRICE OF THE WINDOWS AND IN THE LABOR COST OF INSTALLATIONS.

Write for Catalog 68

HOPE'S WINDOWS, Inc.

Jamestown, N. Y.

PRODUCERS TELL US—

About Products, Personnel, Plants

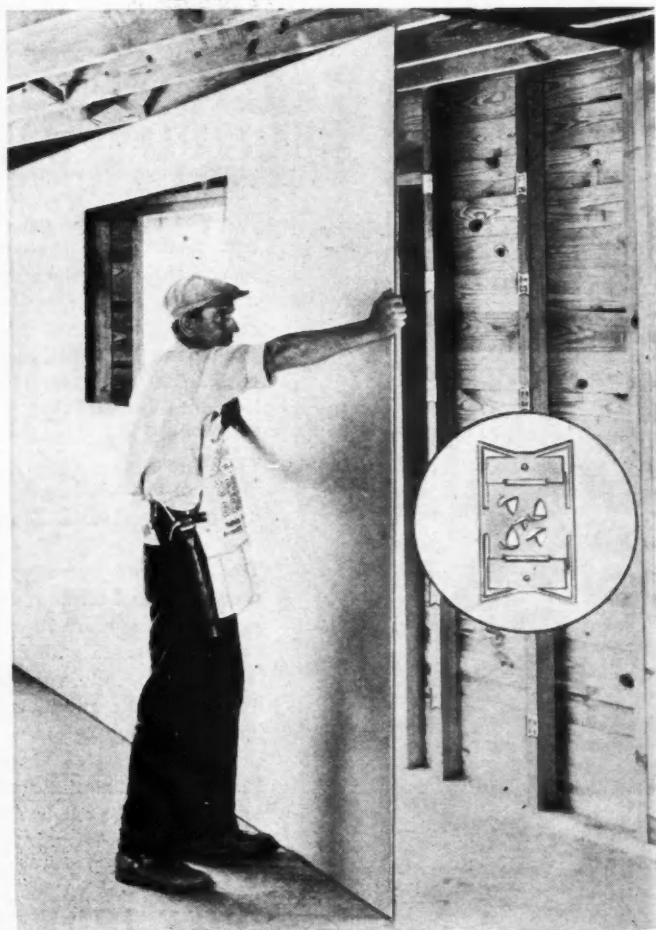
Upson Fastener and Giant Panels Speed Home Building

IN THE OPINION of many contractors and builders who have watched progress in dry construction with a more or less quizzical attitude since its beginning, recent developments in this field have so revolutionized dry building that their earlier doubts are fast disappearing.

Results of a survey recently made among contractors by the Upson Company, Lockport, N. Y., show that the chief reasons for reluctance to use such materials in the past were their tendency to warp and buckle, and the visible nail heads which were necessary. The consensus now is that with the elimination of surface nailing, warping and buckling—through scientific application with the Upson floating fastener—there is clear sailing ahead for dry construction.

When the prongs of the fastener penetrate the panel from the back and bend together, the panels are gripped so firmly that they cannot come loose. Panels applied with this fastener remain flat and secure. Warping and buckling due to slight shifting of the frame-work as a result of structural settlement, expansion or contraction are eliminated by the "floating" principle. This allows the panels to move slightly up or down or from side to side as they adjust themselves to the movement.

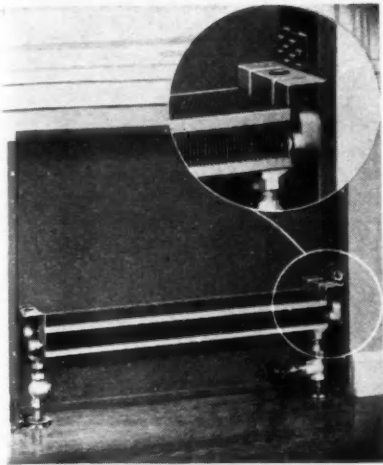
The fastener permits speed in the construction of dry-built homes. Application of the Upson strong-built panels, especially the giant 8 x 14' size, is greatly facilitated by the use of the fasteners. A time study in one large housing project shows that all ceilings in a five-room house could be put up in 1 hour and 50 minutes.



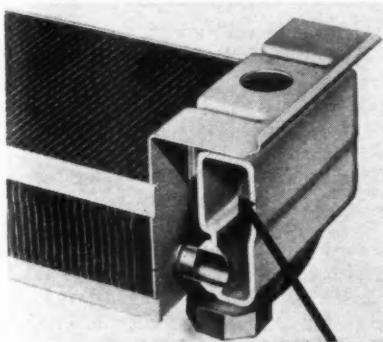
UPSON giant-size wall panel being applied with invisible fasteners.

Announce New Modine Convectors

OUTSTANDING developments in the design of enclosures and heating units distinguished the new line of convectors announced by the Modine Manufacturing Co., Racine, Wis.



CONVECTOR with adjustable support.



ARROW indicates built-in air chamber in new unit.

Four different types of heating units, specifically designed for the four popular types of heating systems, are offered. These include the "Hiflo" for 1-pipe and gravity hot water; the "Turboflo" for 2-pipe forced hot water; the "Standard" for vapor and vacuum steam; and the "Quiet-Seal" for 1-pipe steam.

A built-in air chamber on the new hot water heating unit eliminates the need for purchasing and installing accessory air storage equipment.

Enclosures have built-in heating unit supports that permit manual pitching of units at several different elevations and degrees of pitch. Heating units can be installed or removed from enclosures without the use of tools, saving labor time.

All heating units are shipped to the job, in their enclosures, simplifying installations.

Recessed enclosures are designed to permit the setting-in of fibre-board insulation between sheathing and enclosure back, on the job.

The Modine manually installed enclosure front, and Parker-Bonderizing of enclosures for paint retention and rust protection are features retained in the new convector line.

Small Home Boiler Burns Coal or Oil

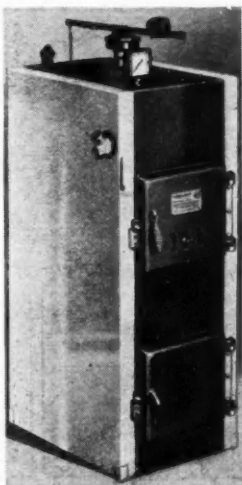
A NEW "A" boiler, engineered for the modern small home, is being announced by the Kohler Co., Kohler, Wis. Advantages of the "A" boiler include its fuel-saving "wet base," long flue passages, and built-in domestic water heater.

Answering in particular the need of low-cost home builders desiring radiant warmth, the "A" is a general purpose boiler burning oil or coal equally well.

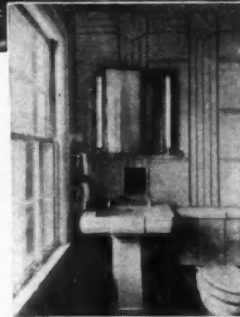
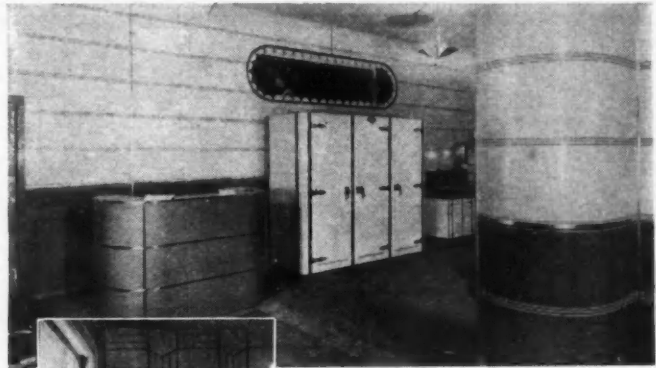
Water in this Kohler boiler circulates completely around the firebox, this "wet base" feature preventing heat loss to the floor or around the base, and making fireproofing of floor unnecessary.

The type "A" can be installed without its heavy steel jacket to heat the room in which it is located. The unusual three-point support assures a steady bearing on any kind of floor.

The boiler's design is compact, making it suitable in homes where space is at a premium. Nevertheless, flue passages are long—an efficiency feature that forces high heat extraction.



KOHLER'S new boiler.



Walls
that
express

INDIVIDUALITY and CHARM

Miracle Walls by TYLAC flatter the builder and the building because they present an economical way to create beautiful, individual effects of exceptional permanence. TYLAC lends itself perfectly to a wide variety of plans—classic dignity or colorful, rhythmic, streamlined gayety.

Four basic patterns offer the ultimate in freedom of design—plain unscored panels, scored sheets, tile patterns or accurate reproductions of wood grains and marble. TYLAC sheets 4' x 4' to 4' x 12' are easily applied over any surface, old or new, flat or curved.

TYLAC is permanently pre-decorated at the factory, needs no painting or varnishing, no refinishing. It will not chip, crack or craze, and is not damaged by hot water, fruit juices, fats, oils, household acids or alcoholic beverages. It's the wall covering safe for shower specifications.

TYLAC is the smart covering for resident or commercial walls, cottage or mansion—for new buildings or modernizing jobs.

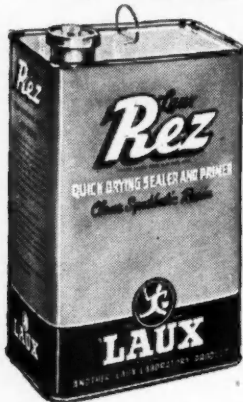
Sold by dealers everywhere. Write for full information.

Miracle Walls
by TYLAC

TYLAC COMPANY, MONTICELLO, ILLINOIS



...for
**MILLWORK
MUMPS-**



use
REZ

TRADE MARK REG. U. S. PAT. OFF.

SWELLING and BINDING due to moisture absorption in millwork or any wood material (sash, doors, floors, trim, plywood) can now be controlled by first applying Laux REZ in plant or on the job.

This unique synthetic resin sealer is especially formulated to penetrate into the wood fibre. It leaves a tough, water-repellent barrier on all cell walls, thus controlling moisture absorption... and the swollen wood, the grain raising, the loss of dimension that inevitably result. Also, Laux REZ contains a potent toxic that prevents fungus growth, stain and decay. (REZ is quick drying and may be painted or stained over perfectly.)

Apply REZ with brush, saturated cloth, spray or dip treatment... get positive, low-cost protection against wood's two enemies, Moisture and Decay. Paint, hardware, and lumber dealers can supply REZ... or write your nearest Laucks office for full information.



Don't Forget...
**Rustproofing for Metal
REZ for Wood!**

REZITING—Industrial Wood Treatment

FREE to manufacturers of sash, doors, plywood, and other wood products... a descriptive brochure of Laucks complete series of low-cost wood treatments for plant application... among them water-repellent, toxic preservatives that meet requirements of National Door Manufacturers Association and Western Pine Association. Write today to your nearest Laucks office.

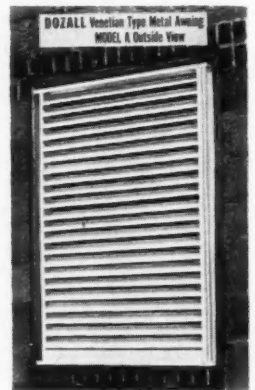
I. F. LAUCKS, Inc.

Seattle — 911 Western Ave. Chicago — 6 N. Michigan Blvd.
Los Angeles — 859 E. 60th St. Vancouver, B. C. — Granville Island
Portsmouth, Va. — Commerce and Broad Sts.

New Metal Awnings of Venetian-Type

INTERESTING new specialty for homes and commercial buildings is the Dozall Venetian-type metal awnings for windows and porches, developed by Industrial Div., Cleaners Specialties, Inc., 5204 E. 15th St., Kansas City, Mo. This company is advertising for salesmen and distributors to take up this new building specialty and introduce it on an exclusive territory basis. An attractive illustrated circular is available showing just what this metal awning is, how it is installed, and how it operates.

The model A Dozall, as illustrated, gives permanent protection against sun, heat, cold, storms and burglars. Both the models A and B provide light-controlled vision and good ventilation. They give long service and need not be removed winter or summer. Ample provision is made against rattling or banging and it is said that window washing is easily managed behind these metal awnings.

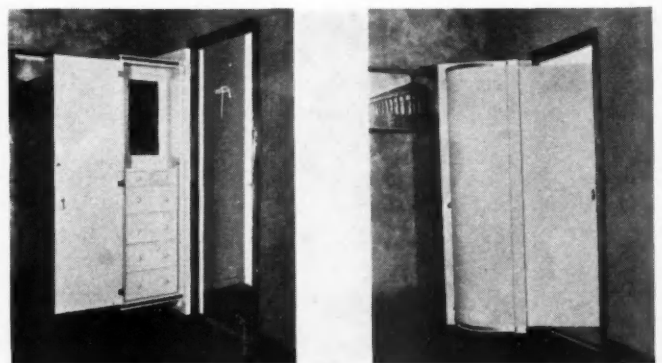


NEW metal awning.

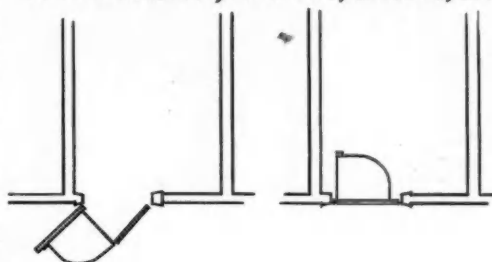
"Expander" Increases Living Space

A NEW opportunity for "tenant appeal" and for solving the problem of complete living facilities in limited space is offered by a new device called "Expander." It was designed by a prominent firm of New York architects and is offered by Expander, Inc., 221 W. 57th St., New York City. It is installed on the inside of a closet or other door and provides some fifteen cubic feet of storage space in the form of a wardrobe for hanging coats, suits, dresses, etc., and a linen closet with drawers and shelves. A bureau unit with drawers, shelves and mirror makes an ordinary closet into a private dressing room with facilities for the complete toilet. And there are even a kitchen cabinet unit and a bar unit.

The "Expander" can be easily and quickly attached to any ordinary door and is entirely hidden when the door is closed. It occupies only two and one-half square feet of floor space. These units seem to provide builders and building managers with a practical and effective attraction for prospective purchasers or tenants. For example, the bureau unit, when used on the living room closet door provides a private dressing room for overnight guests in the home without a guest room. If two units are used on a double door closet a very attractive and useful boudoir or dressing room is formed. In a one-room apartment this makes the one room substantially the equivalent of two.



FOR BATHROOMS, KITCHENS, CLOSETS, ETC.



ABOVE, left: "Expander" open; right, used as screen.

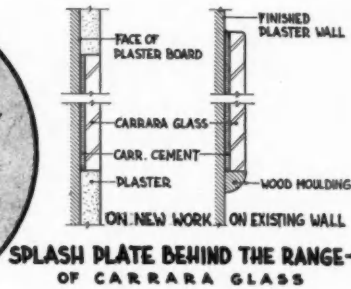
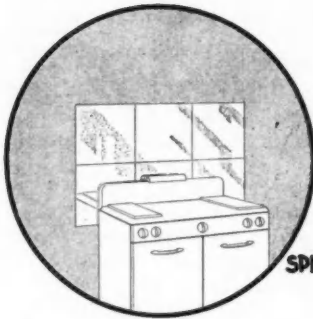
Presents Ideas on Use of Glass in the Kitchen

THE KITCHEN has been rightfully called the workshop of the home, and therefore, any innovations to make this busy room an easier place in which to work, are enthusiastically received.

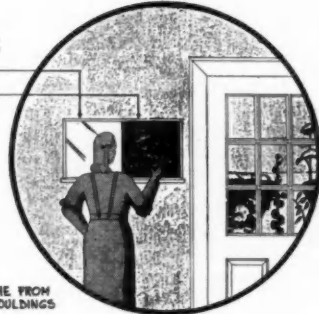
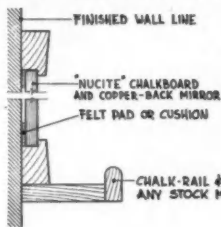
Two new ideas for the use of glass in the kitchen are presented in the July-August issue of "Pittsburgh Plate Products" (Pittsburgh Plate Glass Co., Pittsburgh) and reprinted here. They are effective and inexpensive—a splash plate behind range, and a double purpose panel.

The splash plate of Carrara serves to protect the wall area behind the stove from grease spots which are so difficult to remove. The Carrara surface is impervious to staining and crazing, and is easily cleaned with a damp cloth.

A combination mirror-chalkboard, a double-purpose panel, will appeal to every housewife. Here on one panel is a very handy memorandum surface, and a mirror for the last minute touch-up before sitting down to dinner. The Nucite chalkboard section can be had in green, ivory or black colors.



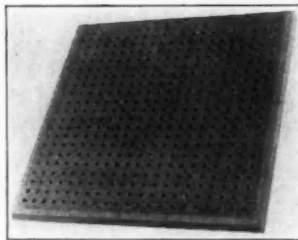
DOUBLE PURPOSE PANEL: TOUCH UP MIRROR AND GLASS MEMORANDUM BOARD



DETAILS of glass features for kitchens.

"Cushiontone" Offered

A NEW low-cost acoustical material which possesses an unusually high degree of sound-absorbing efficiency has been perfected by the Building Materials Division of the Armstrong Cork Co., Lancaster, Pa. Made of a special-density fibrous composition, this material is called "Cushiontone." Four hundred and eighty-four deep perforations per square foot give it high sound-absorption values at all standard frequencies, while its noise-reduction coefficient reaches as high as 75%.



ARMSTRONG "Cushiontone"

Three standard thicknesses are available, 1/2", 5/8", and 3/4". Standard unit sizes are 12" x 12" and 12" x 24". The material may be installed on any rigid level surface, while the 3/8" unit may be erected to furring strips by nailing.

Because it is light in weight, Cushiontone requires no extra wall or ceiling reinforcement before installation. Although its standard Ivory color blends well in most cases, the material may be refinished to harmonize with any decorative scheme.

MESKER STEEL SASH

gives you at least
35% MORE QUALITY
for your money

** Based on Sworn Facts taken from the 1940 SWEET'S CATALOGUE*

No other Steel Sash gives you
all these important features!

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2. Rust-proof bronze bearing malleable cup-pivots*
3. Vertex corners on all weathering bars*
4. One-piece outside glazing section*
5. Frame corners riveted and welded
6. Ventilator corners riveted and welded
7. Frame bars a minimum of 1 1/2" in depth
8. Ventilator bars a minimum of 1 1/8" in depth
9. Muntin bars a minimum of 1 1/2" in depth
10. Muntin joints interlocked and welded
11. Cam lock in addition to push bar
12. Minimum 3/8" anchorage in masonry
13. Available with wrought iron* sills or all wrought iron
14. Available with phosphate rust-proofing

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Ready Reference STEEL SASH MERIT-METER

Proves Mesker's Superiority

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also the **VISUAL-TEST KIT**

helps you SEE, FEEL and KNOW the difference in Steel Sash quality

... more than a "lucky accident" these fourteen features are the result of years of painstaking research. They're the fourteen reasons why the value-wise building industry is daily turning more enthusiastically to MESKER.

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Without obligation send us: Ready Reference Steel Sash Merit Meter
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Firm Name _____
 ARCHITECT BUILDER DEALER

Address _____
(GIVE STREET ADDRESS OR P. O. BOX NO.)

City _____ State _____

9AB-101

Marlite HELPS SPEED UP DEFENSE HOUSING



Marlite SELECTED FOR
408 Kitchens and Bathrooms
at Great Lakes Naval Air Station

● The selection of Marlite for kitchen and bathroom walls in Enlisted Men's quarters at Great Lakes Naval Air Station is ample evidence that it meets the exacting requirements of defense housing supremely well. Evidence too, that these advantages of Marlite pre-finished Wall Paneling enables you to put extra value, charm and utility into the homes you build for defense.

EASY INSTALLATION. Carpenters quickly cut wall-size panels to proper size and apply.

ECONOMICAL in first cost. No periodic refinishing.

EASY TO CLEAN. Glass-smooth surface offers no "grip" for dirt.

PRE-FINISHED at the Factory. No painting on the job.

OVER 100 COLORS AND PATTERNS to choose from.

Ask your lumber dealer about Marlite De luxe (high polish, mirror finish) and low cost Marlite Velvetex (velvet smooth finish) . . . write us, or see Sweet's 11/39.



MARSH WALL PRODUCTS, INC.
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Pre-finished WALL PANELS
FOR CREATING BEAUTIFUL INTERIORS

PLAIN-COLORS HORIZONTALINE WOOD-VENEERS • HEATEX • •
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**PRACTICAL JOB
POINTERS AND
BUILDING DATA**

AN EXCHANGE of ideas and methods in building practice. For individual contributions, two dollars or a year's subscription to American Builder is paid when published; state occupation.

How to Build a Bar

THE MODERN trend in home construction is for more and more built-in-features. Cabinets, bookshelves, drawers, closets and built-in or concealed bars are just a few of these built-ins that make for convenience as well as pleasure. What would otherwise be wasted spaces are converted into a useful, practical purpose and, furthermore, floor space is conserved. Some built-ins are very unique and cleverly designed.

One of the most attractive built-in bars seen in a long time is the hide-away bar built of knotty Idaho White Pine in a private office in Seattle, Washington. The two-shelf bar in open position with exposed bookshelves above is illustrated on a new detail sheet recently published by the Western Pine Association, which is the fourth in their series of interesting detail sheets.

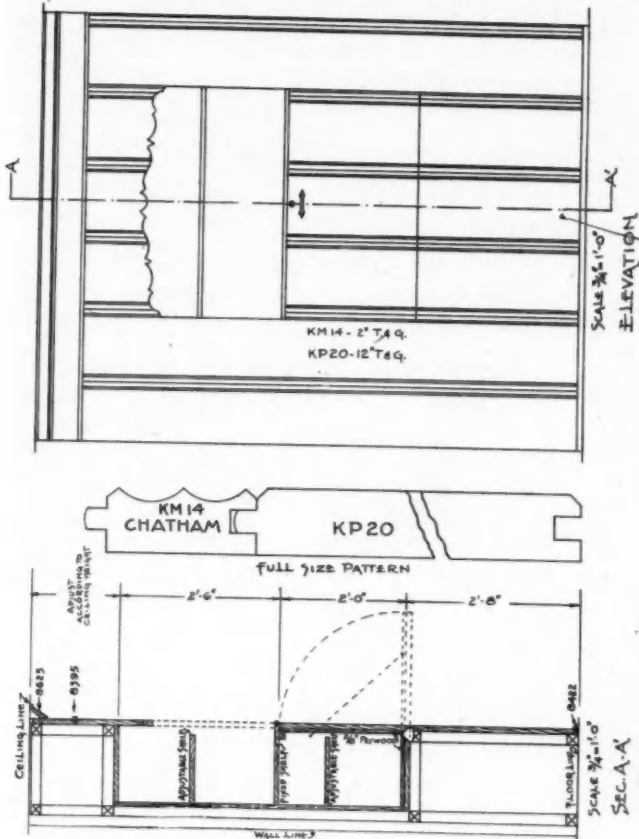
By placing the paneled wall out a short distance from the wall of the building, sufficient space was provided for the built-in bar as well as for a storage closet at each end. The Knotty Pine paneling around the bar is in Western Pine pattern KP 20 with a knotty insert strip KM 14 (Chatham) between each paneling board. A clear Rez treatment was used on the paneling and wood-work so as to retain natural beauty of Idaho White Pine.



BUILT-IN BAR for home or office.

Architects, builders, retail lumber dealers and others interested in combination built-in bars and bookshelves will find the new detail sheet of the Knotty Pine bar very useful. Single copies of this sheet (DS-4) may be obtained free from the Western Pine Association, Portland, Oregon.

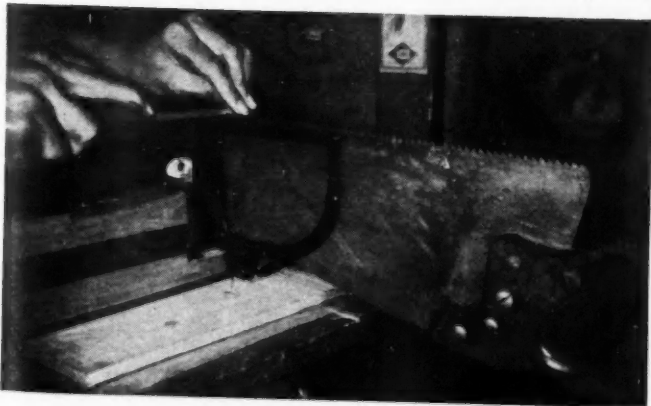
KNOTTY PINE BUILT-IN BAR



DETAILS of bar construction.

Inverted Miter Box Guide Holds Saw for Filing

A SATISFACTORY substitute for a saw vise can be had by using the miter box guide to clamp the saw. Remove the guide from the vertical post on the box and replace it in an upside-down position, pushing it down until it rests on the base of the box. Tighten the wing nut as much as possible to prevent



FILING saw by using inverted miter box guide as clamp.

the guide from swinging. Slip the saw to be filed in the slot, being sure that the teeth clear the sides about an eighth of an inch, and tighten the three or four set screws on the sides of the guide with a screwdriver. This will hold the saw firmly enough to enable good filing to be done. The depth of the slotted portion of the guide is sufficient to accommodate all but very wide saws.
—W. C. WILHITE, Carlinville, Illinois.



New items recently added to Majestic's extensive line of building products. Behind each is the Majestic policy to keep abreast of modern building needs and to build quality items reasonably priced—a 33 year old policy liked by both B. I. and

OUR POLICY

Since we — as should all patriotic Americans — are lending our complete support and manufacturing cooperation to the National Defense Program, our policy for the duration of the emergency will be as follows:

All orders for defense projects and with preference ratings will be filled first. Following this, non-defense needs of our old customers will be met in the order they are received. Any remaining merchandise will then be made available to new customers.

Although we cannot guarantee prices for any length of time, because of the unstable elements that control manufacturing costs, any changes will be made only as a direct result of increased costs to us.

While there is a possibility of a future shortage of certain items, we shall continue to do everything in our power in designing, manufacturing and substitution of materials to meet both defense and non-defense demands for Majestic Products. Thus far, aside from occasional delays which solicit the patience and cooperation of customers, all reasonable orders have been filled.

This statement of policy is made in appreciation of the loyalty of our many customers, and to signify our conscientious effort to do everything possible to aid building during these unusual times.

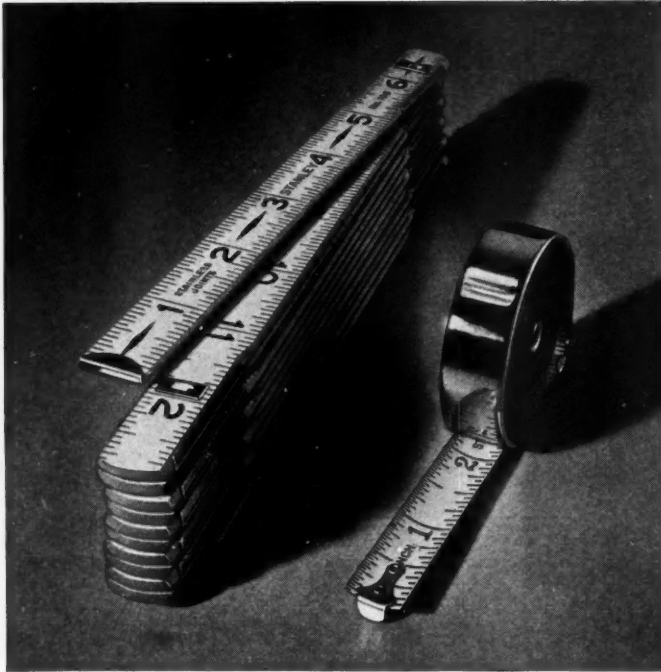
M. Pr... masonry enclosed areas. Cast semi-steel. Louvred and waterdrips at top and bottom. Screened with bronze wire screen. Size 8" x 2 1/4" x 4 1/4". Typical of Majestic's many metal building necessities—designed to save labor and cost.

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STANLEY RULE
EVERY TIME!**



**No. 106 "Green End"
ZIG ZAG RULE**

New worthwhile improvements! Large, easy-to-read Gothic figures, stainless joints, improved finish! New Stanley white lacquer provides a protective coating that makes any measurement easy to read. 6 foot length, graduated all edges for convenience and accuracy. Also made with figures 1, 2, 3, etc., beginning on inside of rule—No. 106F.



SIXTY-FIVE YEARS of rule-making are behind every Stanley rule. The approval of generations of skilled craftsmen proves that these Stanley Rules of today have the quality you want in an accurate, long-wearing rule. See them at your hardware store, and write for Catalog 34, which describes the complete line of Stanley Tools.

**No. 6386 Direct Reading
PULL-PUSH RULE**

Direct reading feature is handy for inside measurements; red indicator on case points to exact measurement when case and blade butt against work. No chance for error. Flexible-rigid for straight measurements, circumferences and irregular shapes. 6 foot black and white steel blade, nickel plated watch size case.

**Practical Stage Settings
for Home Laundering**

Attractive Plans for Laundry Rooms

THERE are two schools of thought on laundry-utility rooms in the home—and both are right depending upon the circumstances. The first holds that to devote an entire room to the family washing and ironing is costly. An extra room adds to the cost of a house—particularly if that house is already built, necessitating a new contract to make an addition. Critics of the laundry-utility room insist that the answer to the situation, for economy and for utility, is to be found in the design of equipment and the planning of the kitchen itself. This point of view finds particular support among engineers and builders of low-cost housing—and it is reflected directly in the shape, finish, and convenience features of modern washers and ironers.

The other school of thought cannot be discredited, either, in advocating the virtues of a separate room for laundry functions; and the same individuals in General Electric's home laundry equipment section and Home Bureau, at Bridgeport, Conn., who have striven to design and place equipment and cabinets which will incorporate the function in the kitchen, have given considerable thought to planning such an addition to modern domestic work space.

There are two sound reasons for the laundry-utility room—one having its justification in convenience to the user, and the other appealing particularly to the intelligent appliance salesman. Taking the second reason first, there is no cause for embarrassment before the consumer in admitting the excellent sales strategy which dictates the selling of services instead of products. In the case in point, emphasis is placed on the many advantages of an "extra" room for laundering, sewing, storage, the workshop, and such auxiliary kitchen chores as canning and preserving. The smart salesman sells the room itself—not the single washer or ironer which the customer came in to buy. This is ensemble-selling, creating the desire for a complete service, and it builds buying motives stronger than mere price—on which so many consumers go astray.

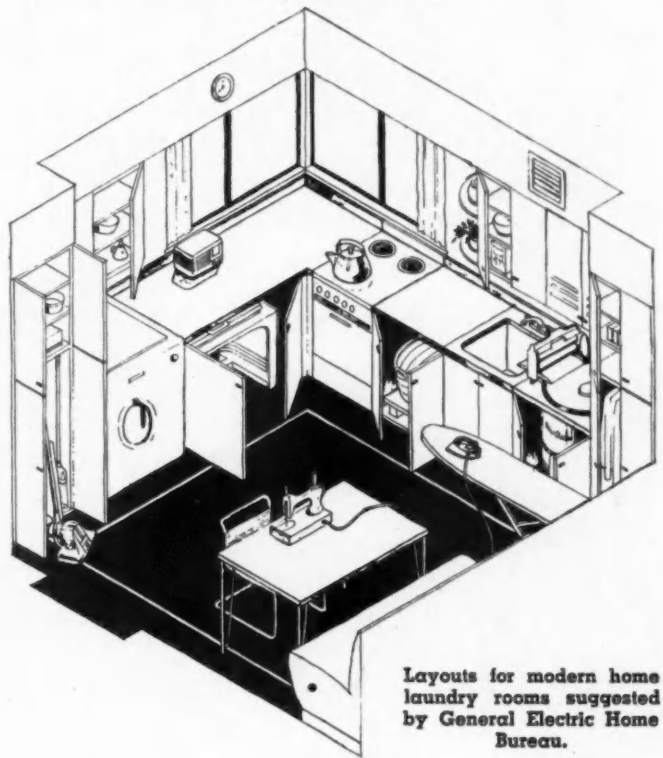
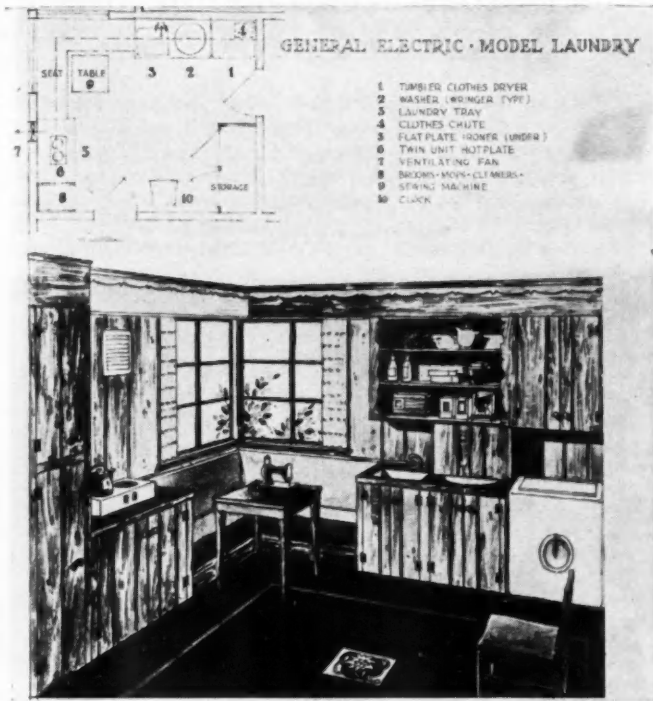
The desire for spaciousness, in either the living or working quarters of a home, is one that will not be denied by any amount of cold figures, because it is purely human in origin. The practical success of the laundry-utility room does not need to depend on desire alone, however. It need not be a luxury, for a surprising number of functions other than washing and ironing will accrue to its credit. On laundering alone it will tend to exercise a beneficent influence. One of the plagues of the average home has always been "washday"—that one day a week set aside to do a huge unpleasant job, when meals and other items of family routine are allowed to slide, and when disorganization is the rule and not the exception. Mrs. Ruby Littlefield, the director of the General Electric home laundering institute, has long urged housewives to utilize the speed and convenience of modern equipment to spread "washday" out over the entire week, thereby escaping the onus of an accumulation of soiled linen, the evils of mildew in warm weather, and the other characteristics of the accumulated task. She points out that the reasons for washday once-a-week, such as the need to heat large quantities of water and monopolize the kitchen, have vanished and only the custom remains. With a modern room planned and equipped to handle washing, drying, and ironing with a minimum of disturbance, the tendency to make little washdays out of big ones is strongly encouraged; and the job becomes as much a part of the daily routine as cooking and cleaning.

With the laundering job itself, as with any other job, organization is more than half of the battle—and the normal kitchen or basement area has enough functions without imposing an additional one upon it. The laundry-utility room can be permanently organized for its task, with washer, hot water provisions, laundry racks, dryer, supply shelves, ironer, hand iron and board, and cabinets. It is the peculiar virtue of most home laundry equipment, however, that it almost disappears from view when not in use, and remains only as highly usable work space. Such a room is ideal for sewing, itself a recurrent activity. It is the answer to such auxiliary kitchen tasks as canning and preserving; it makes a convenient storage room for cleaning equipment, magazines, and summer furniture; indoor gardening not only finds space here, but in itself brightens up the home laundry. Finally the room can serve as a children's playroom—and any parent of experience

STANLEY TOOLS

Division of The Stanley Works, 133 Elm St., New Britain, Conn.

THE TOOL BOX OF THE WORLD



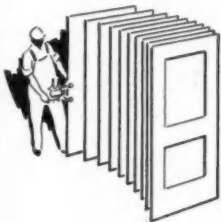
Layouts for modern home laundry rooms suggested by General Electric Home Bureau.

knows the need for a "room-size" compartment into which toys, books, tricycles, games, and even children themselves can be put away.

The General Electric home laundry institute, in cooperation with the Home Bureau, has recently made available suggested plans and decorative schemes for the inspiration of those wanting a laundry-utility room. Architects and home builders are urged to write for further information. Plan above shows an attractive room finished in wood. Most of the equipment is concealed when

not in use, and provision is made for ample working space. Even the wringer of the washer is concealed and protected by a specially-built cabinet. Another plan, somewhat more elaborate, is modern in styling, including steel cabinets, small apartment-size electric range, built-in ventilating fan, radio, and protective wringer cabinet. Other plans show the proper distribution of equipment and wall space for maximum efficiency.

4950 pounds less per day



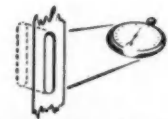
With the proper set-up, a good man can mortise 450 doors a day with this new Carter Lock Mortiser. A mortise a minute is not unusual. To make the job easier, Carter now offers a heat-treated aluminum housing which knocks off 11 pounds from the weight of the former Carter Mortiser.

Figure it out—that means 4950 pounds less per day to lift. Men can work faster with much less effort. It means some nice extra profits for you.

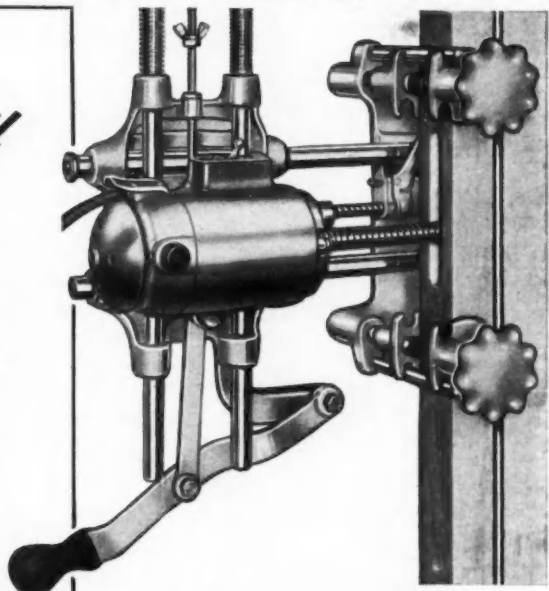
Simple, quick adjustments for setting depth, length and center of cuts. Lock size changeover can be made in 90 seconds.

Full 1 H. P. motor is ball bearing throughout. Speed of 18000 R. P. M. assures smooth cuts. Motor and frame slide on rods through bronze bushings. Uniform feed prevents overloading.

Send coupon right now for facts on this money making tool.



A Mortise A Minute



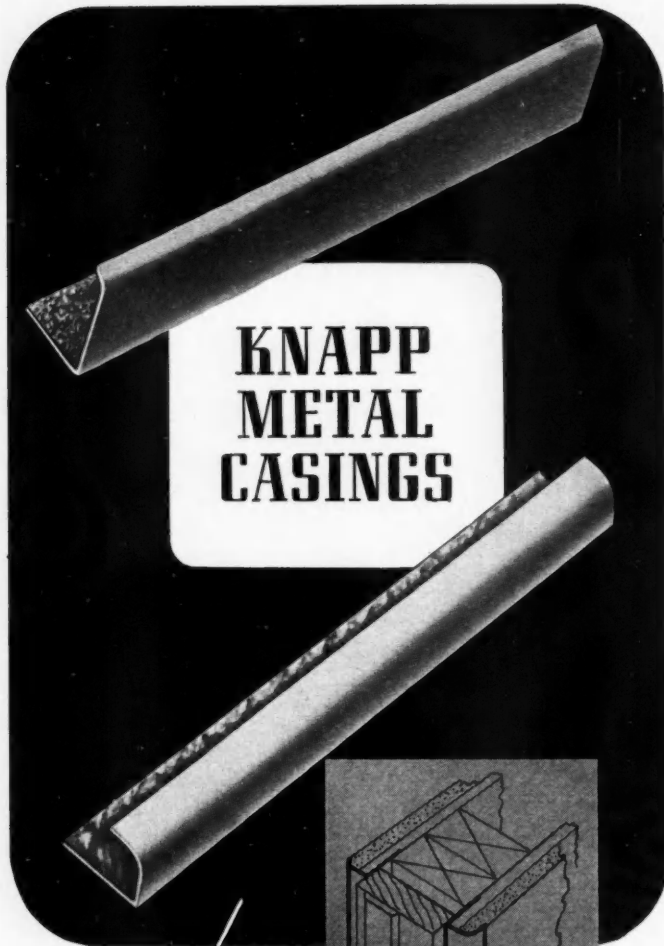
New Carter Lock Mortiser is fastest, lightest machine on the market

R. L. CARTER DIVISION

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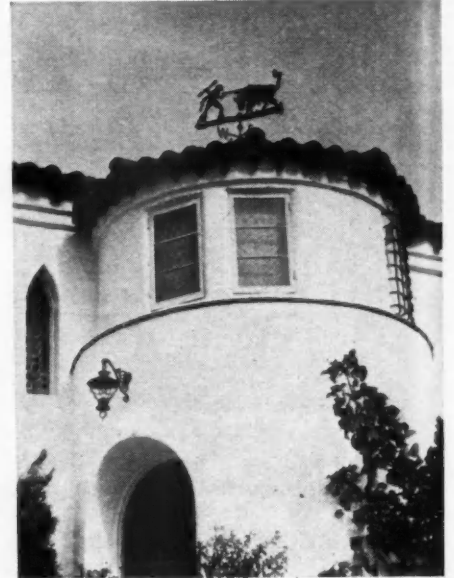
KNAPP METAL TRIM
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Ideas for Design and Installation

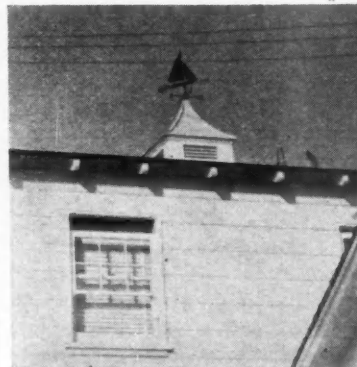
Any Home Can Have This Point of Added Interest

THE collection of pictorial details below shows how a spot is available on almost every home for the installation of a weathervane as an architectural feature. Generally speaking, a cupola, turret or tower is the logical spot. However, if one of these is not a part of the design, a point on the ridge of either the house or garage can be selected.

There is no limit to the scope of subjects from which to select



THE popularity of Spanish architecture in California makes bullfights a frequent subject for weathervanes in that state.



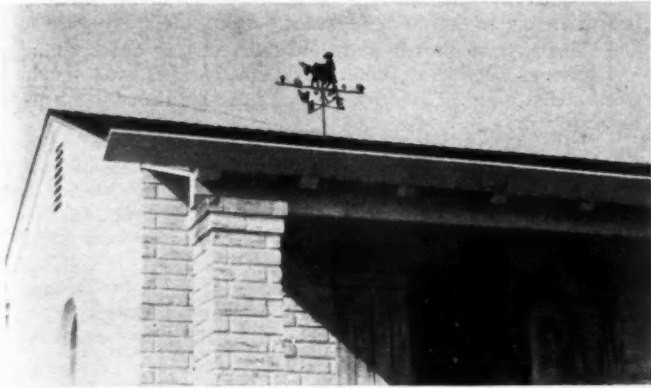
ABOVE: Popular ship design weathervane mounted on ventilator, and, at right, old Peg-Leg looking out to sea from garage ridge.



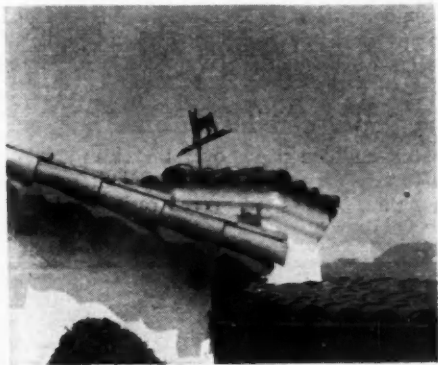
ANOTHER sailboat design with sails and hull painted white, directional arrow and keel in black, repeating roof and cupola colors.

of Decorative Weathervanes

a suitable pattern. These shown here were used on California homes and range all the way from the bull fight atop the tower of this Spanish tiled residence to a log cabin and soap kettle atop a shake covered ventilator. Other popular subjects are sailboats, animals, birds, etc.; some have the four points of the compass indicated. Fairly stiff sheet metal or plywood and suitable pivoted mounting are the only materials required, except finish.—Hi Sibley.



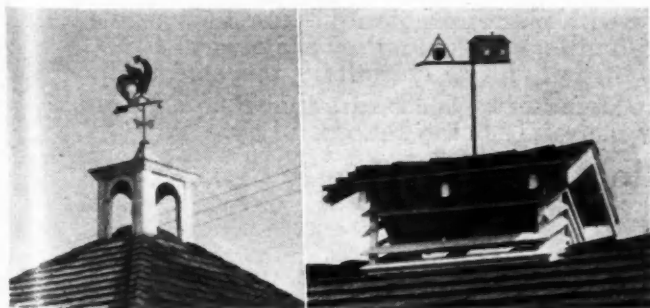
ABOVE: A peon rides his burro in the direction of the wind, and at left, the family dog is immortalized.



LEFT: A simple arrow frequently is quite effective, particularly when mounted on a turret.



BELOW at left: A streamlined rooster turns atop a high roof, while at the right frontier cabin days are recalled.



TONS OF DEFENSE METAL NOW SAVED ON CONSTRUCTION OF WINDOWS

Use of Caldwell Sash Balances
Cuts Use of Priority Metals 90%



★ **TURTLE CREEK DEFENSE HOUSING, TURTLE CREEK, PA.**—Frank Harris Smart, *Architect*; P. R. Scheuneman, Jas. Crovatta, Oscar Liff, *Associate Architects*; Jos. E. Burke, *Supervising Site Engineer*; W. F. Trimble & Sons Company, *General Contractor*. Rae weather proof windows.

The Turtle Creek Defense Housing, now under construction, is an important example of how priority metals may be saved in the installation of windows.

This construction, of 600 dwelling units, contains 6,443 windows in which Caldwell sash balances have been recently installed.

If ordinary sash weights had been used, 133,100 pounds of cast iron weights and 1,590 pounds of steel pulleys would have been required.

By installing the Caldwell Type 242FT balance, only 12,500 pounds of metal was used for all the windows. These windows were equipped with Rae impregnated wood weatherstrip.

Aside from the great saving in metal, there is a further saving in literally miles of sash cord or chain, in lumber, in freight and trucking, . . . and last, but not least, a 1/2 saving in labor.

The Caldwell Balance is expressly made for unit windows. Comes with kink-proof tapes, enclosed mechanism, metallic lacquer finish. The Caldwell Sash Balance is exceptionally durable, and low priced.

CALDWELL Sash Balances



The Caldwell Manufacturing Company
Rochester, N. Y.

Essentials of Good Oak-Floor Construction

THE following information will be found useful to those concerned with the proper use of oak flooring. While it is not a part of the commercial standard for oak flooring as recently accepted by the National Oak Flooring Manufacturers Association (previously published April, 1941), it represents the custom of the trade and the manufacturers' recommendations, based on long experience for maximum service from the use of oak flooring.

Also, while the following is the complete standard, it is but an excerpt from a pamphlet entitled, "Oak Flooring (Second Edition), Commercial Standard CS56-41," to be issued by the Department of Commerce. This pamphlet, which includes a list of acceptors, brief history of the project, membership of the Standing Committee, etc., will be available from the Superintendent of Documents, Washington, D.C.

1. It is vitally important that precautions be taken preliminary to laying of oak flooring, to insure beautiful, enduring hardwood floors.

2. Defer delivery of the oak flooring until all plastering, cement, masonry work, painting, wallpapering and interior finishing are completed and all are thoroughly dry. Under no circumstances should the laying begin until such work is completed and the interior atmosphere is dry.

Temporary Heat

3. In winter weather, the building should have heat turned on before flooring is laid, to remove dampness existing in the cold atmosphere. In summer months, in certain parts of the country where there is excessive moisture, buildings of importance usually have some heat turned on before, during, and after the laying of the oak flooring, in order to remove excess moisture from the interior atmosphere. In such conditions it is best to have the bundles delivered inside the building about a week before starting to lay the flooring.

4. Floor joists should be of thoroughly air or kiln-dried lumber and spaced not more than 16 inches, center to center, for sub-floor construction.

5. When there is no subfloor, the oak flooring of 25/32-inch thickness is to be laid directly on the floor joists, spaced 12 inches, center to center. Joists should be cross-bridged for added rigidity.

Subfloor Construction (Under floors)

6. A subfloor is the foundation of the finished floor. In new buildings, it is presumed there will be an "under-floor" or "subfloor" laid over the joists. A subfloor must be provided in all cases where the oak flooring is less than 25/32-inch thickness. It is a permanent advantage to have oak floors laid over a subfloor.

7. Subflooring should be 1 by 4-inch or 1 by 6-inch stock, sized, No. 1 common or No. 2 common grade, of good, new, kiln-dried lumber, laid diagonally (at 45 degrees) to the joists. The boards should be driven close, but not tight.

8. The subfloor boards should be square-edged, and not tongued and grooved or shiplap, not wider than 6 inches, and should be clean and straight. Avoid boards that have been used as forms for concrete work.

Nailing the Subfloors

9. Boards must be nailed down solid at every bearing with two 10-penny nails. All butt joints must rest on bearings. If it is absolutely necessary to use subfloor boards wider than 6 inches, extra nailing must be employed.

10. One of the secrets of obtaining a solid, nonsqueaking, almost "one-piece" oak floor, is to use plenty of nails in both the subfloor and the top floor. (See nail schedule farther along in this article.)

Examine Subfloor Carefully

11. Examine the subfloor carefully. Remove all dirt and plaster lumps, drive down any raised nails, replace broken boards, and make sure the floor is level and solid. Then sweep clean. Use no water.

Building Paper and Insulation

12. Lay a good quality building paper over the clean subfloor. Use building paper of a type known as "15-lb. asphalt saturated roll felt." Do not use thin, black-sized or red resin-sized paper or "slaters" felt.



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Look for the RED ZIG ZAG

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These finishing limes—the original Ohio White Finish and its famous twin, Hawk Spread—satisfy architects, plasterers and dealers who demand nothing less than the best. Manufactured with modern technique from the world's finest deposit of dolomitic limestone, they are always fresh, always uniform. Unusually high in plasticity, they spread far.

Remember these brands and make sure that Red Zig Zag Stripes are on every bag of finishing lime you buy.

The Ohio Hydrate & Supply Co.
Woodville, Ohio

13. For rooms directly over heating plants, use double-weight building paper (30-lb. asphalt felt) or 30-lb. asbestos paper, or standard insulating board about 1/2 inch thick. If preferred, the insulation can be applied (in new or old buildings) on the basement ceiling, set in between the floor joists.

Sleepers or Screeds

14. If the under or subfloor is to be omitted and the oak flooring is to be nailed directly to wood "sleepers" or "screeds" set in or on the concrete slab, the sleepers should be spaced not more than 12 inches, center to center.

15. When a subfloor is to be installed over a concrete slab, the sleepers may then be spaced on 16- or 18-inch centers. Sleepers should be tightened in place. There are various approved devices, such as galvanized metal clips, expansion bolts in lead sleeves, and wire. Fastening and tightening by twisting strong wire around sleepers has proved a simple and effective method.

16. Sleepers should be of pretreated lumber, impregnated with an approved wood preservative. They should be of a lumber grade equivalent to No. 1 common, 2 by 4 inch or 2 by 3 inch, and laid with the flat side down.

17. When electrical conduits and piping are to be laid on top of the wood subfloor, floor furring strips of the required thickness and 1 3/4 inches wide, are spaced on 10-inch centers and tacked to the subfloor. They are laid at right angles to direction of the finished flooring. The latter is nailed through the furring strips, using nails one size larger than those specified in the nail schedule.

Floor Ventilation Very Important

18. Where basements are not provided, adequate provision must be made for the free movement of cross currents of air beneath the building. This circulation may be obtained by providing vents and other openings in the foundation walls.

19. The total area of vent openings should be at least 1 1/2 percent of the first-floor area, and more if possible.

20. Stagnated and humid air under a building will encourage stain and decay. The preventive is air circulation. When conditions do not permit adequate ventilation, the oak flooring should never be less than standard 25/32-inch thickness. Architectural designs requiring "low-slung" floors may be modified slightly to permit the introduction of sufficient ventilating openings.

Nails and Nailing

21. Proper nails and correct nailing hold the flooring in place, make the floor rigid, and prevent squeaks. The nails should be started through the strip where the tongue leaves the shoulder, and driven inwardly at an angle of 45 to 50 degrees to the floor. Countersink all nails with a steel set or use a nail for setting. Do not attempt to do this with a hatchet or hammer, as this may cause bruises and scars that cannot be removed by scraping and sanding.

METHOD OF NAILING

Nail Schedule

All tongued-and-grooved oak flooring must be blind-nailed.

All oak flooring 1/2 inch or less in thickness must be laid on a sub-floor.

All square-edge flooring must be face-nailed (through the top face) instead of blind-nailed.

Flooring Dimension—inches	Nails	
	Size	Spacing
25/32 by 2, 2 1/2, and 3/4 (tongued and grooved)	8-d light flooring nail— use wire or steel-cut casing nail (cut nail is preferable)	10 inches apart
25/32 by 1 1/2 (tongued and grooved)	Same as above	12 inches apart
15/32 by 1 1/2, and 2 (tongued and grooved)	6-d bright wire casing nails	10 inches apart
11/32 by 1 1/2, and 2 (tongued and grooved)	4-d bright wire casing nails	8 inches apart
5/16 by 1 1/2, and 2 (square-edge)	1 1/8 inch barbed-wire flooring brad, No. 16; heads countersunk and puttied	2 nails every 7 inches

(Continued to page 130)



**THERE'S NO TRICK
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LUMBER WITH A Plus**

Wolmanized Lumber* is ordinary lumber to which has been added this plus—ability to withstand decay and termite attack. Vacuum-pressure impregnation with Wolman Salts* preservative does the trick.

Wolmanized Lumber is handled on the job just like ordinary, untreated wood; the preservative has no corrosive effect on tools or metal fastenings. It is clean, paintable and odorless. All of the other advantages of wood construction are retained.

Wolmanized Lumber is produced in nineteen treating plants, strategically located throughout the country. All are under the direction of one central laboratory, assuring uniformity of product. It is distributed through retail lumber dealers, under the one trade name, Wolmanized Lumber. AMERICAN LUMBER & TREATING COMPANY, 1645 McCormick Building, Chicago, Illinois.

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LUMBER



(Continued from page 129)

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50°F.

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Concrete mixes are designed for use at 70° F. When the temperature drops to 50 degrees or lower the development of strength is seriously retarded—concrete needs special attention.

Federal, State, and other construction specifications call for the addition of Calcium Chloride to all concrete when the temperature is expected to drop to 50 degrees or lower during the 24 hours following the pouring. They have made tests and know that the addition of Calcium Chloride gives speed and assures designed strength even at lower temperatures.

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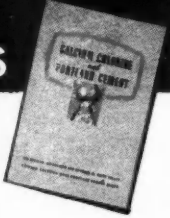
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How to Lay Oak Flooring

22. The following instructions are intended for the laying of oak floors in new construction and over wood subfloors. However, they also apply generally to the laying of oak flooring over old floors.

23. Leave an expansion space of not less than 1/2 inch on all sides next to the walls, but not wider than will be covered by the base-shoe, quarter-round, or door thresholds or saddles.

24. The flooring strips are to be started square with the room, against either sidewall. These first strips are to be face-nailed along the edges next to the wall where the base-shoe will conceal the nailing. All other flooring strips are blind-nailed on the tongue edge, except square-edge flooring.

Drawing Up

25. After laying and nailing three or four strips of oak flooring, place a short piece of straight-edged hardwood against the tongue of the outside strip of flooring, and drive it up snugly. This drives the flooring strips into their final position.

Flush Floor

26. Whenever possible, carry the laying through doorways continuously from one room into another, so that all rooms will have a flush floor. Avoid laying a ripped strip at doors or where it may mar appearances.

Joints

27. All pieces of flooring strips are tongued-and-grooved on the sides and on the ends. This is called "side-and-end-matching." The fit of all pieces is practically perfect when laid side to side and end to end. The end jointing, therefore, may come anywhere in the floor, without regard to a joist or a sleeper bearing at the joint; but joints should be placed so as to avoid having two or three ends in line or clustered together.

Random Laying

28. Oak flooring of the 25/32-inch thickness is made in widths 1 1/2 inches and 2 1/4 inches, and also 3 1/4 inches when ordered. Specify the width desired, or call for all three widths—about an equal quantity of each—to be laid at random. This makes a very interesting floor, with a mellowed effect, and is suited to all but the most formal styles of design.

Laying New Oak Floors Over Old Floors

29. The old floors serve as subfloors. Replace boards that cannot be planed or nailed down level, drive down all loose nails, nail the boards securely, and make sure the old floor is level and free of humps. Remove the base-shoe or molding strip at the bottom of the base (baseboard). Sweep clean, and lay saturated felt. Then proceed with the laying of the new floor. Lay the new oak flooring at right angles to the old floor.

Surfacing "Scraping or Sanding"

30. Oak flooring is delivered to the job with a wearing surface that is beautifully smooth and as perfect as modern machinery can make it.

31. When ready for surfacing, the floor should be swept clean. Floors should be traversed several times, working on the first traverse across the grain and then lengthwise with the grain, starting with No. 2 sandpaper on the machine and graduating to No. 1/2 sandpaper on the second traverse, and with No. 0 or No. 00 sandpaper on the third and fourth traverses. For very fine floors, four or five traverses are essential. The floor should then receive a final buffing or cleaning with fine sandpaper (use fine sandpaper No. 1/2 that has been used on the machine sander) or No. 0 steel wool—by machine or by hand. Do not use steel wool, however, just before or after a paste filler is applied.

32. After sanding, sweep perfectly clean and permit no one to walk on the floor until the floor stain, filler, or first coat of finish has been applied and is dry.

Finishing

33. The finish of oak floors is of vital importance in developing complete floor satisfaction. Modern floor finishes by many well known producers are available. They offer color and service to complete the harmony of any color scheme desired. Reference may be made to well-qualified floor finishers or to the makers of the outstanding brands for complete information in keeping with individual tastes.

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LETTERS from Readers on All Subjects

Facts, Opinion and Advice Welcomed Here

Home Building Costs Increasing

Memphis, Tenn.

To the Editor:

I have been a subscriber to *American Builder* for a number of years but do not have my files of magazines here in Memphis. Have you any figures readily available of the cost of a house, say in 1914 at the beginning of the last World War, at the peak of construction costs, say in 1920, and at the low point of the subsequent reaction? It is my belief that costs never reacted to anywhere near the level of 1914. In view of the devaluation of the dollar it seems reasonable to me to expect an even more marked and permanent advance in building costs in the present war or as a result of it.

R. H. LUCAS,
With The Guardian Co.

ANSWER: I am glad to pass along to you cost figures which are quite generally regarded as authoritative and typical. These figures pertain to a standard frame house of six rooms built in the St. Louis area. Real Estate Analysts, Inc., St. Louis, a well known research and statistical agency, has been keeping a record for comparative purposes of the cost of this particular house. Mr. Roy Wenzlick, head of this agency, frequently refers to this as his "guinea pig house," on the assumption that its cost would be typical for experimental and research purposes of houses in other parts of the country.

In a release, dated August 20, 1941, he gives his cost record on this house as follows:

Construction Costs of Standard Frame House

Year	Total Cost	Cost Per Cu. Ft.	Year	Total Cost	Cost Per Cu. Ft.
1913	\$3833	15.1c	1931	\$4680	18.5c
1914	3833	15.1c	1932	4482	17.7c
1915	3839	15.1c	1933	4693	18.5c
1916	4269	16.8c	1934	5279	20.8c
1917	4749	18.7c	1935	5469	21.6c
1918	5185	20.4c	1936	5791	22.8c
1919	6409	25.2c	1937	6314	24.9c
1920	7678	30.3c	1938	5767	22.8c
1921	6604	26.0c	1939	5890	23.2c
1922	6102	24.1c	1940	6325	25.0c
1923	6634	26.2c	1941 Jan.	6797	26.8c
1924	7487	29.5c	Feb.	6789	26.8c
1925	7280	28.7c	Mar.	6721	26.5c
1926	7045	27.8c	Apr.	6775	26.7c
1927	6635	26.2c	May	6811	26.8c
1928	6194	24.4c	June	6888	27.2c
1929	6210	24.4c	July	7142	28.2c
1930	5449	21.4c	Aug.	7317	28.9c

—EDITOR.

Wants Survey of Construction Capacity

Washington, D.C.

To the Editor:

An active construction industry will do much to minimize the dislocations caused by the Defense Program. An active, well-developed building industry will also be an important factor in working out the adjustments necessary after the emergency. Careful planning by Government agencies should result in a program designed to utilize the potential capacities of the building industry in such a manner as to keep the entire industry a healthy, going concern.

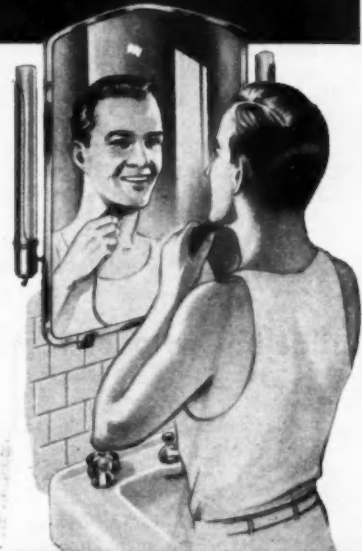
A suggested program to remedy existing difficulties and give some degree of assurance to the private construction market and building materials manufacturers might be as follows:

(1) A survey of the production facilities of all building material manufacturers.

(Continued to page 132)

When You SHAVE Tomorrow

THINK of THIS!



YOU who build and sell all types and kinds of homes know the importance of "features." You know how often a sale is made or lost merely by the impression your prospect gets from the bathroom and its fixtures.

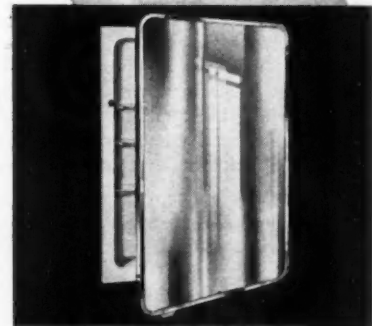
So, tomorrow, when you are shaving, think of the advantages of specifying a cabinet from one of the four complete Lawson lines, each in a different price class.

Think of Lawson's complete line of "Time Proof" vitreous porcelain-finished cabinets, with and without side lights, at baked enamel price levels—the world's finest cabinet.

Think of the other lower-cost baked enamel lines for budget homes, low-cost housing projects, etc.

Think of the line of Lawson moderately priced chromium plated bathroom accessories.

Think of the advantages you'll gain when you show your next prospect a Lawson equipped bathroom!



For the Master Bath

This Lawson "Time Proof" Vitreous Porcelain-Finished Cabinet is available in a variety of styles and sizes, with or without tubular side lights.



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Bathroom Cabinet Division

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125 YEARS
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SOLD EXCLUSIVELY THROUGH WHOLESALE OUTLETS

LETTERS—

(Continued from page 131)

- (2) A survey of labor in the construction industry.
- (3) A careful analysis of the new Defense Construction Program. We understand this is now under way under the supervision of Mr. Robinson Newcomb, of the Statistics and Research Division of OPM.
- (4) The development of a program of substitutions. Many critical materials are still being used in defense construction. In many cases changes in designs could be made to free critical materials and use materials produced by industries that are still operating far below capacity.

There are indications here that such a program is already under way in many Government departments. If this is carried through, the building industry can be kept in a position to serve the country efficiently, reducing to a minimum price rises. Unemployment which will result from the curtailment of private construction in non-defense areas can also be reduced.

C. T. BRIDGMAN,
Secretary, Defense Committee,
Structural Clay Products Institute.

Builds in Compact Water System

Seneca Falls, N.Y.

To the Editor:

For the small home beyond the water mains and without a cellar or where space is at a premium, a recent development in domestic water supply systems will solve the often perplexing problem of where to put this important piece of equipment.

The new Jet-O-Matic Water System operates on the jet principle and has only one moving part—the rotating motor shaft to which is directly attached the pump impeller. Consequently, gears, pistons, belts, valves, and other noise creating parts are eliminated resulting in extremely quiet operation—hardly more noticeable than the average mechanical refrigerator. This quiet-operating feature, in addition to its compact construction, and the fact that small tanks can be used advantageously, permits its installation in the utility room, kitchen, storage closet, or any other similar location.



View above shows an installation in a small kitchen of a summer cottage. Extension of the built-in kitchen sink cabinet completely encloses the pump and tank and, moreover, provides additional counter space for the housewife. In this particular installation, the enclosure was built in two pieces—top and sides—and while it was rigidly supported by cleats on the walls, it could be easily and quickly removed in case it was ever necessary to service the pump. The enclosure was built in knotty pine to conform with the interior finish of the balance of the kitchen.

G. W. CRAMER,
Adv. Mgr., Goulds Pumps, Inc.

**American Builder Subscriber for 58 Years—
Who Can Beat This Record?**

West Acton, Mass.

To the Editor:

In your August issue of the *American Builder* I was interested in reading the Letters from Readers, especially the one, on page 109, who "Wants More Modernism." And just think how long

**EVERY BUILDER CAN SAVE MONEY
with this Tool**



It cuts 3 1/4" stock—rips to center of 50" panel and joints 1/2" x 6" wide. It will save time, money and labor in your shop

or out on the job—enable you to handle special millwork and quickly pay for itself.

OFFERS YOU MANY ADVANTAGES

Here are some of the features that make this the outstanding combination unit on the market: *No interference* between saw and jointer. Either machines may be used singly, or both may be used together, by one man or two, with ease and facility. *Compactness*—both machines in our combinations are driven from below **BY THE SAME MOTOR**. *Lower Power Cost*—Since both machines are driven from the same motor, not only is the cost of an additional motor saved, but the running cost is generally lower than with two separate motors. *Portability*—In spite of its large capacity, this combination unit is so compact that it is used as portable power unit for many outside jobs, as well as being used anywhere in the shop where it will best suit the job. Many contractors load it on a truck and take them right to the job. *Maximum Efficiency*—Users who own these combination units claim that they can perform 80% of all common woodworking operations on their machines, and at savings from 25% to 50% in time.

SEND for CATALOG

It gives prices and descriptions on the full line of Delta band saws, circular saws, sanders, jointers, shapers, mortisers, and scroll saws. Tells you how to take advantage of low-cost power tools to increase your profits.

Delta Mfg. Co. (Industrial Division)
647 E. Vienna Ave., Milwaukee, Wis.

Gentlemen: Please send me the new 1941 Delta Catalog giving full details on the Delta Tilting Arbor Saw and other Delta low-cost tools.

Name

Address

City State

he has been reading the *American Builder*; almost a year! It is too bad for him to waste his time in trying to get something from your magazine, when there does not seem to be anything new in it.

For myself, I received my first copy of "Carpentry and Building" in April, 1883. Some years afterward the name was changed to "Building Age."

When the Radford building magazine, "American Carpenter & Builder" first came out, I was one of the charter subscribers, and in addition to the "Building Age" have always taken the *American Builder*. Later, that publication took over the "Building Age," and now under the name of the *American Builder and Building Age* I am still a subscriber, as I have been since April, 1883. I think enough of the magazine to have taken it continuously for 58 years, and I am enclosing my check for another two years' subscription (to make it 60 years). Also, please send me a copy of the new 1941 plan book, "Security Homes."

A copy of the *American Builder* always lies on my desk and I look it through often.

Again, I wonder if you have any subscribers who have been taking the magazine longer than I?

JOHN S. HOAR, Contractor and Builder (Retired).

Priorities Asked for Home Builders

Philadelphia, Pa.

To the Editor:

Continuance of home building at a rate sufficient to meet the needs of our people in this defense period is not only a need if we are to maintain any degree of stability in our rent situation, but a very vital need of the defense program itself. We need a national building program of at least 625,000 dwelling units per year.

All this is well enough recognized, in theory. If home building is to get the green light it will undoubtedly be necessary, under circumstances as they are now shaping, to insure that it gets needed materials through some system of priorities. It is profoundly important that these priorities be soundly set up and administered. The Home Builders Institute of America has recommended to the Supply Priorities and Allocations Board that private home builders able and willing to supply housing of the needed kind in defense areas be given preferential rating as against federally subsidized or government financed housing in those areas. The Institute among other important recommendations on this critical matter asks that priority ratings be issued direct to the individual builder, that they be given for any residential construction upon which work has been started at the time the priorities system goes into effect.

The National Association of Real Estate Boards concurs in these recommendations supported also by the National Home Builders Association.

It is our belief that if priority regulations are properly set up and properly administered the home building industry need not be seriously curtailed in order to carry on other parts of the defense program. Pertinent here is the indication from some studies so far made that the home building industry of the nation normally absorbs less than 1½ per cent of our total iron and steel production.

We need to explore every avenue for possible substitute materials, especially for the metals that we well know must be rationed. We need to have, right away, an objective study of just what materials on the critical list are really essential for home building and in what quantities they must be requisitioned, if substitutes are not found.

PHILIP W. KNISKERN,

President, National Association of Real Estate Boards.

Skeptical About "Shortages"

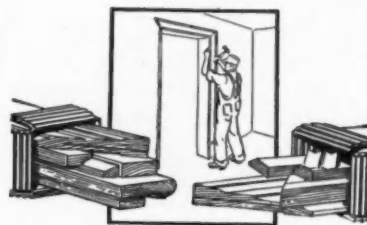
Lafayette, Ind.

To the Editor:

I should certainly like to add my personal "amen" to your splendid editorial in the August issue of *American Builder* (Propaganda about "Shortages," page 47). It is the first time the present situation has been so concisely hit upon the head.

I just wish that we were in a position to help in some way with some of these problems.

CARL F. BOESTER, Director,
Housing Research Purdue University.



A UNIQUE SITUATION

Trimpak Corporation's production is at an all-time high.

Many months ago we planned this increased capacity. We anticipated the needs for defense housing, as well as the increased demands of private building. Because of advance planning, Trimpak shipments are being made promptly as promised—a unique situation in these troubled times.

Today, with time more precious than ever the busy builder welcomes the speed with which Trimpak (packaged trim) may be installed. He appreciates the accuracy of Trimpak's manufacturing—the high quality standards which have made Trimpak known for 16 years as "the ultimate in trim."

Save 44% labor with the new patented Trimpak lock joint. Investigate today. Your lumber dealer will be glad to quote prices. For literature write us direct. Address Department AB-10, Trimpak Corporation, 44 Whitehall Street, New York City.

TRIMPAK

THE ULTIMATE IN TRIM

OPM's New Priority Plan—*(Continued from page 60)*

through a period of several months of confusion and uncertainty, there is every probability that materials will be available.

One of Donald Nelson's first aggressive steps has been to inaugurate a series of thorough surveys to determine stocks on hand and requirements of all industry, both for military and civilian purposes. Already it appears that the situation in regard to available supplies is not nearly as critical as has been stated.

High placed OPM officials have admitted that better routing of metals and scheduling of defense requirements will do much to alleviate the present problems.

It should be repeated that *nothing in this priority program in any way restricts or limits construction of any type, either within or without defense areas.* Builders who can get materials are free to build anything they wish.

In fact, most of the policy making officers in both the defense and housing programs have repeated over and over that they hope to see a large volume of home building and they indicate that after the surveys now under way give a better picture of the nation's supply of materials in the light of defense requirements, steps may be taken to definitely assist private construction in nondefense areas.

Although a period of great confusion for the months immediately ahead is probably to be expected, by the early part of next year the situation will be clarified and a considerable volume of construction will be possible. As far as home building alone is concerned, the picture is definitely encouraging. Housing Co-ordinator Palmer has set a minimum requirement of at least 525,000 homes in connection with defense activity, of which 400,000 will be provided by private industry. This number, in all probability, will be greatly exceeded.

Defense Housing Areas*(Continued from page 58)*

MICHIGAN
Bay City-Saginaw
Battle Creek
Detroit-Ypsilanti
Midland
Muskegon
Pontiac
Lansing

MINNESOTA
Minneapolis-St. Paul

MISSISSIPPI
Biloxi
Columbus
Greenville
Hattiesburg
Jackson
Meridian
Pascagoula

MISSOURI
Joplin-Neosho
St. Louis-Alton-
Weldon Springs
Springfield
Waynesville-Bolla-
Lebanon

NEBRASKA
Omaha-Council
Bluffs (Ia.)

NEVADA
Hawthorne
Las Vegas

NEW HAMPSHIRE
Manchester
Portsmouth

NEW JERSEY
Bayonne-Staten
Island (N.Y.)
Bound Brook-Perth
Amboy

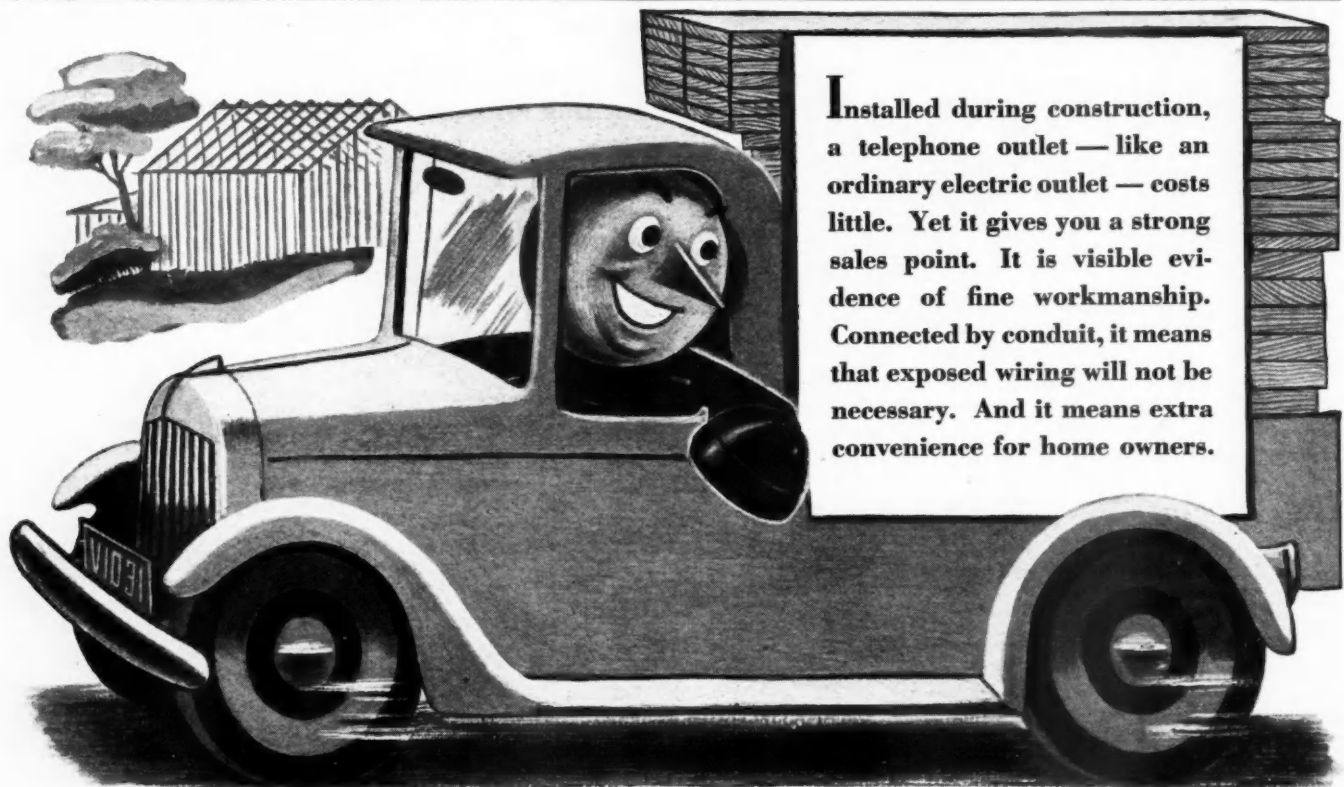
Dover
Newark-Kearny-
Elizabeth
New Brunswick
Paterson-Passaic
Trenton

NEW MEXICO
Gallup

NEW YORK
Bethpage-Farmingdale
Binghamton
Brooklyn-Long
Island City
Buffalo-Niagara Falls
Dunkirk
Elmira
Greenport
Massena
Poughkeepsie
Rochester
Schenectady
Sidney
Syracuse
Albany-Troy-Watervliet
Utica-Rome
Watertown

NORTH CAROLINA
Charlotte
Fayetteville
Jacksonville-Morehead
City
New Bern
Wilmington

OHIO
Akron
Canton-Massillon-
Alliance
Cincinnati
Cleveland
Columbus
Dayton
Hamilton-Middletown



Installed during construction, a telephone outlet — like an ordinary electric outlet — costs little. Yet it gives you a strong sales point. It is visible evidence of fine workmanship. Connected by conduit, it means that exposed wiring will not be necessary. And it means extra convenience for home owners.

• Your local telephone company's "Architects' and Builders' Service" is glad to help in planning efficient, economical telephone arrangements. Call your nearest Bell Telephone Business Office and get acquainted with this time-saving service.



Lorain-Elyria
 Ravenna-Warren
 Sandusky
 Sidney
 Springfield
 Steubenville-
 Weirton (W. Va.)
 Toledo
 Youngstown-Sharon,
 (Pa.)

OKLAHOMA
 Enid
 Lawton
 Oklahoma City
 Tulsa

OREGON
 Astoria
 Hermiston
 Pendleton
 Portland-
 Vancouver, Wash.

PENNSYLVANIA
 Allentown-Bethlehem-
 Phillipsburg
 Beaver County
 Berwick
 Coatsville
 Corry
 Ellwood City
 Erie
 Harrisburg-Middletown
 Johnstown
 Latrobe-Greensburg
 Monessen-Charleroi
 Norristown-Bridgeport
 Philadelphia-Camden-
 Chester
 Pittsburgh-New
 Kensington
 Pottstown
 Sharon
 Titusville
 Warren-Irvine
 Williamsport
 York

RHODE ISLAND
 Newport
 Quonset Point

SOUTH CAROLINA
 Charleston
 Columbia
 Spartanburg
 Sumter

TENNESSEE
 Bristol-Kingsport
 Chattanooga-
 Cleveland-
 Rossville (Ga.)
 Knoxville-Alcoa
 Memphis-Millington
 Milan-Humboldt-
 Jackson
 Nashville
 Tullahoma

TEXAS
 Abilene
 Beaumont-Orange-
 Port Arthur
 Brackettville
 Brady
 Brownwood
 Corpus Christi
 Dallas-Fort Worth
 Cuero
 Denison-Sherman
 Dumas
 El Paso
 Freeport
 Galveston
 Harlingen
 Houston
 Lubbock
 Midland
 Mineral Wells
 Palacios
 San Angelo
 San Antonio
 Texarkana
 Vernon
 Victoria
 Wichita Falls

UTAH
 Ogden
 Salt Lake City

VERMONT
 Springfield-Windsor

VIRGINIA
 Dahlgren
 Newport News
 Norfolk-Portsmouth
 Petersburg-Hopewell
 Pulaski-Dublin-Radford

WASHINGTON
 Bremerton
 Everett
 Keyport
 Longview-Kelso
 Seattle
 Spokane
 Tacoma

WISCONSIN
 Beloit
 Green Bay
 Madison
 Manitowoc
 Milwaukee
 Oshkosh

WEST VIRGINIA
 Charleston
 Morgantown

ALASKA
 Anchorage
 Ketchikan
 Kodiak
 Sitka

HAWAII
 Honolulu

OPM Critical List

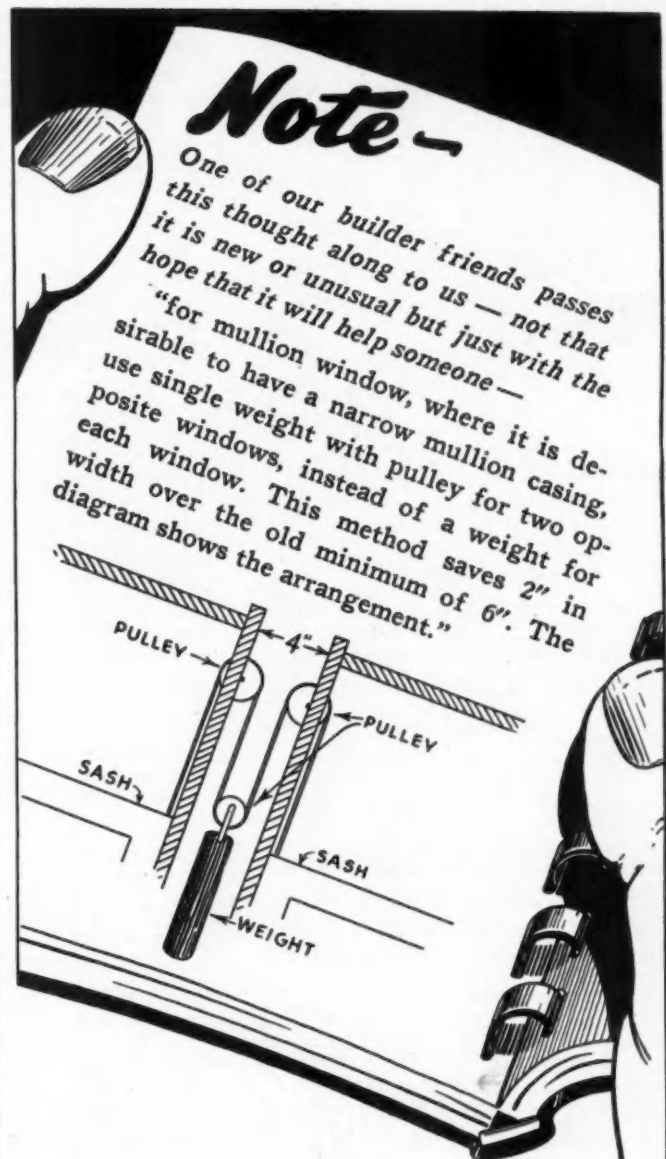
(Continued from page 59)

of internal angles and on each surface where different kinds of plaster base abut each other. Corner beads for vertical corners only, paint dipped ferrous metal generally, zinc coated only where exposed to moisture or extreme conditions of humidity.

c. Exterior stucco base, woven or welded fabric, non-metallic coated; zinc coated before fabrication, optional in California coastal district only.

8. Builders and Cabinet Hardware—with parts of steel or iron only except necessary bushings and pin tumbler assemblies of brass or bronze and, optionally, latch bolts, dead bolts, and stop buttons in exterior lock assemblies of brass or bronze; knobs, push plates, drawer and other pulls of glass or other non-metallic material. Exposed steel parts for exterior use, japanned or primed for painting, lacquered over phosphate coating or cadmium coated, and excluding finishes of zinc coating, nickel or chromium plating except as below noted.

(Continued to page 136)



SAMSON SPOT SASH CORD is of uniform, dependable quality — long established and conscientiously maintained. There is quality in it and reputation behind it. For real economy, through trouble-free satisfactory service, always insist upon Samson Spot Sash Cord.

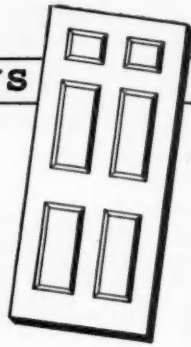
Identified by the Colored Spots, our trade-mark (Reg. U. S. Pat. Off.)

SAMSON CORDAGE WORKS · BOSTON



DOORS · · WINDOWS

THREE VITAL MINUTES



FRAMES · STORM DOORS · SCREENS · TRIM

The three minutes required to make the WOODLIFE dip are vital to home owner and builder, alike. To the home owner they mean protection from future swelling, warping, checking, grain raising, decay and blue stain. To the builder they mean customer satisfaction and a reputation for building quality that lasts.



Protection Products Mfg. Co.

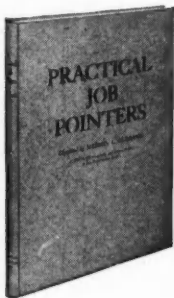
Mfrs. of PRESERVATIVE SOLUTIONS for **20** Years
Research Laboratory and Plant KALAMAZOO, MICH.

New Second Edition

PRACTICAL JOB POINTERS

Compiled by
NELSON L. BURBANK

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Six hundred kinks, short cuts and new methods of handling all kinds of jobs which were published in *American Builder and Building Age* during the past seven years in the "Job Pointers" section, have been brought together and indexed in this new book. Each is accompanied by a scale drawing or photograph.

Contents

Use and Care of Tools—Workbenches and Attachments—Portable Equipment—Excavations; Foundations; Forms—Sills; Girders; Joists; Sub-Flooring—Exterior Wall Construction; Inside Wall Framing—Exterior Wall Covering—Roof Construction; Bay Construction; Roofing—Cornices and Porches—Interior Wall Covering; Interior Trim—Steps; Stair Construction—Windows—Doors—Closets; Shelves; Built-in Equipment—Finished Flooring—Painting; Finishing—Screen Repairing; Screens—Sanitary Equipment—Electrical Wiring—Scaffolds; Ladders; Hoists—Garage Doors—Short Cuts in Laying Out Work.

130 pages, 600 illus., 9 x 12, cloth, \$2.00

Book Department

AMERICAN BUILDER and BUILDING AGE

38 Church Street

New York, N. Y.

OPM Critical List

(Continued from page 135)

- a. Nails, screws, bolts, nuts and washers ferrous metal generally uncoated; zinc coated, optional, for roof coverings and wall ties only.
- b. Wall ties zinc coated for masonry veneer over frame construction.
- c. Pulleys and sash balances.
 - (1) Uncoated japanned or primed for painting, ferrous metal.
 - (2) Electroplated zinc on ferrous metal spiral and similar sash balances.
 - (3) Weights, cast iron.
- d. Self-releasing fire exit-devices, as for builders hardware above.
- e. Wood venetian blind hardware and shade fixtures, ferrous metal, primed for paint or lacquered.

NOTE: Hardware used exteriorly under extreme exposure conditions, as in salt air, zinc coated in lieu of as above listed.

9. Glazing points, zinc.

ELECTRICAL—to include only:

NOTE: Roughing in material limited to the recommendations of the electrical supplies industry on file in the Priorities Section, Office of Production Management.

1. Underground materials.
 2. Overhead materials.
 3. Entrance (main) service switch and meter pan or receptacle.
 4. Meter.
 5. Circuit breaker type distribution panels.
 6. Fuse type distribution panels including fuses.
 7. Interior wiring method.
 - a. For non-fireproof construction:
 - (1) Knob and tube, wire and fittings.
 - (2) Wire, and non-metallic sheathed cable.
 - (3) Flexible metallic conduit and armored cable, zinc coating limited in thickness to that of standard electroplate for this material.
 - b. For fireproof construction:
 - (1) Wire.
 - (2) Rigid steel conduit, enameled.
 - (3) Flexible metallic conduit or armored cable, coated as above noted.
 8. Conduit fittings, outlet boxes and wiring devices—number limited, see Note.
 9. Plates—switches and convenience outlets, non-metallic.
 10. Lighting Fixtures—except aluminum and solid brass or bronze, copper and brass plating permitted.
 - a. Indoor fixtures, light gauge spinings, stampings and drawings; non-metallic (glass, plastics, porcelain, etc.) wherever practicable.
 - b. Outdoor fixtures and standards, cast and wrought ferrous metal only.
 11. Electrical accessories.
 - a. Wiring, bells, buzzers, push buttons and transformers—multi-family dwellings only.
 - b. Lock releases—multi-family dwellings only.
 - c. Entrance Door Communication—multi-family dwellings only.
 - d. Public telephone systems.
- PLUMBING AND GAS DISTRIBUTION SYSTEMS—to include only:
1. Cast or stamped ferrous metal, enameled and vitreous ware plumbing fixtures, the latter wherever practicable.
 2. Fixture Fittings and Trimmings—Base metal limited to ferrous metal, yellow brass and zinc die castings with plating of flashed copper and nickel or unplated.
 3. Drainage and Venting Systems—to include only:
 - a. Cast iron pipe and fittings.
 - b. Galvanized steel pipe, wrought iron pipe and malleable fittings generally non-metallic coated.
 - c. Ferrous metal and brass tubing traps, clean-cuts and connections for fixtures (brass limited to minimum necessary).
 4. Water Distribution Systems—to include only:
 - a. Galvanized steel or wrought iron pipe and malleable fittings, or cement lined cast iron pipe and fittings—lead wherever practicable, *inside buildings only*.
 - b. Valves—iron and brass (brass limited to minimum necessary and used for seats only wherever practicable).

5. Water Heaters (storage type) and Hot Water Storage Tanks—*made only of:*
 - a. Galvanized sheet—only where local conditions necessitate.
 - b. Black steel, painted.
 - c. Coated steel (enamel or glass lined).
 - d. Brass valves, connections and controls for water heaters.
 - e. Copper coils for storage type hot water generators and heat exchangers—multi-family systems only.
6. Water Softeners for multi-family dwellings only, to have painted steel exteriors, interiors as for water heaters, etc.
7. Gas Distribution System—*only for items noted below:*
 - a. Black steel pipe and fittings.
 - b. Valves as for water distribution systems.

HEATING AND VENTILATING EQUIPMENT—to include only:

1. Boilers—*Furnaces only for items noted below:*
 - a. Boilers—ferrous metal with brass safety devices and cocks, limited to minimum practicable.
 - b. Furnaces—ferrous metal with zinc coated casings, interliners and baffles for gravity furnaces and with zinc coated interliners where used in forced warm air furnaces.
 - c. Breechings—ferrous metal non-metallic coated.
 - d. Floor furnaces, space heaters, stoves and other similar heating devices, wherever practicable and where they may replace the above.
 - e. Vents for heating equipment in demountable houses—ferrous metal, non-metallic coated.
2. Accessories—*consisting only of:*
 - a. Pumps.
 - (1) Water Circulators.
 - (2) Condensation.
 - (3) Vacuum R.L.
 - b. Fans, Blowers and Motors—Centrifugal—forced warm air systems only. Propeller—large exhaust on large multi-family units.
 - c. Oil Storage Tanks, ferrous metal—non-metallic coated, size limited to minimum necessary, for example, not to exceed 275 gallons capacity (for plants serving less than five families).
 - d. Expansion tanks for hot water systems—ferrous metal, non-metallic coated.
3. Distribution Materials—*consisting only of:*
 - a. Piping—ferrous metal, uncoated.
 - b. Fittings—cast ferrous metal, uncoated.
 - c. Valves.
 - (1) Vent—ferrous metal wherever practicable, yellow brass elsewhere, no plating.
 - (2) Gate—ferrous metal wherever practicable, yellow brass elsewhere, no plating.
 - (3) Globe—ferrous metal wherever practicable, yellow brass elsewhere, no plating.
 - (4) Cocks—ferrous metal wherever practicable, yellow brass elsewhere, no plating.
 - d. Traps—central steam systems for multi-family dwellings only.
 - (1) Boiler return.
 - (2) Blast.
 - (3) Bucket.
 - (4) Float and thermostatic.
 - e. Ducts and connections.
 - (1) Ferrous metal phosphate treated and painted or untreated.
 - (2) Bright tin.
 - f. Hangers and brackets.
 - (1) Strap iron.
 - (2) Cast Iron.
4. Radiators, Convectors and Registers—*only for items noted below:*
 - a. Radiators and convectors of cast iron, without metal enclosure.
 - b. Valves.
 - (1) Radiator, yellow brass unplated.
 - (2) Air Valves, yellow brass unplated.
 - c. Traps—radiator, for multi-family dwellings only, yellow brass unplated.
 - d. Registers and Grilles.
 - (1) Stamped or cast ferrous metal.
 - (2) Fabricated steel optional for large units in floor.

(Continued to page 138)

NO SHORTAGE! OF MATERIALS!



for BESSER Concrete Masonry Homes

Homes like above are being built in all parts of the country of concrete Masonry units made on Besser Plain Pallet Stripper—Vibrator or Tamper—Block Machines. There is no shortage of the materials that go into Besser made Blocks. For the most part the aggregates are taken from

local natural deposits, and easily procured in practically all localities where they can be delivered promptly for making Besser Concrete Blocks.



AND AT LESS COST

Patronize your local Besser equipped concrete block plant and get a quality of block suitable for the finest of homes yet priced right even for low-cost homes. Besser equipped plants are also doing their part in National Defense, on a large scale in many sections of the country and the Panama Canal Zone where cantonments and defense housing programs are under way. It will pay you to investigate the advantages of blocks made on Besser Tampers or Vibrapacs.



Opposite is shown one of the Besser Plain Pallet Stripper (Tamper) Machines for brick or block manufacture. Its high production ability ensures quick deliveries for you. Ask for names of Besser Plants near you.

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COMPLETE EQUIPMENT FOR CONCRETE PRODUCTS PLANTS

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ALPENA, MICHIGAN



Super Tool SAVES LABOR DEXTER-TUBULAR LOCKS and LATCHES

Write for complete information. No obligation

National Brass Company, Mfrs.
GRAND RAPIDS, MICHIGAN
Certified Builders Hardware
Cabinet Hardware
Screen Door Hardware

Something New An AUTOMATIC Garage Door



Turn the handle and up it goes - no tugging, no lifting.

THAT'S STANLEY
Econ-O-matic
Pat. Pend.
Economical - Automatic

A Stanley "Swing-Up" Hardware Set with new attractions. For old and new doors, weighing not over 150 lbs. Its low cost will surprise you. At your dealers or write for full details. The Stanley Works, New Britain, Conn.

STANLEY

TRADE MARK

HARDWARE FOR CAREFREE DOORS

OPM Critical List

(Continued from page 137)

5. Firing Equipment—only for items listed below:
 - a. Oil, gas and coal burners.
NOTE: Oil burners eliminated from eastern seaboard area.
6. Control Equipment—only for items listed below:
 - a. Damper Regulators.
 - b. Thermostats.
 - c. Pressure Controls.
 - (1) Pressure Reducing Valves—multi-family only.
 - (2) Pressure stats.
 - (3) Pressure Relief Valves.
 - d. Relays.

NOTE: Above items to be reduced to minimum and plating eliminated.

HOUSEHOLD EQUIPMENT—to include only:

1. Ranges and Refrigerators (as available in the industry).
2. Incinerator hardware and fittings—ferrous metal, non-metallic coated, multi-family dwellings only. Incinerator proper, of non-metallic material only.
3. Refuse receptacles—metal cans, zinc coated, modified as per Federal specifications or phosphate treated and painted.

LAND DEVELOPMENT ITEMS—only as noted below:

1. Wells—Reinforcing Mesh for dug well slabs only.
2. Well Casings—ferrous metal, zinc coated only where local conditions make necessary.
3. Pipe Lines and Connections for water and gas distribution systems, as below:
 - a. Pipe and Fittings, ferrous metal; zinc coated pipe only in smaller sizes or where local conditions require.
 - b. Fire Hydrants—ferrous metal with brass limited to minimum necessary for working parts.
 - c. Valves and stop cocks—ferrous metal where possible, otherwise with brass working parts.
 - d. Valves boxes, small—cast ferrous metal.
4. Storage Reservoirs—only for items listed below:
 - a. Reinforcing steel.
 - b. Elevated Steel Tanks and Supports.
5. Manholes—ferrous metal covers and frames and step bars—for streets only.
6. Water and Sewage Treatment Plants—to include only:
 - a. Reinforcing steel.
 - b. Cast or other ferrous pipe.
 - c. Valves and fittings.
 - d. Septic tank fittings, ferrous metal non-metallic coated. Tanks, non-metallic only.
7. Drainage and Culverts—to include only:
 - a. Reinforcing Mesh.
 - b. Inlet Frames and Gratings—cast ferrous metal.
 - c. Ferrous metal gaskets and bands where required for reinforced concrete drainage pipe.
 - d. Ferrous metal angles for inlet throats in gutters.
8. Pumps—to include only:
 - a. Shallow and Deep Well.
 - b. Pressure Tank—phosphate treated ferrous metal painted, zinc coated where local conditions require it.
9. Electrical Service; extensions from distribution systems—overhead and underground materials of metal or with metallic components (except metal light standards).

* * *

Master Metal Strip Solves Shortage Problem

DUE TO the restrictions in the procurement of metals for civilian use in building construction, it is interesting to note that the Master Metal Strip Service, 1720 N. Kilbourn Ave., Chicago, manufacturer of Master No-Draft Sash Balance, has been fortunate in obtaining a certain type of stainless steel for forming the housing of this popular spring sash balance. This is a case where the substitution actually makes a better material than the original metal formerly used.

Master Metal Strip Service has every reason to believe that there will be ample quantity of this special steel available for all of its needs in manufacturing its products.

Emergency Homes Must Not Be Shoddy

(Continued from page 78)

of 1-3-5 mix instead of "Waylite," or equal, blocks. Floor slab to be poured after proper preparation for waterproofing and reinforcing, as detailed in plans.

Door slabs: At the two exterior doors (front and kitchen) as indicated on plans, the concrete contractor shall install slabs as follows: 1. Front door—2'6" x 3'4". 2. Kitchen door—2'6" x 3'.

To eliminate settling of slabs, contractor shall install 2'6" concrete piers at two outside corners of slabs. On the two inside corners, said slabs shall be hung on two deformed iron bars (one at each inner corner), 1/2" in diameter, which have been previously imbedded when pouring concrete foundation. The two door slabs above indicated shall be laid on thoroughly puddled and tamped earth, 4" of thoroughly tamped cinders, and the slab shall be 5" of concrete plus 1/2" top dressing, steel troweled.

MASONRY: Contractor shall furnish all labor and materials, and equipment, necessary for all brick work and other exterior and interior masonry walls and partitions, and shall use extreme care to build plumb, straight, level walls and partitions having particularly and constantly in mind that no plastering will be done on walls and partitions, so that there is especial need for carefully constructed walls and partitions.

Contractor shall install, but not furnish, the following: All the rods, plates and anchors, the 2" space stops as shown at four corners of building (from floor to ceiling top of 2" air space between walls), lintels, etc. The 2" air circulation stops will assist in accurately obtaining and regulating the air space between brick wall and interior masonry block wall.

This contractor shall include all cleaning and pointing of brick walls and mastic caulking of all openings. The interior course of wall for the exterior walls shall be "Waylite," or equal, laid in cement mortar, or equal. Interior partitions shall be "Waylite" block, or equal. All door and window sills shall be cut stone. Mortar shall be cement mortar, or equal. All courses shall be laid straight, level, and true to line. 2 x 4 jamb blocks for nailing of exterior door frame shall be installed as directed by carpenter contractor.

CHIMNEY: The flue from heating unit shall be as manufactured by the Condensation Engineering Corporation,—the registered trademark known as "Vitroliner." This material shall be of 18-gauge Armco enameling stack iron, and covered inside and out with a special high-temperature, acid-resisting, vitreous enamel fused on to the metal at 1800 degrees Fahrenheit. This flue shall run from an elbow at the heating plant to a point approximately 10" above roof line, at which point the artificial chimney in proper proportion to house shall be installed and manufactured of the same material and quality as above described. The color of the chimney shall be chocolate brown.

Heavy insulation shall cover the flue pipe from a point just below the first floor ceiling joist to a point just above the roof. The flue shall then continue through the artificial chimney cap to a point approximately 4" above said cap. The joint of the pipe passing through said chimney cap shall be of patented water-tight

construction. There shall also be a threaded nipple at the lower end of said flue for draining of possible condensation.

All of the above to be installed with approval of Federal Housing Administration and Underwriters.

(Continued to page 140)



SHOWING interior block partition between kitchen and bath; note compact, roughed in plumbing.

DEXTER-TUBULAR *Lifetime*
LOCKS and LATCHES **WARRANTY**
PACKED IN EVERY BOX

GENUINE
DEXTER-TUBULAR LOCKS and LATCHES
WARRANTY

National Brass Company, Mfrs.
GRAND RAPIDS, MICHIGAN
Certified Builders Hardware
Cabinet Hardware
Screen Door Hardware

Use DONLEY ATTIC VENTILATORS for defense housing



LOW COST
EASY TO INSTALL

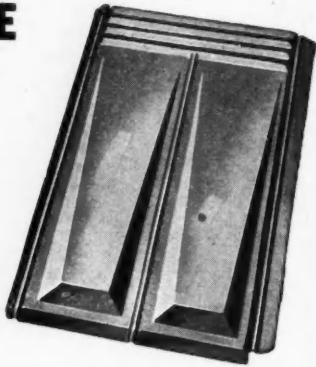
Minimum cost, but good design and construction—that's what Defense housing must have and that's why you should use Donley Steel Attic Ventilators.

Good construction calls for ventilated attic space—Donley Ventilators let you include this feature at maximum speed and rock-bottom cost. Sized to fit standard masonry construction for easy fitting. Rectangular, 1/2-circle and 1/4-circle styles; rectangular style in 10 sizes from 8" x 11" up to 18" x 36", with free area range of 23 to 234 square inches.

Notched at bottom of body to admit top edge of siding, see illustration. Easy to install, no wood trim needed. Made of 20 gauge steel. Painted with two coats of special, high quality paint—complete with bronze fly screen fastened to the inside. Consult your dealer for further details or see our catalog in Sweet's.

The DONLEY BROTHERS Co.
1910 MILES AVENUE • CLEVELAND, OHIO

**NATIONAL DEFENSE
Draws Heavily on
EDWARDS
SHEET METAL
BUILDING
MATERIALS**



Sheet steel is high on the priority list. The amount available for non-defense construction has been greatly curtailed. We are therefore obliged to limit our sales of steel roofing, tile, shingles, ceilings and sidings to such items and quantities as remain after meeting the demands of the Government for more essential requirements.

We invite your inquiries subject to these conditions.

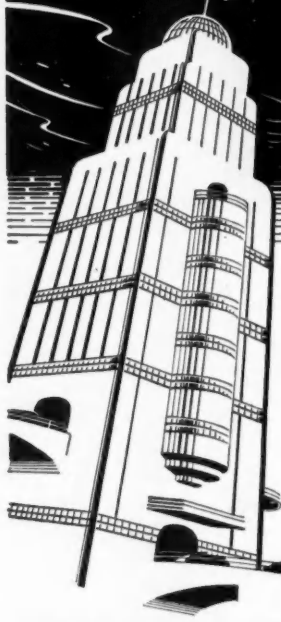
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Cincinnati, Ohio

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PLANS FOR
TOMORROW**



Tomorrow, when the urgent call of defense for stainless steel is just an echo, there will be more Allegheny Stainless than ever for building. This strong, ever-beautiful metal has hundreds of structural and decorative uses both inside and out. Investigate Pluramelt (stainless-armed mild steel) and Ludlite Bord (stainless on rigid mineral board), two economical and conserving forms of Allegheny Stainless. Write Dept. S-148 for full data.

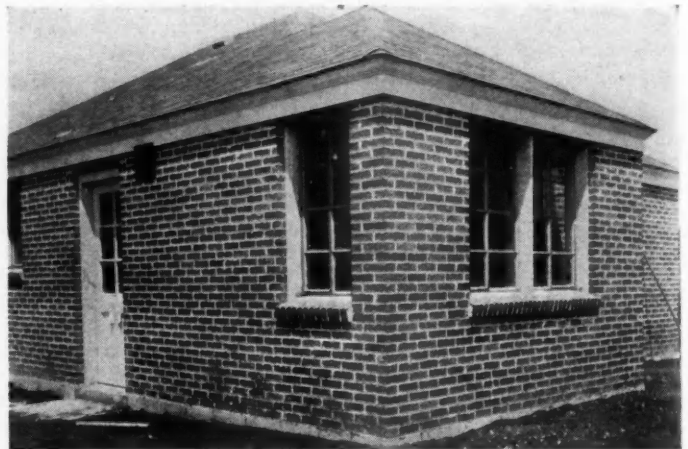
ALLEGHENY LUDLUM STEEL CORPORATION

GENERAL OFFICES: PITTSBURGH, PA.

BRANCH OFFICES IN PRINCIPAL CITIES

Emergency Homes—

(Continued from page 139)



ABOVE: View of Mills & Sons' "Westbrook" defense home showing close-up from the rear. Note breather tubes at bottom of brick.



CONSTRUCTION features Waylite block interior, brick exterior, and two-inch air space between.

STEEL CASEMENTS AND SASH: All sash (except where stock sizes are not available) shall be Truscon double hung, or equal with metal frame storm sash and bronze screen. Where bay window occurs, General Contractor reserves the right to use wood frames and sash in said bay.

CARPENTRY: All joists, rafters, and/or other lumber for framing shall be No. 1 Yellow Pine. Roof boards shall be No. 2 Yellow Pine, shi lap. All exterior cornice lumber shall be No. 1 Ponderosa Pine, or equal. Wall plates shall be of size shown in detail on plans, and shall be secured by $\frac{1}{2}$ " rod bolts with washer plate at bottom $3" \times 5" \times \frac{1}{4}"$ with washer and bolt at top as shown. Rafters shall be $2 \times 6-16"$ on center. Hip rafters 2×8 . Ridge 2×8 . All joists shall have a minimum of 4" bearing on walls or iron beam supports.

Exterior doors shall be 6'8" in height instead of 7' as shown on plan. These doors shall be of stock design and will comply as closely as possible with the design of the door as shown on plan. All interior doors $1\frac{3}{8}"$ flush panel shall be gum, pine edges, Mengel or equal—except where heating specifications indicate Tropical Louver type door kitchen to heating chamber. A scalloped fascia board as shown on base of living room bay shall be included in the lumber bid—not millwork). As exterior doors are especially subjected to differing interior and exterior temperatures, the purchasers agree that in the event such doors warp, the contractor may correct by installing brass or chrome bolt, or bolts, at top or bottom, or both, and shall not be required to replace such doors. Two-member stock base, 4" to $4\frac{1}{2}"$.

Except where corners of rooms or wall angles are too close to casings to permit their use, there shall be installed in all forty degree angles the dustless corners (at floor lines) as manufactured by the Dustless Corner Shoe Company of Glendale, Calif. All rooms shall have stock cove picture moulding, or small three-member casing type cove, at General Contractor's option, at point where wall meets ceiling. Case work in kitchen is all steel, as manufactured by Youngstown, or equal. Cases not included in this contract but setting of same by contractor is included. All trim throughout shall be White Pine, Poplar, or Gum, except stools which shall be Birch.

STORM WINDOWS AND DOORS: Furnish and install three combination storm doors and storm windows for all window openings—"B" quality single strength glass. Screens for combination doors shall be 16" mesh galvanized wire.

ASPHALT TILE FLOORING: Finished floors throughout shall be 3/8" asphalt tile as manufactured by Thomas Moulding Brick Co., Tile-Tex Company, Armstrong Company, or equal, and shall be laid with mastic adhesive materials over carefully steel troweled concrete slab surface. Tile shall be 9" x 9" in solid color.

MEDICINE CASE: Shall be first quality Hess, Parker, or equal, with plate glass mirror, with 5-year guarantee.

KITCHEN CASES: Kitchen cases shall be as manufactured by Youngstown Pressed Steel Corporation, or equal, with steel sub base. The top of sink unit shall be porcelain enamel. Double bowl sink with deck type chrome plated swing spout faucet. Back splash shall be approximately 4" to 6" in height. This contractor shall also include in his bid the above mentioned faucets, crumb strainer, flat rim strainer with rubber plug, and the continuous waste. There shall also be a row of two 30-inch in height kitchen cases and one 27-inch kitchen case, made by the same manufacturer, installed on wall above sink.

HARDWARE: Interior hardware shall be first quality wrought brass, design and manufacture to be selected by the General Contractor—and shall be as manufactured by Hollywood Company, or equal. Front door shall have installed cylinder lock and grip with turn bolt and knob on interior. Rear kitchen door cylinder night latch and knobs with latch. French door off bedroom will be equipped with door lock with lever action lock instead of key.

ROOFING: Roofing shall be U. S. Gypsum, or equal, 210 lbs. per square, 3 tab shingles. Double starters shall be used—and shingles shall be applied over 15 lb. per square felt. Galvanized roofing nails shall be used. Roof ridge shall be Boston type—individual 9 x 12 asphalt shingles.

CEILINGS AND INSULATION: All first floor ceilings shall be U. S. Gypsum Sheetrock with depressed joints and Perfatape applied. Entire first floor ceiling shall have installed two inches of U. S. Gypsum blanket glass wool insulation, or equal.

ELECTRICAL LIGHTING AND WIRING FIXTURES: Electrical outlets included in these specifications are as per the following schedule and take precedence over those shown on plan:

Front entrance hall—one outlet, one switch—(said switch to be located on exterior wall just inside front door). Living room—three outlets. Dinette—one outlet, one switch, one plug. Kitchen—one outlet, one switch, five plugs (one convenience outlet, one refrigerator outlet, one Bendix washer outlet, one outlet for electric clock, and one outlet for exhaust fan). Utility room—one ceiling outlet, pull chain controlled; one outlet for heating plant. Bathroom—one outlet over medicine case which shall contain a convenience plug in the electric fixture selected for said outlet. Bath hall—one ceiling outlet, pull chain controlled. Bedroom No. 1—one outlet, one switch, two plugs. Bedroom No. 2—one outlet, one switch, two plugs. No outlets in clothes closets.

Chimes: Contractor shall provide outlet set. General Contractor shall furnish one model T C 995 combination electric kitchen clock and NuTone two door chime.

Switches and convenience outlets to be General Electric, Pass & Seymour, or equal. All wiring shall conform to the rules of the National Board of Fire Underwriters. All wires shall be new code, rubber covered, single braid copper wire, run in continuous lengths between openings without splicing. No wires shall be less than 14 gauge.

Steel outlet boxes shall be used and same shall be protected with a compound to prevent corrosion, or made of corrosion proof material. Outlet boxes shall be properly and firmly secured in position so that outer edge of box and finished plaster line will be equal. Meter box is to be steel or cast iron and placed upon the outside wall as directed, with tight closing door and fastening device, coated with compound to prevent corrosion, or made of corrosion proof material. Service wires shall be extended sufficiently to enable electrical service company to make proper connection.

VENTILATING KITCHEN FAN: An electric kitchen ventilating fan (Airmaster, or equal), shall be installed as indicated on plan. Electrician to provide proper outlet for same. Fan to be furnished by General Contractor.

(Continued to page 142)



KITCHEN



BATH



RATHSKELLAR

3 ROOMS

where **VICTOR In-Bilts** contribute to Modern Living:

1. **IN THE KITCHEN** to speedily clear out greasy fumes and cooking odors. Keeps the room fresh and clean.
2. **IN THE BATHROOM** to dispel steam, heat, moisture and odor. Provides automatic ventilation.
3. **IN THE RATHSKELLAR** to carry out smoke, clarify the air, assuring all-time comfort.

The cost of assuring modern comfort in these three important rooms is so small when amortized with the total home cost—that no modern home can afford to be without Victor In-Bilt Ventilators. Put Victor In-Bilts in your plans. Write for details. Address Dept. IB-220.

VICTOR ELECTRIC PRODUCTS Inc.
2950 Robertson Ave., Oakley, Cincinnati, O.



Clear as water
from a
drinking glass

A faulty hot-water tank brings complaints and loss of good-will. So many builders are protecting their reputations today by installing tanks that are porcelain enameled inside. This most durable of all finishes means less rusty water, fewer tank leaks and longer tank life. It meets all code requirements.

When the porcelain enamel is fused to ARMCO Ingot Iron, you can assure your customers of the finest basic quality. They know about the "world's standard enameling iron" from 27 years of national advertising. Write for more information. . . . The American Rolling Mill Company, 2751 Curtis St., Middletown, Ohio.

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You, too, will find Pecora cheapest in the end because it has what it takes to make it so.

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Use This Gun
 With 3 Nozzles and 4 Cartridges of approx. 1 qt. each
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 Collect for Terms: 2% disc. net cash with order. To approved credits 2%, 10 days, 30 days net. F. O. B. Philadelphia, Pa.

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 L. SONNEBORN SONS, INC., 88 LEXINGTON AVENUE, N. Y. C.
 Your Name _____
 Address _____
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Emergency Homes—

(Continued from page 141)

SHEET METAL, FLASHINGS, ETC.: All sheet metal indicated on plan shall be of galvanized iron—all to be 26-gauge Armco iron, Cop-R-Loy, or equal.

GLASS: Bathroom glass shall be 3/8" hammered, Factrolite, or clear. All glass shall be Libbey-Owens, or equal, and shall be "A" quality, single thickness. All putty shall be special steel sash putty.

PLUMBING AND SEWERAGE: All fixtures shall be manufactured by Standard Sanitary Manufacturing Company, or equal, as follows:

Bath tub—"Master Pembroke," or equal, with shower head and curtain rod, also colored shower curtain. **Lavatory**—shall be "Hexagon" P-3867-R, or equal. **Toilet**—shall be "Modernus," vitreous china, or equal, combination. **Sink**—sink is not included.

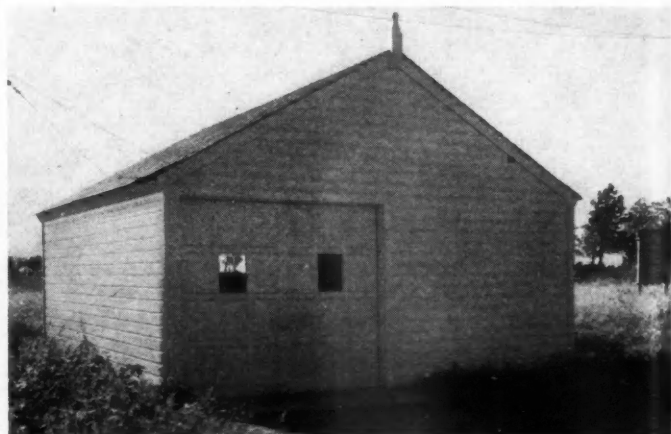
Automatic gas fired domestic hot water heater shall be 20-gallon insulated tank (Security, or equal). All work and materials shall comply strictly with the building code requirements and the Health Department requirements of the municipality in which the building is to be located. Included in this contract is the connection (hot and cold water) for washing machine, gas run to gas stove location, and the connection of the heating unit and automatic domestic hot water heater. Water supply pipes for the washing machine shall be run and connected by plumber. All cast iron soil and vent stacks shall be carefully caulked with lead and oakum, and be completely leak, gas and odor free. This contractor shall furnish all labor, material and equipment necessary for the full completion of the work, and all workmanship, fixtures and fittings shall be guaranteed for a period of one year from the completion of the building. Water supply shall be 3/4" lead pipe from buffalo box into the building.

One sillcock shall be furnished for exterior hose connection, equipped with a self-draining shut off valve inside of building, and located as directed by owner or General Contractor. Any and all pipes located in outside walls shall be insulated against freezing with Balsam Wool, or equal, and guaranteed against freezing. Sink waste and revents to be 2-inch galvanized pipe with a 2-inch cleanout. All other soil pipes and stacks shall be 4-inch extra heavy, tar coated, cast iron, with a 4-inch cleanout at the bottom of each stack. Where vent pipes pass through roof they must be increased at least 1-inch in diameter, and well flashed with lead flashing apron.

WINDOW SHADES: All first floor windows shall be equipped with Waverly linen shade cloth, or equal, installed on Standard or Hartshorn rollers.

HEATING: The heating installation is to be the Cor-O-Aire system, Model 85G, gas fired, "Free Air," having net output of 70,000 BTU, equipped with heat anticipating type thermostat, filter screen, humidifying reservoir, summer switch, automatic fan switch, and Corozone unit for purification of air.

Heating unit to be guaranteed to maintain heat at 70 degrees Fahrenheit with reasonable variations to mild extent only when outside temperature is minus 10 degrees Fahrenheit. Operation of plant and all parts of plant to be guaranteed for a period of one year; said guarantee to include free service, if required.



DOUBLE garage provides space for car, workroom and storage.

PAINING AND DECORATING: All interior woodwork shall receive two coats of paint. First coat—DuPont Ovalite Undercoater, or equal. Second coat—DuPont Dulux, or equal, enamel. Where doors are natural finish, use two coats gloss or satin varnish. Where doors are stained use one coat stain, one coat shellac, and two coats of varnish—first grade DuPont, or equal. DuPont Dulux materials, or equal, shall be used. All interior doors shall be finished the same as enameled woodwork.

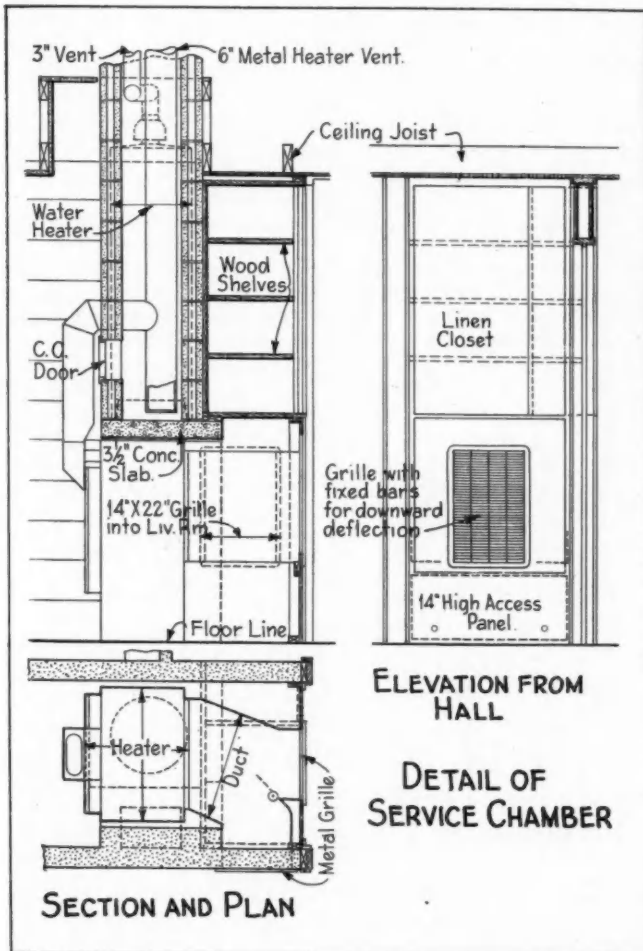
All exterior woodwork and sheet metal shall receive two coats of paint. All window stools shall receive one coat stain, one coat shellac, and two coats varnish. Exterior thresholds shall receive one coat filler and two coats spar varnish. All exteriors of steel sash to receive two coats—one factory primed and one coat dark color (moss green, brown or black), DuPont.

All interior woodwork shall be mildly sanded between coats. All knots showing shall be shellacked before priming. No interior painting shall be done during rainy or freezing weather, or when any surfaces are not thoroughly dry. Where any rust is found on sheet metal or steel sash, rust shall be carefully removed with wire brush or sanding before painting. All puttying of nail holes, cracks, joints, etc., shall be done after first coat of paint is applied. Inside putty shall be white lead putty tinted to match the final coat of paint.

All trim shall be back painted immediately on delivery to the job. All exterior door frames and wood surrounds, if any, of steel casements shall be back painted and primed all over before installation.

SPECIAL EQUIPMENT: There shall be installed by the General Contractor, one Bendix DeLux type washing machine, or equal, bolted into concrete floor. This item shall be of type which washes, rinses and wrings clothing—all automatically.

LANDSCAPING: Landscaping to be done shall consist of furnishing and planting in locations at discretion of the General Contractor, two (2) trees of ornamental or shade varieties of 2½" to 3" caliper. The General Contractor shall be responsible for distributing roughly the black dirt around the premises at the discretion of the said General Contractor.



DETAILS of compact gas-fired conditioner under linen closet.

Amerock
Achievements!
MATCHED DESIGNS

Knobs, pulls, hinges, and catches "match" perfectly in design giving complete harmony to the finished installation. Pioneered by "Amerock." Patents Nos. 2,233,278; D126,551; D126,566.

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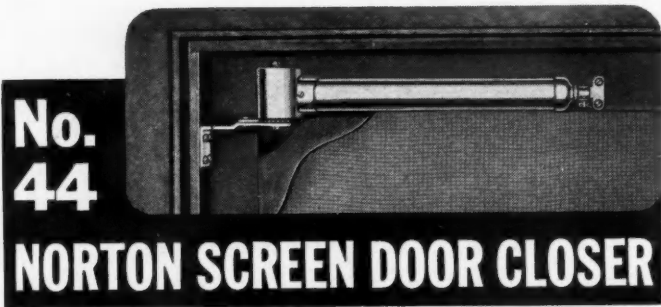
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No. 44

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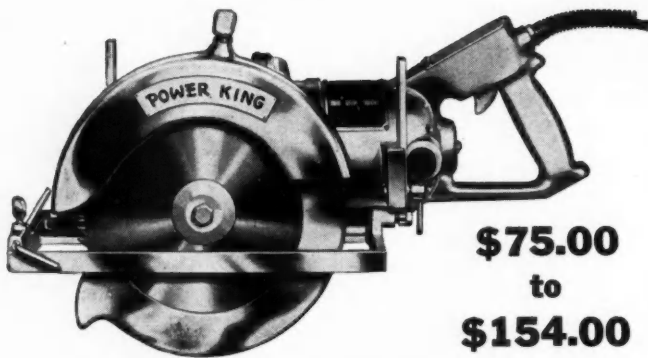
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These new profit makers have the speed and power, efficiency and safety required for today's toughest saw jobs. They reflect 20 years experience in designing and building portable electric tools. They are lightweight and compact—have quick-acting pistol grip and switch control; balanced lift control; dust blower for clear vision; thumb-locked ripping guide; quick-change arbor for blades, discs, dados; carrying case and grease gun are furnished. Write for catalog giving complete specifications today.

POWER KING TOOL CORP.
1012 Cleveland St., WARSAW, INDIANA

Glamour and Appeal—

(Continued from page 81)

than a \$100 value in the property by those inspecting the houses. We are well pleased with our experience, and we think we are benefiting those who have confidence in us as well as being benefited ourselves."

Daylight Fills Every Corner

No sooner does one enter a Driskell-built house in Western Hills than he is impressed by the interior's cheerfulness, beauty and appearance of comfort. Larger than average window openings admit natural light to bathe every corner of each room and admit healthful sunshine and clean air. The select oak flooring

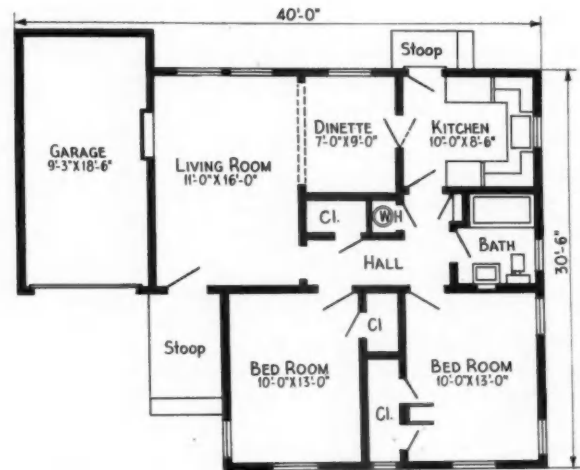


CONSTRUCTION VIEW looking down the street of

is noted, the tasteful wallpaper, and the built-in bookcase of the living room. But the feature which draws out involuntary and admiring "ah-hs" is the 36x48-inch plate glass mirror above the bookshelves. It contributes zest and richness to the room, makes it look larger by seeming to shove the wall back, and captures a scene through the windows which is highly decorative.

Bathroom Walls Easily Cleaned

The kitchens are workshops which women have only dreamed about before. Naturally, there is a sink for washing dishes, work table space for the preparation of meals, and ample cupboards. The doors on the cabinets are eye-arresting and sparkle a welcome and invitation. Their panels are Louvrex patterned glass which softens the outlines of objects on the shelves but permits one to see what is inside without opening the doors. The same figured glass was used to glaze the kitchen door. The kitchen has been further designed for a housewife's happiness by installing a primp mirror above one end of the sink. A



THIS IS another of the popular Western Hills floor plans.

woman can give her face a quick retouching before answering the doorbell instead of detouring through the bedroom to her vanity.

Bathrooms in Mr. Driskell's houses will never be hard to keep spotlessly clean, thanks to the 16-inch wainscot of Vitrolite structural glass on the walls above the tubs.

Both of the bedrooms in the Glass Designed for Happiness homes are graced with generous mirror installations which captivate everyone. In one chamber a triple-view arrangement has been developed by installing a 16x40-inch panel on the fronts of the two doors on the closet and a 16x60-inch mirror on the wall between them. Women and men alike can leave the house knowing exactly how their grooming looks to other people.

The second bedroom has a 16x40-inch mirror attached to the inside of the closet's door above a shelf for toilet items. By



Joe Driskell's Fort Worth defense homes.

pulling up a bench or stool, vanity facilities are provided and, when the makeup is completed and the door closed, the "dressing table" is taking up no space.

Nationally Known Materials Used

Only nationally advertised products are used in the happiness houses by Mr. Driskell. He has bought only quality building materials from the Chickasaw Lumber Co., Kohler plumbing fixtures, Sherwin-Williams paints, and Hollywood overhead garage doors. Thermowool insulation is laid four inches deep in the ceilings, and bronze weather stripping is on the doors and zinc on the windows. Wm. Cameron & Co., Ft. Worth, supplies the wood, double-hung sash glazed with Libbey-Owens-Ford window glass, and Binswanger & Co. of Ft. Worth sells the Louvrex and Vitrolite. Bathroom floors are ceramic tile, while finest grade linoleum is laid in the kitchens. All of the houses are fitted with Venetian blinds, have Mosaic tile splashbacks in the kitchens, and showers in the baths.

The community of new homes is conveniently located, being two blocks from an elementary school, six blocks from a junior high school, three blocks from a senior high school, bus lines within two blocks, and two blocks from a recently completed community center.



THE quality building materials used exclusively in the Title VI homes of Driskell & Co., which are "designed for Happiness with Glass" are purchased from the Fort Worth yard of the Chickasaw Lumber Co.

EVERY MINUTE COUNTS..

and man-hours are a hundred-fold more valuable now than ever before

The IVES NON-MORTISE DOOR LATCH will save valuable installation time on all defense housing jobs.

Simply drill one hole for the spindle and notch the stop for the latch case, and you have a quality installation for permanent dependable usefulness.

Write Department "A" for specifications

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THE H. B. IVES CO. NEW HAVEN, CONN., U.S.A.

MAKES ANY WINDOW A modern WINDOW

Here is a "two-in-one" feature that helps sell houses and saves you money besides. Combines weather-stripping and balance, making any double-hung window easy to operate and weather-tight.

SAVES UP TO \$1.00 PER WINDOW

Use economical plank frames for new sash or cover up old pulley holes on old jambs with Master No-Draft Sash Balance and have a modern sash installation at low initial cost and minimum maintenance expense.

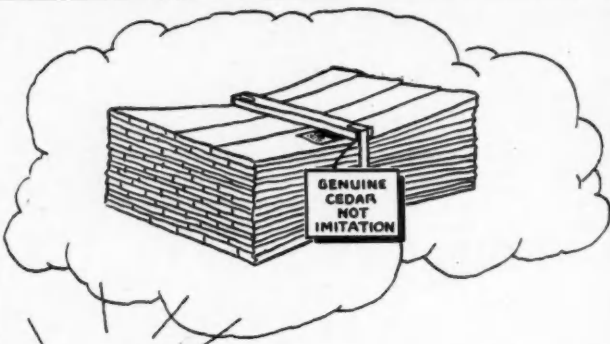
Send coupon today for complete information. It will pay you to learn about this unit.

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Gentlemen: Please send me information on the Master No-Draft Sash Balance.

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ON LATEST
MODELS OF
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WALKER-TURNER CO., INC.
10101 Berckman St., Plainfield, N. J.

Power Equipment Helps in Defense—

(Continued from page 83)



THIS Typical Del Aire living room has a spaciousness through large window areas and wide arch into dinette.

center of operations, where proper lengths and sizes are cut and assemblies made for dozens of houses at the same time. Plaster is mixed on the job in special machines; complete interiors are spray-gun painted in less than three hours.

Thus, by thinking (and building) in terms of entire blocks of homes instead of individual dwellings, and carrying on many operations simultaneously, the Del Aire organization met its tough building schedules.

As a result of these modern building operations and money-saving "mass production" short-cuts, the Del Aire project has met with immediate local approval, with all finished houses occupied upon completion and new home sales averaging three per day.

Construction data on these Del Aire houses is as follows:

Foundation, continuous concrete and reinforced steel.

Front and rear grounds graded, not landscaped.

Exterior, four coats stucco (and wood trim) over Johns-Manville Steeltex. Walls also reinforced with tension braces to make a more rigid frame.

Roof, red cedar shingles or composition roofing.

Floors and ceilings, 2 x 10 floor joists, 2 x 6 ceiling joists; ½" oak floors.

Doors, 1¾" Douglas fir for exterior, 1⅝" Douglas fir for interior.

Walls, hard wall plaster, smooth finish with baseboard above wood mould in living room; kitchen and bathrooms have stippled finish.

Dinette opens into living room; table space only provided.

Tubs, ironing board compartment and water heater installed on service porch.

Windows, double-hung, wood sash; screens and shades furnished.

Wall outlets, kitchen and bedrooms, two; living room, three.

Closet doors are set in plaster; one closet has metal shoe rack.

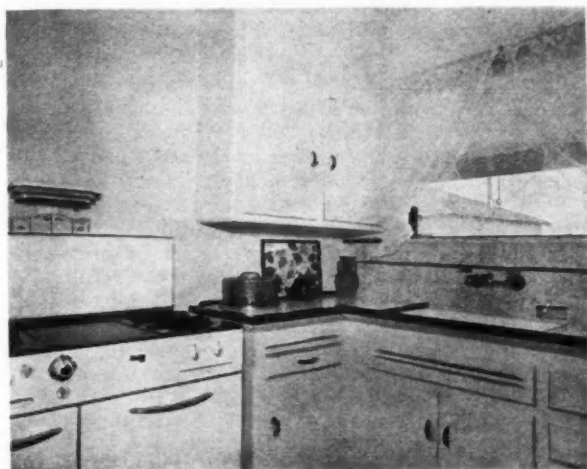


ANOTHER Del Aire home, this one given ranch house styling, but retaining one of the standardized room arrangements.

THE bath of the model home, shown here, is attractively done in color; generally, however, these Inglewood houses have white baths.



THESE Title VI homes have standardized kitchens which are efficiently arranged, as shown below.



Linoleum covered floors in kitchen, service porch and bathroom. Double sink in kitchen.

Wall and ceiling vent above refrigerator space which adjoins separate broom closet; cupboards above.

Heating, Guernsey gas wall heaters, 40,000 B.t.u. capacity with wall vents to carry out fumes.

Bathroom fixtures throughout are white porcelain; shower over tub; single tile border around tub.

Plumbing fixtures, Washington-Eljer.

Attached single garage in majority of houses, with upward-acting door.

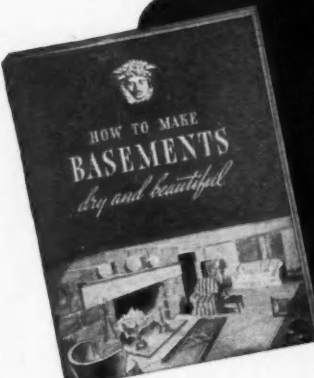
Corner lots developed usually with three bedroom houses, double garage and house equipped with fireplace, which adds \$140 to cost.

All houses have brass knockers, brass door knobs and plates and outside brass trimmed lamp. Built-in mail chute.

Buyers can select exterior and interior colors, and color for tile and linoleum from samples displayed in company offices.



THE plan of this five-room and attached garage home features accessibility with a minimum of hall area.



FREE

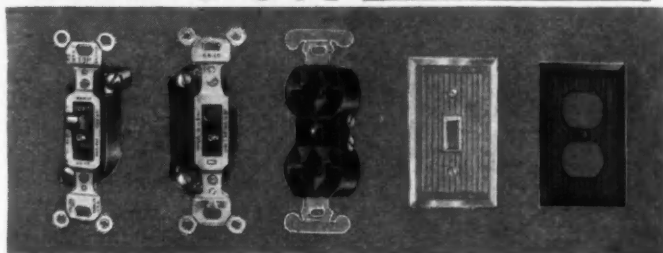
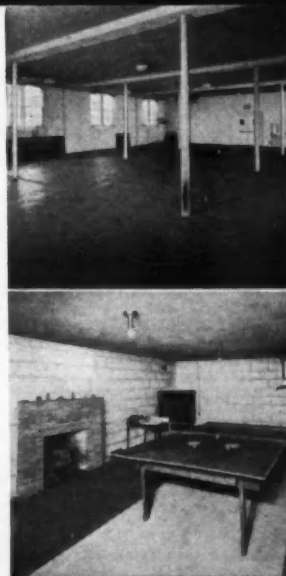
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America's Housing Need

(Continued from page 64)

group from 25 to 44 will increase 11.7 per cent in this decade as compared to only 9.9 per cent in the preceding decade.

Home Building's "Greatest Dynamizer"

We will now deal with the third factor. As we had practically no home replacement market until very recent years, it has been true all through our building history that the population of an area had little to do with its building activity. New homes were built in growing communities rather than static areas with a big but only slowly increasing population. Homes are needed in areas where people move TO, not where they move FROM. Hence the movement of population from our farms, villages and small towns to our big cities and manufacturing areas has been the greatest single dynamizer of the construction industry in our past, and will continue to be of immense importance in the future.

Today, we see the creation of a colossal defense industry with new factories springing up all over the country and old factories expanding at record pace. In answer to the call for workers, population is once again in motion and new homes in vast numbers are inevitably required.

How great will this new movement be? The National Resources Planning Board sees ahead a reduction of unemployment to zero in 1944, a decline in nondefense workers from the 1940 level of 45,200,000 to 33,000,000 in 1944, and a rise in defense workers from 4,800,000 this year to 11,700,000 in 1942 and to the colossal number of 23,500,000 in 1944. This writer holds no brief for these figures and they are of course little more than guesses. But in view of the present world situation that may precipitate us fully into war or bring about the militarization of the United States for years to come, the figures are not unreasonable in themselves. No such gigantic dislocation in employment can be brought about without a very great movement of population from nondefense to defense areas. Houses by the hundred thousands will stand idle in the former and houses in vast numbers will be required in the latter.

Defense Is the "New Industry" of This Decade

It should be fully grasped that defense—whether we enter fully into the war or merely arm for all contingencies—is our "new industry" in this decade, just as the railroads were in the Eighties and the automobile in the Twenties.

But defense is a vaster industry than ever were the latter. There is no limit to the demands that a war economy makes on a nation's productive facilities. These will have to be increased far more than we have even begun to contemplate at the present time. War requires not merely existing plants but an entire immense complex of new plants of its own. All of this means vast movements of workers who must be supplied with homes.

Immense Replacement Market Ahead

We now come to the fourth factor, the replacement market for homes. The need for replacement or drastic rebuilding of entirely inadequate and deteriorated home structures is now receiving more attention than at any time in our history.

We are no longer able to draw on an unlimited supply of low-standard-of-living workers abroad as in our past days of vast mass immigration nor do we have any great source of such labor in our own country. It will not be possible to move American labor from farms and nondefense areas to the armament centers and house them in the dilapidated homes that were satisfactory to immigrants in their earlier stages of Americanization.

Any such attempt would result in low morale of defense workers, inadequate manufacturing output, and a huge turnover of labor as workers become dissatisfied with their housing and move on to other areas in search of more satisfactory homes.

The Real Property Inventory of 1934-36 revealed that 16.2 per cent of all city home dwellings examined were either unfit to live in or in need of such major repairs that complete rebuilding or very drastic reconstruction was necessary even at that time. Since then there has been a considerable program of

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public housing but it has been a mere drop in a bucket compared to the immense scope of the problem.

If we apply this 16.2 per cent to the 20,598,506 occupied dwelling units in urban places reported by the 1940 census, we get 3,337,000 home dwellings that should be replaced as rapidly as possible. No doubt, it is quite impracticable to replace all of these structures rapidly at a time when the maximum national effort must be concentrated on defense. But the latter itself will act as a stimulus to rebuild many of these obsolescent homes much faster than we would otherwise have done. The close connection between maximum output of armaments and at least reasonably satisfactory housing for workers will become plain to authorities responsible for the defense effort.

Thus the needs of war and defense will put new emphasis on the growing importance of a replacement market for the home-building industry. That importance had already been grasped by the far sighted as soon as large scale immigration ended. In the days of extremely active immigration it was quite possible for a recent wave of immigrants to move out of the more dilapidated structures and leave them to be occupied by a still more recent wave of newcomers with a still lower standard of living. But as these waves ceased, and practically all former immigrants advanced well on the road toward complete Americanization, the impossibility of keeping extremely obsolete dwelling structures in use as homes became ever more apparent. The workers who are now moving to the defense areas are by and large either native American or quite thoroughly Americanized by now and will have none of the slum housing that was satisfactory to the poorest European immigrants in the days of the first World War.

Demolitions Add to Shortage

The above facts have already been recognized and reflected to some extent by the rapidly growing rate of demolition of homes in this country. Before 1929, homes were demolished practically only to make way for commercial or industrial structures. The demolition of old homes in order to replace them with new ones was decidedly a rarity.

But in recent years there has been more or less continuous demolition of dwelling structures which seems to have reached an extraordinarily high level in the period 1936 to 1938, stimulated partly by the growing unprofitableness of very obsolete housing as vacancies rose and taxes remained up, partly by stricter municipal regulations, and in more recent years partly by the USHA program.

In the years 1936 to 1938, according to the Division of Construction of the U. S. Department of Labor, 17 home units were demolished for each 84 new units built per 10,000 people in 263 cities. This gives a ratio of home demolition equal to 20 per cent of new construction. This is an extraordinarily high percentage indicating that 1 home was demolished in those years for every 5 built. If that ratio were used in estimating the general housing needs of the United States, the great majority of previous estimates made in this country of homes required annually will be shown to be much too low.

For instance, if it is estimated that 750,000 new homes should be added annually to the country's inventory of homes, it is obvious that it will be necessary to build 937,500 new homes to replace 187,500 demolished and provide a net increase in new homes of 750,000.

I do not believe the general nationwide ratio of demolition as yet warrants such figures, but there can be little doubt that in view of the exceedingly unsatisfactory shape of so large a proportion of the country's housing plant, demolition must be reckoned with more and more in estimating the country's housing requirements.

The greatest replacement market of all of course results from the passage of time. The 1940 Census reported 37,336,090 dwelling units for the entire country, of which 34,861,625 were occupied. If we take the latter figure and give these homes an average lifetime of 50 years, it will be necessary to build almost 700,000 new homes a year to replace all of them in the course of half a century. Even if we assume a far more leisurely pace and allow ourselves a full century to replace our entire housing plant, we would have to build almost 350,000 homes annually.

If we assume a very rapid rate of replacement, say ten years,

(Continued to page 150)



Fully hot the minute the switch is turned on, the

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is the ideal auxiliary unit for bathrooms, bedrooms, and children's playrooms. It provides comfort on chilly days—and adds its warmth to that of the main heating plant on exceptionally cold days.

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Smith Mixers

America's Housing Need

(Continued from page 149)

of the 16.2 per cent of urban dwelling units reported by the Real Property Inventory as unfit, we will still find it necessary to replace our remaining housing plant in sixty to seventy years.

Huge Annual Need

Thus the questions—how many homes should we build annually in this country, how great is the home shortage—must be answered in terms that largely revolve around the four factors discussed in this article, several of which are quite new to the building industry and have played little part in its past.

There cannot be any one definite answer or one set of statistics. It is a matter of interpretation and projecting one's imagination forward to take into account factors that will dominate the future rather than those that have played so great a part in the building history of our past.

It is because most estimates of annual housing requirements have been based on old traditional factors and have ignored the new ones such as demolitions, the need for replacement, the changing age composition of the population, etc., that these estimates have been of little value for the future. It has already been pointed out that it was quite possible in our past to house wave after wave of recently arrived low-standard-of-living immigrants in dilapidated hand-me-down houses, but in the future we will be confronted with the housing requirements of a population largely Americanized up to a standard of cleanliness and propriety that no industry or government dare ignore.

Hence, it is absurd to build up home shortage estimates that assume we can continue much longer to keep in use dwelling structures that were passable in the 1890's when the major problem was housing millions of new immigrants from eastern and southern Europe.

The question—how many new homes do we need annually—is much like asking—how much new clothing does a family need annually?

There is obviously a minimum and an optimum requirement with all sorts of degrees and variations in between. The same applies to housing. We can perhaps very roughly estimate the optimum annual requirement for new homes in the present decade as follows:

- | | |
|--|-----------|
| (1) New homes for new families, keeping in mind the rapid numerical growth of the age group from 25 to 44..... | 550,000 |
| (2) New homes to offset rising demolition rate and to replace homes destroyed by fire, flood, etc..... | 170,000 |
| (3) New homes to replace those practically unfit for Americanized workers..... | 350,000 |
| (4) New homes to replace aging homes on a long term basis over a period of 60 to 70 years..... | 460,000 |
| (5) New homes required to give an adequate vacancy ratio and permit home prospects reasonable choice..... | 70,000 |
| | <hr/> |
| | 1,600,000 |

Sensational Figures Often Tell Truth

I grant that the above figure, implying that we need 1,600,000 new homes a year for at least a couple of decades to come, is sensational and I fully admit that the building industry is not at present organized to perform such a task. But the truth often IS sensational and modest unsensational figures put forward by timid minds are often apt to unintentionally conceal, rather than reveal, the truth. But I have stated already that the above figure is a sort of optimum requirement. I do not of course say it is at present a practical figure, especially in these days when the maximum of the nation's effort must be devoted to armaments and heavy belt-tightening looms in the offing.

But the above figure is fundamental nevertheless. Call it sensational if you will, the fact nevertheless remains that the process of deterioration of our housing plant will continue to proceed inexorably until we reach a building year which accomplishes something close to the above-mentioned figure. The problem is fundamentally no different from keeping an industrial plant in shape. The longer you let it deteriorate the sooner you get to the point where you have no option but to rebuild.

As a practical matter, the number of homes we can actually

build depends mainly of course on three factors: (1) the prosperity of the population as reflected by the national income, (2) the cost at which we can build homes, (3) the degree of subsidization that the more prosperous groups of the population will (or can be compelled to) stand for in order to erect housing for the less prosperous. To the above three factors, a fourth must now be added, that is whether we can obtain the material and labor in a period when defense requirements naturally come first.

Cost Reduction a Triumph

The prosperity of the population at present is rising to unprecedented levels in terms of national income. The defense industry acts as a colossal pump primer pouring money into people's pockets.

A national income of over 100 billions in 1940 dollars should be attained by 1943, assuming reasonable efficiency at Washington in dealing with national problems.

Building costs however have risen steadily—in some areas even spectacularly—in terms of hourly wage rates and fixed quantities of materials. But to this there has been a remarkable offsetting factor that has probably been more responsible than anything else for the record number of single family houses being built this year. This factor is the rapid and consistent reduction in the size of homes.

Because the American family is now so much smaller than in the past, and because we now know much better than formerly how to design homes for efficiency of operation, it has become possible to market an extremely small home that costs less as a "finished package" than ever before in the recent past in spite of rising labor and material prices.

The following figures are highly significant: The average cost per square foot of the small home built this year by operative builders is about 3½ per cent higher than last year, but the square footage has been reduced fully 10 per cent on the average with the result that the "finished package," that is, the over-all building cost of the house, is actually 7 per cent less than last year.

It is often contested that such homes are too small. But they are selling as fast as they can be put on the market. That is the ultimate consumer's answer as to the question of their acceptability. These figures indicate how completely rising building costs have been more than neutralized by modern design especially adapted to the now very small American family. This performance in cost reduction is in fact remarkable and can well be designated a triumph for both the building industry and private enterprise.

* * *

HOLC Remodeling Experts Available

PROPERTY owners who will repair and modernize their houses to provide homes for defense workers and their families are being offered the advice of architects and technicians—without cost.

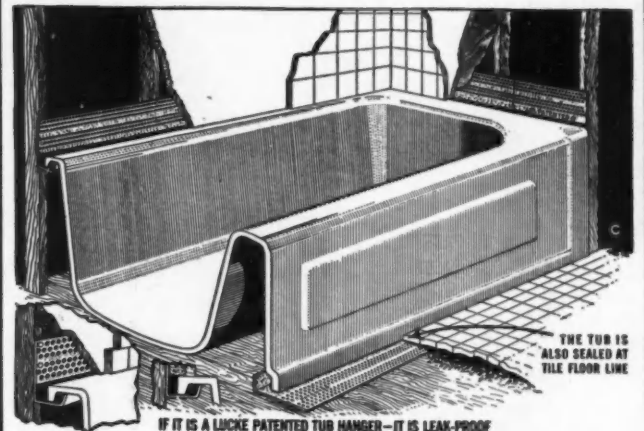
A new service recently established through the office of the Defense Housing Coordinator and the Home Owners' Loan Corporation has been placed in operation in key defense areas where the housing shortage is acute. Through its facilities, it is hoped to make 15,000 "extra rooms" and apartments available in the near future.

Home owners can apply to either local Home Registration Offices or HOLC offices for the aid of housing experts, according to an announcement, dated Aug. 30, by Defense Housing Coordinator Charles F. Palmer, and John H. Fahey, Chairman of the Federal Home Loan Bank Board, which directs the HOLC. Homes with unused space which can be converted into suitable living quarters will be inspected and estimates of the cost of remodeling will be made without charge.

The expenses of remodeling will have to be borne by property owners, it was explained, with reimbursement coming from rent. The HOLC technicians will estimate the amount of income which might logically be expected and home owners will be assisted both in obtaining financing of proposed improvements and the services of technicians who will carry out the work at a reasonable fee.

President Roosevelt has authorized the use of \$100,000 from his emergency fund to employ fee technicians to assist the HOLC's salaried staff which in the past few years has directed the reconditioning of more than 550,000 homes.

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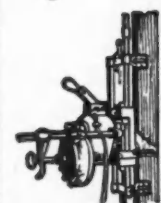
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Construction Volume from Federal Funds

FEDERAL expenditures for construction, including total value of all contracts awarded or force-account work started by the Federal Government for construction projects in 1939 and 1940, are shown in the accompanying table published in the U. S. Bureau of Labor Statistics Bulletin R1327, "Review of Building Construction in 1940." This tabulation, which covers all construction undertaken by the Federal Government both inside and outside the continental United States, shows valuations for 13 other types of construction projects in addition to residential and nonresidential buildings.

The total value of Federal construction projects in 1940 was two and three-quarter times as high as it was in 1939. By far the largest share of this increase was in contracts awarded for the construction and repair of naval vessels. The value of such work started in 1940 was in excess of \$4,000,000,000, as compared with only a little more than \$385,000,000 in 1939. There were also very large increases in the value of projected construction of nonresidential buildings, airports and public roads. Smaller increases were recorded for residential buildings and river, harbor, and flood-control projects. For the remaining nine categories of Federal construction included in the table the total contract values in 1940 were lower than in 1939.

TABLE 4.—Value of Contracts Awarded and Force-Account Work Started on Construction Projects Financed from Federal Funds, 1939 and 1940 ¹

Type of project	Total		Regular Federal appropriations		Federal agency Work Projects Administration funds		Public Works Administration funds	
	1940	1939 ²	1940	1939 ³	1940	1939 ²	1940	1939 ²
All types of projects.....	\$6,296,527,048	\$2,282,137,504	\$6,016,267,754	\$1,296,454,079	\$38,499,869	\$88,464,858	\$75,054,272	\$716,127,404
Airports ⁴	113,313,230	4,752,921	111,913,406	873,891	944,731	2,305,000	455,053	1,574,030
Building ⁵								
Residential.....	\$246,940,818	\$231,070,689	73,396,873	1,038,119	2,061,306	231,357	4,777,486	48,710,050
Nonresidential.....	1,065,864,605	438,150,755	1,031,538,803	124,460,721	18,836,151	35,425,263	15,489,651	278,264,771
Electrification.....	97,923,095	130,044,708	88,993,995	100,616,066	2,500	32,076	8,926,600	29,396,566
Forestry.....	4,156,684	13,640,920	0	11,950	4,156,684	13,628,970	0	0
Heavy engineering.....	13,917,855	94,296,737	2,588,354	22,093	(?)	(?)	11,329,501	94,274,644
Hydro-electric power plants.....	7,060,274	22,804,087	0	0	1,722,750	620,365	5,337,524	22,183,722
Public roads ⁶	339,132,054	266,573,425	336,833,955	230,246,090	1,334,444	2,484,820	963,655	33,842,515
Reclamation.....	68,994,015	115,612,233	60,084,687	85,096,726	6,244,180	24,219,857	2,665,148	6,295,650
River, harbor, and flood control.....	140,907,493	109,811,338	140,701,260	105,039,781	122,628	1,698,504	83,596	3,073,053
Ship construction and repair:								
Naval vessels.....	4,050,710,394	385,307,643	4,050,710,394	385,207,643	(?)	(?)	0	100,000
Other.....	86,774,981	209,955,459	86,774,981	209,875,448	0	0	0	80,011
Streets and roads ⁷	25,778,901	89,128,444	11,804,612	7,757,730	563,934	2,263,267	13,410,355	79,107,447
Water and sewerage systems.....	16,219,321	118,131,218	4,401,681	1,560,978	325,997	589,918	11,491,643	115,960,322
Miscellaneous.....	18,833,328	52,856,927	16,524,744	44,646,843	2,184,564	4,965,461	124,020	3,244,623

¹ Preliminary; subject to revision.

² Revised

³ Includes \$166,705,153 in contracts awarded for housing projects under the United States Housing Authority.

⁴ Revised. Includes \$181,091,163 in contracts awarded for housing projects under the United States Housing Authority.

⁵ Exclusive of hangars and other buildings which are included under building construction.

⁶ Data for building projects which were located in the cities reporting to the Bureau are also included in tables 1 to 3, inclusive.

⁷ No appropriations made for this type of project.

⁸ Grade crossing elimination and roads.

⁹ Other than those for which contracts were awarded by the Public Roads Administration.

A HOME IS ONLY AS MODERN AS ITS KITCHEN!

You can't blame a woman for judging a home by its kitchen. That's where she spends a large part of her time. And when kitchens are equipped with "Pyrofax" Gas Service, that means "modern" to any woman!

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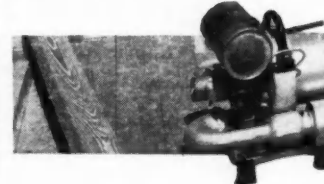
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More and more, wise builders are adding Homelite Portable Generators to their tool kits. For this easily-portable, gasoline-engine-driven generator gives you instant electricity—1800 watts—for operating cost-cutting electric hand tools. And the beauty of it is, you can use this handy unit on any job—thereby eliminating the time, trouble, and cost of having local power installed.

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HOMELITE CORPORATION

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Ample Labor Supply

(Continued from page 67)

the defense activity? Or is any curtailment necessary?

The answer to this question lies with the defense authorities, but it is apparent that by the careful routing of products and the discontinuance of unnecessary non-residential construction, the greater part of the present residential volume could be continued.

The amount of vital materials required to build 650,000 to 700,000 homes, which is the estimated total for 1941, is relatively small in terms of the nation's productive capacity. Yet the amount of employment provided in building this number of houses is highly important. Also the amount of taxable business created by this building is important.

It is difficult to state the total employment created by the construction industry, but it is probably in excess of six million persons, making the industry second only to agriculture. A new study by the Bureau of Labor Statistics shows that at the peak this year 2,100,000 were employed at construction sites

(Continued to page 154)

TABLE V—215,000 CONSTRUCTION CONTRACTORS EMPLOYED 1,073,665 IN 1939
(U. S. Census of Construction, 1939)

Kind of Contractor	No. of Establishments	Value of Work Performed (add 000)	Active Proprietors and Firm Members	No. of Employees (Average for year)	Total Pay Roll (add 000)	Materials and Equipment Used (Cost at site) (add 000)
UNITED STATES TOTAL	215,050	\$4,519,794	228,784	1,073,655	\$1,403,171	\$2,046,513
BUILDERS AND CONTRACTORS (firms)	38,893	2,511,888	39,411	821,242	796,564	1,158,711
SPECIAL TRADE CONTRACTORS	176,187	2,007,906	187,373	452,413	607,207	887,902
Air conditioning.....	798	40,396	671	6,754	10,715	22,911
Carpentering.....	30,044	132,957	32,718	31,282	32,672	48,199
Concrete.....	4,464	57,030	4,944	18,106	19,467	24,030
Electrical (other than power lines).....	15,915	222,774	16,121	42,390	68,749	102,828
Elevator (installation and repair).....	409	45,083	289	7,018	15,138	20,985
Excavating and foundation.....	405	8,907	446	2,826	2,932	2,750
Excavating and grading.....	1,852	22,536	1,992	7,943	8,017	2,016
Flooring (wood only).....	1,988	13,735	1,197	3,050	4,094	6,397
Flooring (wood and other).....	445	17,636	492	3,200	4,811	9,771
Flooring (resurfacing and re-finishing).....	645	2,821	706	829	853	592
Heating and Plumbing Group	37,112	572,878	38,138	108,173	146,822	299,891
Heating and piping.....	2,882	75,550	2,265	14,251	21,790	40,133
Heating and piping, with sheet metal.....	1,572	36,297	1,713	6,821	10,259	18,500
Heating, piping and plumbing.....	13,166	251,075	13,761	47,381	64,908	134,617
Heating, piping and plumbing, with sheet metal.....	2,122	62,384	2,283	11,954	17,044	33,761
Plumbing.....	16,699	141,334	17,281	26,412	32,070	69,546
Plumbing with sheet metal.....	761	6,238	835	1,354	1,445	3,074
Insulation.....	708	26,590	508	6,970	10,025	11,356
Lathing.....	523	9,867	608	3,380	5,437	2,292
Plastering and lathing.....	720	24,782	811	7,754	11,688	8,703
Plastering.....	5,347	65,756	6,045	17,413	21,625	20,202
Ornamental iron.....	622	14,421	607	2,622	3,929	7,061
Painting.....	10,046	46,347	11,023	13,733	16,916	11,017
Painting, paperhanging and decorating.....	39,973	180,917	44,253	52,077	65,586	43,979
Roofing and Sheet Metal Group	11,793	187,655	12,354	44,631	66,474	94,043
Roofing.....	4,875	78,716	4,986	18,951	23,290	35,221
Roofing and sheet metal.....	3,046	58,725	3,216	16,906	21,434	32,133
Sheet metal.....	3,872	40,214	4,152	8,774	11,750	16,689
Masonry.....	7,029	97,339	7,712	30,273	36,785	39,540
Tile and mantel.....	2,149	48,944	2,134	11,362	16,174	22,904
Steel erection and repair.....	568	81,375	379	10,426	18,546	51,517
Weatherstripping.....	419	7,214	402	1,793	2,833	2,588
Glass and glazing.....	1,040	1,821	978	3,142	5,134	8,336
House moving.....	608	4,016	708	1,912	1,849	388
Other.....	1,465	69,110	1,227	13,297	20,161	34,606

MOST RECENT STUDY of building industry employment is the above data just released by the Census of Construction. Due to the fact that home builders and many of the smaller special trade contractors were difficult to locate, the above table understates the number of firms. Also, many firms classified as special trade contractors, such as carpenter or mason contractors, frequently engage in home building work. It should also be noted that work sublet by general contractors is not included in value of work performed by these firms but is reported as a part of the business of the special trade contractors.

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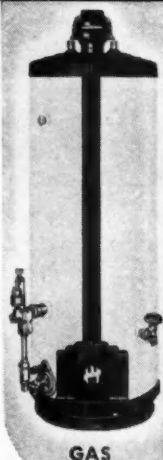
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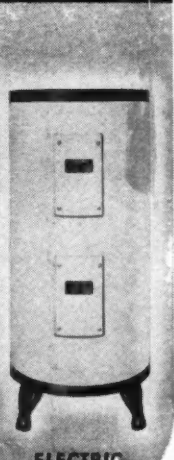
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Ample Labor Supply

(Continued from page 153)

alone. An additional 3,780,000 were employed in producing and transporting the construction products used.

Home building is one of the greatest single factors in creating tax paying employment. The B. L. S. study shows that 1700 man hours of work at the site are required to build an average \$4500 house. This is the equivalent of one man working 212 eight hour days, or of 10 men working 21 days.

An additional 2,550 man hours of work off the site are required for each typical house, that is, in mining, producing and transporting the materials. Thus each house creates 4,250 man hours of employment.

Applying these figures to the 650,000 housing units estimated for 1941 gives an insight into the far reaching effect of home building on jobs.

Illuminating light on the ramifications of the building industry is shown in Tables III, IV and V of this article.

In Table III, for instance, we see that 20,621 lumber yards gave employment to some 109,600 persons in 1939. Lumber wholesalers, as shown in Table IV, numbered 1,236 and gave employment to 10,700. To study further the effect of building curtailment on the nation's business, turn to Table I, where are listed 54 manufacturing firms which make products used in construction. This Table again brings out some striking facts about the local nature of employment created by building. For example, this Table shows 2,040 concrete products plants, giving employment to 20,800 persons. It shows 800 brick and hollow structural tile plants giving employment to 31,520. It shows that there are 8,356 saw mills and logging camps giving employment to 238,000 persons, and in addition to that there are 3,076 planing mills not connected with saw mills, giving employment to 56,000. Sheet metal shops numbered 1,262, giving employment to 22,200. The total number of plants listed here as making materials and equipment for the construction industry was 30,816 and they gave employment to 996,269 persons. The value of the construction products produced by these plants reached the staggering sum of \$4,176,216,557. This was roughly 7.3 per cent of the value of all U. S. manufacturing in 1939.

Newspaper "Articles"

(Continued from page 93)

effectively, both at this time and in the immediate post-war period.

Defense housing to relieve congestion and to speed armament production in the designated "defense areas" has been recognized by the Administration as an essential service deserving high priority rating. As Defense Housing Co-ordinator Charles F. Palmer recently stated, homes for defense workers must have a priority rating "next in line after bombers." Fortunately, only a very small portion of the building materials and equipment needed to complete modern small homes are in any way required for munitions, guns, tanks, ships or planes. If these other common building materials and the plants and workers producing them and putting them in place are not utilized for building, they will go unused, and unemployment of serious proportions will stalk the land. The small amount of steel, or other critical-list materials needed to keep this great, essential industry going at its present wholesome pace is so small as to be inconsequential in the direct armament priorities scramble.

With a wider understanding among the general public of the important place of home building and the home building industry—with its 8 million workers, both direct and indirect, depending upon it for support—broad planning for defense needs can be more wisely done, mistakes avoided, national morale strengthened, good adequate homes and housing provided for the entire working population. This will overcome the nation-wide shortage of good small homes, create taxable wealth and hold down rentals both within the designated "defense areas" and throughout the country generally. Public support for the building industry is vital today.

Leaders Speak Out—

(Continued from page 65)

support of our defense activities, we must not make the mistake in this country of choking off small businesses because of temporary bottle necks in certain basic raw materials. The building industry more than any other affects the lives and activities of small business throughout the nation. The Home Builders Institute of America has set up a committee on Priorities, Prices and Substitute Materials chairmanned by Jack Mowbray of Baltimore. The Institute is prepared to cooperate fully with government officials in finding ways and means to avoid a choking off of the building industry.

The relative amount of defense material required in this industry must be weighed against the importance of sustaining morale and revenue producing activities. It will be a terrifically high price for the nation to have to pay for a total shut-down of residential building activities in all but defense areas; and if it is within the realm of possibility the essential raw materials should be released for plumbing and the few other items that are now causing a cessation of building. Surely, with our industrial machine geared up to its potentials we will be able to do this. It is hoped that this can be done immediately as, otherwise, dislocation and breakdown of the intricate supply and distribution structure will be the penalty.

DAVID D. BOHANNON
Operative Home Builder
President, Home Builders Institute.

Private Enterprise Building 4 Homes out of 5

Philadelphia, Pa.

To the Editor:

Official Washington recognizes that adequate housing for hundreds of thousands of workers engaged in constantly expanding defense industries can only be assured through the activities of the private builder, operating with private capital, at his own risk—because four out of every five small-price units are constructed by the private builder.

The National Home Builders' Association has fought successfully to uphold this principle and will continue to do so.

In large centers of the nation—smaller areas likewise—we have proved that the private operative builder can do a housing job better, faster and cheaper than any Federal makeshift or group of governmental agencies working on a haphazard basis with astonishing dissimilarity of purpose.

Furthermore, when the emergency has passed, the typical construction of the local private builder will be a credit to the community and will pay its freight in the maintenance of local governmental operation.

The residential building industry is prepared to make all necessary sacrifices during the rearmament program. Army, Navy, aircraft and lease-lend needs first must be met—but right behind these requirements the private home builder demands priority . . .

Because the protection of the American home is the all-compelling reason why this nation is arming itself to the hilt!

EDWARD A. KERR
Operative Home Builder,
President, National Home Builders' Association.

"Defense," More than Mere Equipment for Soldiers

Buffalo, N. Y.

To the Editor:

Our people must accept the paramount need for National Defense, and insofar as necessary our business must be adjusted accordingly.

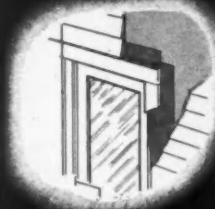
Defense, however, covers more than mere equipment for soldiers. This must cover the social, moral and economic standards necessary for continuous growth. We cannot have this with a poorly housed community. Then we must keep that great mass working whose jobs depend wholly on the building industry.

During the past fifteen years low cost housing has been greatly neglected, and now with many new plants and full time operation for industry there has developed a big shortage of homes. We cannot do a good job producing airplanes, tanks, etc., without proper morale among workers who are improperly housed.

The building of homes has always been private enterprise.

(Continued to page 156)

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Leaders Speak Out—

(Continued from page 155)

Regardless of the emergency this need can still be supplied by private capital, but to do this there must be no Government restrictions to create shortages that will result in delays and high costs.

Defense needs for building materials in cantonments and the like are only a small part of the industry's production. There will continue to be plenty of materials necessary to build good structures and to moderately equip them. The utilization of natural resources, such as gypsum, limestone, and timber will create that wealth so necessary to the growth of our country.

But aside from the value of materials there is the matter of labor. About seventy per cent of the cost of construction goes to labor of one kind or another. This is income that will help aid our National Defense building. Building labor, such as masons, carpenters, and the like cannot be successfully used to make guns, chemicals, or airplanes, consequently, should building be curtailed this class of labor would be out of work.

If we are building a defense to protect the American way of life, then we cannot overlook the fact that normally the building industry supplies jobs for between six and seven million people. Then there is invested about three billion dollars in plants, equipment and retail establishments to supply the building industries.

Here you have in capital investments and jobs one of the most important segments of our economy.

The building industry is ready to supply the Government with its defense needs, but its essential importance to American life must not be overlooked.

MELVIN H. BAKER
President, National Gypsum Company.

Needed to Maintain Morale

Chapman, Ala.

To the Editor:

Too much emphasis cannot be placed on the importance of defense housing and home building by private enterprise as related to the nation's industrial production and the creation of taxable wealth. A maintenance of something approaching normal activities in residential construction will contribute to the maintenance of public morale, the avoidance of widespread local unemployment and the utilization of materials, most of which are not directly usable for war needs.

Residential building is vital to the lumber industry and any disruption of that will be felt acutely by lumbermen in every branch of the industry.

EARL M. MCGOWIN,
President, Southern Pine Association.

3-Point Plan for Material Manufacturers

Bayport, Minnesota

To the Editor:

I feel that it is important for an industry such as ours which is engaged exclusively in the production of materials for home building, to be given an opportunity to maintain our employees in their chosen American way of life and their American way of thinking. Continuity of employment is of utmost importance if this is to be done. In my opinion, there need be little interruption of our industry if all of us in the business of supplying materials for home building adopt the following rules of procedure:

First, give preference to all materials needed for direct army and navy projects and private residential building in the defined critical defense areas.

Second, cooperate with the O.P.M. by making all possible substitutions of other materials in order to leave for defense work the materials most critically needed in the production of army and navy equipment.

Third, in finding substitute materials, favor those that need a market in order to foster general prosperity.

If this subject is approached thus constructively by such industries as ours, I feel that the government agencies should cooperate by giving full importance to the need of additional housing in this country, particularly in the critical defense areas, and give a blanket priority rating to any manufacturer who is following the above rules and who can show that a considerable volume of his product is going into residential building in such critical areas. I also feel that the small quantity of so-called critical materials needed in

spite of every effort at substitution, to carry on the very desirable building program that means so much to so many people, should be made available.

FRED C. ANDERSEN
President, Andersen Corporation.

Wenzlick: Let Private Building Carry the Load

St. Louis, Mo.

To the Editor:

Defense housing can be taken care of in most communities with greater speed and with less disruption of our regular economic life by allowing private industry to carry the load. I favor a blanket priority ruling on all housing in defense areas costing less than \$6,000. I believe that efforts at rent control in the average defense community will deter new building under private initiative and will perpetuate the very housing shortages they attempt to correct.

ROY WENZLICK
President, Real Estate Analysts, Inc.

"Paint Protects America"

Washington, D. C.

To the Editor:

"Paint Protects America"—the defense slogan of the paint, varnish and lacquer industry—emphasizes the vital function of protective coatings to preserve our national asset of 80 billions of dollars worth of homes plus the vast industrial, public and other properties which constitute our basic structural utility. In normal times, it has been computed that the possible annual conservation of property in the United States by the use of paint totals Three Billion, Four Hundred and Forty-five Million Dollars Annually. Paint is important in every phase of the symposium announced for the October issue of *American Builder*—housing and home building, creation of taxable wealth through new products, most of which require paint, maintenance of public morale through brighter and more cheerful surroundings, protection of the public health through the sanitary use of paint, promotion of public employment through the application of paint, and the conditioning and preservation of many materials which may be required to fill gaps in the present emergency.

While paint is performing its indispensable economic function of protection, it at the same time automatically beautifies property while protecting it—and without a cent of extra cost!

ERNEST T. TRIGG,
President, National Paint, Varnish & Lacquer Association.

Home Building Will Absorb Unemployed

Lancaster, Pa.

To the Editor:

Home building by private enterprise is one of the country's leading industries. In the present emergency it occupies a particularly vital position. In addition to meeting civilian requirements, it must fill the tremendous demand for homes caused by thousands of workers moving to new locations for jobs in defense plants. Also building construction offers the opportunity for employment for many other workers who may lose their jobs in non-defense industries because raw materials normally used in their work are diverted by priority control to factories producing war equipment. Hence it seems very desirable that reasonable supplies of raw materials be allotted to the construction industry, especially in those areas where local unemployment may develop from the lack of defense business.

H. W. PRENTIS, JR.,
President, Armstrong Cork Co.

Priority for Heating Systems Asked

Cleveland, O.

To the Editor:

As this issue of *American Builder* goes to press, it seems that public health and morale might be pushed up in the neck of the bottle, that is, as far as the domestic heating industry is concerned. There is not a steady flow of heating products into defense housing, nor will there be until a plan comes out of Washington which will permit the manufacture of heating goods in anticipation of the requirements for the defense housing market, repairs and re-

(Continued to page 158)



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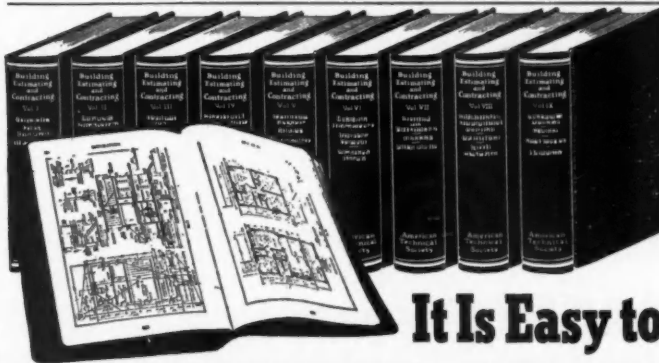
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Leaders Speak Out— (Continued from page 157)

placements, and other necessary requirements in non-defense areas. Colder weather is now breaking up the summer "blitz." Thousands of defense houses cannot be completed in a satisfactory manner without the heating installation and they cannot be occupied without heating equipment.

That vast section of the home building industry using materials which are not of a critical or scarce nature will be stymied to the extent that critical materials like heating goods are made available. A house is not a completed product until it is finished. When it is, the percentage of weight of steel and iron used in the heating and plumbing installation and the labor, including the manufacture and installation of this equipment, is a small percentage of the whole. But if critical and essential plumbing and heating materials are not made available, then the resulting unemployment affecting every branch of the residential building industry will be terrific and without comparison in any other industry.

Heating equipment is unlike other household utilities because the raw fuel must in each of the millions of homes and other establishments be converted into a combustible gas to obtain heat. Each heating system is in effect a small manufacturing plant—a plant in which to create heat. The process of manufacturing warmth in the home or establishment differs greatly from other household utilities, which merely require the turn of a switch or a faucet for their operation.

The millions of home owners, with few exceptions, lack proper understanding and skill in the operation of their heat manufacturing plants. Therefore, the proper maintenance of these plants is always of prime importance to keep life, health and fire hazards at a minimum.

Not only do we need the Defense Housing Rating Plan which was proposed several months ago by Washington, but not yet acted upon, but we also must have available the repairs and the necessary replacements for approximately 25,000,000 homes using every kind and type of heating equipment.

The warm air heating industry is making every effort to cooperate with our Government in its defense effort, but we still lack the plan which will make this effort effective by assuring a reasonably steady flow of materials for all essential needs.

GEORGE BOEDDENER,
Managing Director,
National Warm Air Heating and Air Conditioning Assn.

Small Business Must Pull Together

Jackson, Michigan

To the Editor:

Almost all concerns connected with the housing and home-building industry are properly classified as small business men. Every effort should be made by OPM and other branches of the Government to permit the unimpeded operation of home building by private operators in the interest of the maintenance of public morale and to prevent widespread local unemployment as well as maintenance of a base for taxation to pay for the defense effort.

The National Small Business Men's Association wishes every small business man, who feels the need of being effectively organized and vigorously represented in the handling of small business men's problems, which are so greatly aggravated by the present

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emergency, to give this organization an opportunity to represent them. The small business men of the United States is the largest group of individuals still unorganized. Inasmuch as many of their troubles are due to the pressures exerted by other organized groups, it is high time that each and every small business man realize the importance of organizing and working together in self-protection. Nearly everyone in the building industry is having this situation forcibly brought to his attention nearly every day. With proper support we business men can be of mutual help.

M. SHAKESPEARE,
President, National Small Business Men's Association.

Ottinger Quotes A. Lincoln

New York City

To the Editor:

This acknowledges your telegram inviting me to express my opinion on home building by private enterprise at this time.

Instead of accepting your invitation, I am sending you the opinion of Abraham Lincoln on the subject.

"Property is the fruit of labor; property is desirable; it is a positive good in the world. That some should be rich, shows that others may become rich, and hence is just encouragement to industry and enterprise. Let not him who is houseless pull down the house of another, but let him work diligently and build one for himself, thus by example assuring that his own shall be safe from violence when built."—ABRAHAM LINCOLN.

LAWRENCE OTTINGER,
President, United States Plywood Corporation.

Initiative Must Come from Private Industry

Saint Paul, Minnesota

To the Editor:

It is important for us, of the building industry, to face the question as to what we can do to further the defense effort and to contribute in other ways to the maintenance of a healthy national economy.

Our country has survived many crises, and will survive this one. Two facts to which we all subscribe may help to point the way for the building industry as it tries to do its part:

1. National defense comes first.
2. A special effort must be made to keep normal peace-time business functioning as closely to normal as we can.

The construction industry must play a major part in both of these objectives. It has done and is doing its full part for defense. We need not worry about the industry's ability to contribute most effectively to the defense program of construction in defense areas. The possibilities are not as clear in non-defense areas, but the obligation is ours that we continue to house our people properly through new construction and remodeling, to use available materials and labor, and to minimize the dislocations in industry. The resourcefulness of the American people will provide substitutes where shortages develop. The increased earnings of the laborer and the farmer should go into homes and farm buildings as safe and permanent investments. We owe it to the American people to make these homes and barns easy to own. We must "carry on" sanely and aggressively. This is the largest part most
(Continued to page 160)

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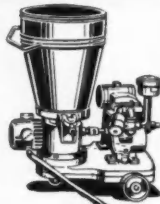
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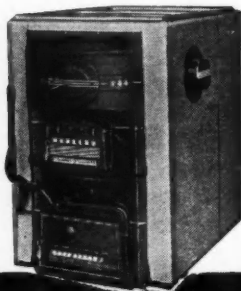
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Leaders Speak Out—

(Continued from page 159)

of us can play in the war effort and assures the easiest transition from war to peace.

The initiative in this move must come from private industry. On the efficient performance of this duty depend the following:

1. The creation of taxable wealth.
2. The maintenance of public morale.
3. The avoidance of widespread local unemployment.
4. The utilization of materials not needed for war.

This is a definite and great responsibility. The allocation by the Federal Government of relatively small amounts of scarce materials to our building needs will insure the ability of the building industry to accomplish these things.

The *American Builder* is doing a fine thing in calling to the attention of the building industry its obligation and its opportunity at this time.

F. K. WEYERHAEUSER,
 President, Weyerhaeuser Sales Co.

Private Versus Public Housing

Chicago.

To the Editor:

From a study of our national history it appears that this country for the first time has a definite "housing policy" and that policy is simply to see that every family in the country is housed in a decent, sanitary and "standard" house. Attention by the people and the government to the housing question is a natural accompaniment of an increased interest in public welfare and the standard of living of all groups. In my judgment any study of the housing problem or the home building industry must be approached with this fundamental thought in mind. We are no longer in an era when the private building industry can do as it pleases and build for whom it pleases without being subjected to the competition of some public housing. Although there are varied opinions on just what government should do to provide good housing for all families and assure an adequate supply of housing in defense areas, there has come to be general agreement on the thesis that some form of public assistance may be necessary to solve the housing problem of some groups of some cities, and that in the case of some defense centers direct building by the government is necessary.

This suggests that probably the biggest problem facing the private housing industry today is simply that of "who is going to do the job." It appears rather certain that unless private enterprise and private capital in the residential construction field go to work on the job of preserving this field for private enterprise against the attacks of those who prefer to have all working-class families housed in publicly built, financed and operated projects, their biggest market will be lost and the home ownership idea will be forgotten. It is not merely a question of private enterprise doing the job. The fact is that private enterprise is doing a highly commendable job of providing good housing for all but a small portion of American families. It is true that the majority of families cannot afford brand new housing today but there are great quantities of good second-hand housing and in most cities new homes are available for purchase at \$25 to \$30 a month. Private housing is accounting for 90% of all the home building today, a fact which may surprise some people who follow the press reports of public housing activities.

In defense areas where millions of dollars are being spent for public defense housing, private enterprise is providing a great bulk of the needed new homes. One difficulty that private capital has in proving its case is the lack of statistical information such as that which is available for public construction, but we do know that in the ten months from July 1940 through April 1941 savings and loan associations, members of the Federal Home Loan Bank System, financed over 87,000 newly built family units in "defense housing areas," that is, areas where public defense units have been allocated or are definitely under construction in FHA Title VI areas. This record is particularly significant in light of the fact that by the end of April only 9,604 dwelling units had been completed and 58,442 placed under construction contract under the government defense housing program—and this is not a criticism of the public defense housing program because that is moving along very rapidly. This merely demonstrates that when the

chips are down, private enterprise housing can rise to do the job.

The private housing industry is making great strides forward and I believe that except for the very lowest income groups—most of which are below the income scale of present public housing tenants and who will always require some form of public rent assistance—private housing can do the job of providing decent and thoroughly livable housing for America. It cannot and need not provide new housing for every family that needs a better house any more than the automobile industry can provide a new car for every family that needs a better car. But by making intelligent use of great aggregates of used housing and by following a broad constructive program the private housing industry can do the job.

From the standpoint of national strength and the creation of taxable wealth there is little choice as to the most desirable form of housing for the average individual. Home ownership, more than anything else, makes a family good citizens of its neighborhood, city, state and country. In cities faced with a housing shortage due to the population being expanded by defense workers, the private building industry has a great opportunity and from all indications it is taking advantage of it. Financial institutions are helping to do a job, and while the risks in many instances may be great certainly the balance is all in favor of taking some risks as against sitting idly by and letting the housing be provided with government funds and projects built which will for 60 years be operated more or less in competition with the housing that could have been built and financed privately.

MORTON BODFISH,
Executive Vice President,
United States Savings and Loan League.

Must Keep Up Building Employment

Washington, D.C.

To the Editor:

When the national defense program started, a housing shortage already existed because of insufficient new home construction during the past decade. In many localities the defense program has moved workers so that housing shortages have become extremely critical.

Workers in defense industries now are playing as important a role in defense as members of the armed forces. In the interests of continued production they must be decently housed. This makes defense housing a vital industry, so that every effort should be made so that public and private housing for defense workers is made available on time.

There are other reasons why it is important for non-defense construction to continue at this time.

Everyone will agree that defense comes first. But while we are defending the country, we must maintain a country to defend. The construction industry annually is the largest single industrial employer, the largest employer outside of agriculture. Widespread unemployment in construction would dangerously weaken our entire economic life.

A going construction industry pays much in taxes. When its workers are unemployed they must be cared for by taxes levied on others. Construction normally is the greatest single creator of tangible wealth. An unemployed construction worker is not helping to create anything.

So it is important that there be as much employment as possible in the construction industry.

Many types of construction, particularly home construction, do not require large amounts of materials needed for defense, so in large measure home construction and many other types of construction do not interfere with the defense program.

The newly created Supply Priorities and Allocations Board has just started a complete inventory of the materials needed for defense and civilian uses. This is a timely action, for there is much uncertainty now as to the availability of many materials for both defense and civilian uses and it is hoped that the inventory will end the uncertainty.

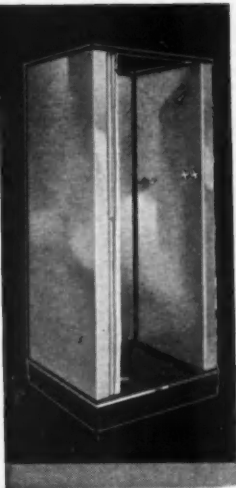
When completed, industry will know what materials will be used only for defense and the materials for which substitutes must be developed for civilian uses. Then construction may go ahead to help give this country the internal stability which is necessary for a successful defense program.

H. E. FOREMAN,
Managing Director,
The Associated General Contractors of America, Inc.

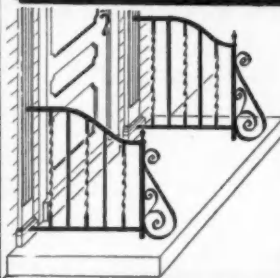
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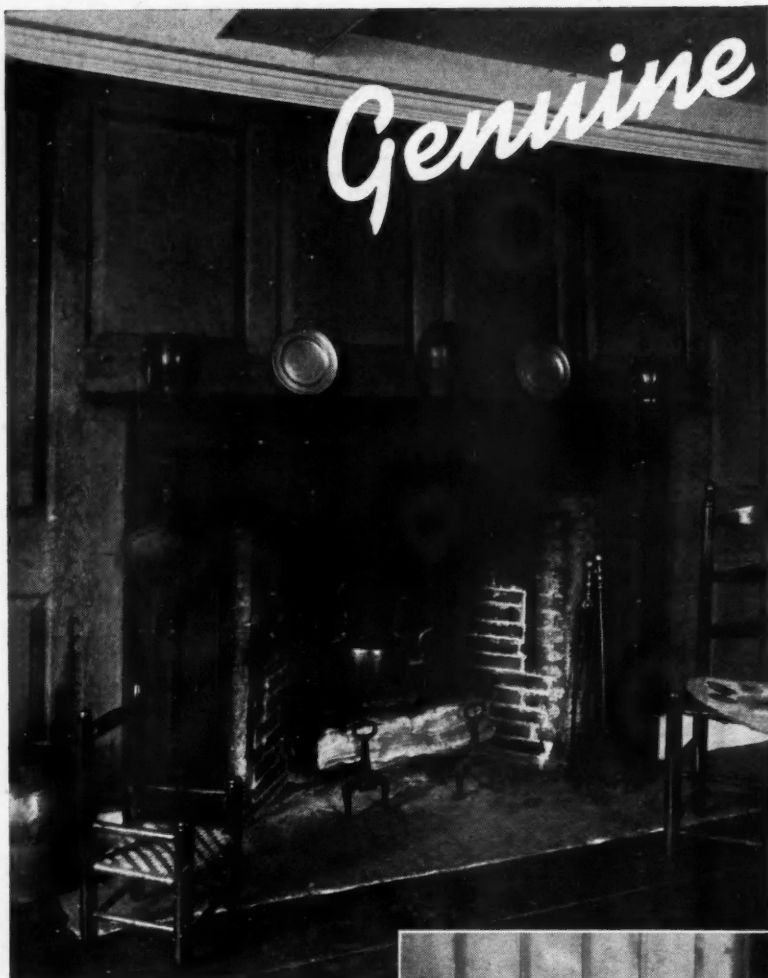
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WHITE PINE

Popular 200 Years Ago

... More Popular Today

There is nothing faddish in the use of Genuine White Pine Paneling. In early Colonial homes this famous lumber imparted that same warmth and friendliness that home builders of today seek and find in Genuine White Pine.

The decorating expense in the old New England home pictured here amounted to virtually nothing over a period of 200 years. The low up-keep of pine paneled walls is another big inducement to the home builder. Genuine White Pine, in natural finish deepens in color with the years and mellows to a soft cinnamon brown. It also lends itself to a wide variety of attractive stains or finishes to suit the individual taste.

With the trend definitely in the direction of wood paneling for interiors, 4-Square White Pine Paneling offers excellent selling advantages to the contractor who features it to prospective home builders.

(Above)—The hospitable hearth and fireside of the old Red House at Gill, Massachusetts, with a setting of Genuine White Pine Paneling mellowed by 200 years.

(At right)—A modern fireside, an echo of Colonial days, with Genuine Knotty White Pine Paneling, carrying on the tradition of friendliness and hospitality.

Modern scientific logging methods insure for America a plentiful supply of Genuine White Pine. Timber is treated as a crop. The mature trees are harvested like ripe grain. For every tree that is harvested, nature seeds and men plant new trees to take its place. This continuous reforestation assures a perennial crop of timber and a continuing supply of White Pine.

4-Square Genuine White Pine is double endmarked for the customer's protection and has all the usual 4-Square advantages of exact lengths, smooth square ends and proper seasoning.



• For complete information about Weyerhaeuser 4-Square Genuine White Pine see your local 4-Square Lumber Dealer.



WEYERHAEUSER SALES COMPANY

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