AMERICAN BUILDER

AND BUILDING AGE

JULY, 1943
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WORLD'S GREATEST BUILDING PAPER

SUMMER BUILDING JOBS

HOW TO SELL MORE ROOFING JOBS...

and Build Greater Customer Satisfaction

Use CELOTEX *Triple-Sealed* ROOFING

The most widely Advertised Roofing Line in the World!

CELOTEX Triple-Sealed Roofing includes a complete range of colors, styles, and weights—plus the extra service assured by the famous Triple-Sealed manufacturing process. There's a world of selling power in the Celotex name, nationally advertised for 22 years to help you sell more roofing jobs.

Millions of Americans read about Celotex Triple-Sealed Roofing every time they see a Celotex advertisement. There is no need for long explanations when you recommend a Celotex roof. They have known for years that "Celotex" means "quality."

Ask your Celotex dealer to show you the new full-color catalog of the complete Celotex Triple-Sealed Roofing Line. Use the selling power of this famous name to sell more roofing jobs!

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and leading business papers!

★

98 MAGAZINES
ARE BEING USED IN 1943 TO TELL
THE CELOTEX STORY!

CELOTEX
REG. U. S. PAT. OFF.
ROOFING • INSULATING BOARD
ROCK WOOL • GYPSUM WALL BOARD
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THE CELOTEX CORPORATION • CHICAGO

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Buying Habits do NOT change overnight!

YPS kitchens will be worth waiting for!

In planning for post-war products, we will not forget that when women buy for their homes they are slow to accept anything faddish. This is particularly true of labor-saving devices which they expect to last a long time. Neither are they likely to accept anything old-fashioned.

In pre-war days, Youngstown Pressed Steel developed its line in basic units, in a range of sizes and prices, so that architects and builders could have the right Youngstown Pressed Steel equipment for each installation, and offer innovations as the public was ready for them.

But new days bring new ideas, and as war work permits us to test them, prove their efficiency, and tool up for them, they will be introduced into our post-war kitchens. Dealers will have fresh, new Youngstown Pressed Steel merchandise to sell after the war.

This idea about Youngstown Pressed Steel kitchens is being constantly kept before the consumer by means of full color advertisements in leading National magazines.

Youngstown Pressed Steel kitchens will be worth waiting for, and you won't wait long after we get the raw material.

Youngstown PRESSED STEEL DIVISION of MULLINS MANUFACTURING CORP. WARREN, OHIO

IT'S OUR WAR • LET'S FIGHT IT NOW BUY WAR BONDS and STAMPS TODAY

HOW TO ENGINEER DAYLIGHT INSIDE

In offices, homes, schools, stores . . . wherever people work . . . an entirely new atmosphere can now be created through use of *daylight engineering* principles.

Our own offices, illustrated above, are an example of daylight engineering. Here, the walls of the outside offices have been built of decorative, translucent glass. Daylight is not trapped in any one office. It is shared by all. Even the inside general stenographic space is flooded with outside light.

Larger window areas properly teamed with translucent walls or partitions and mirrors brighten up rooms, closets and corridors. Eyestrain conditions can be removed. Even the smallest rooms can be given a feeling of spaciousness never before enjoyed. It's engineered with glass.

Libbey·Owens·Ford glass for windows, mirrors, wainscoting and work surfaces, and Blue Ridge Glass for partitions, are available in a wide variety of types and colors. Be sure your records of L·O·F Glass are complete. Libbey·Owens·Ford Glass Company, 2573 Nicholas Building, Toledo, Ohio.

L O F LIBBEY·OWENS·FORD
A GREAT NAME IN *Glass*

Why
dry-built full-wall construction?

"Faster, easier application. Better, crack-proof walls."

These are the proved advantages most often cited by big project builders who have used full wall size *Strong-Bilt Panels*.

In this resume of their experience is the complete answer to the "why" of dry-built full-wall construction.

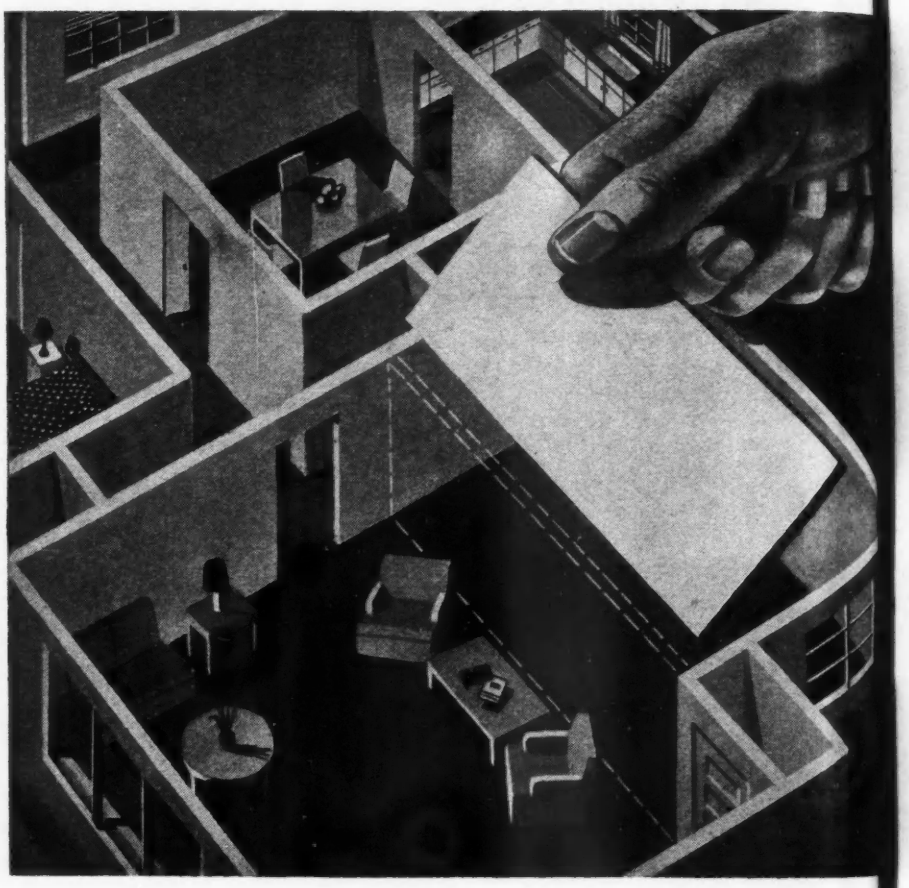
1. Strong-Bilt Panels save time and labor. One panel covers the entire wall of an average room. There is no "drying out" period. Precut to size, the panels go up in record time.

2. Apply them any month of the year. Users are amazed at the ease of handling and speed of application. Floating Fasteners anchor the panels securely from the rear.

3. No face nailing. Not a single nail hole to mar the beauty of the finished surface. No nail holes to fill. No joints to tape. No plastered joints or danger of cracking.

4. Crackproof—lower maintenance cost. Strong and rigid. Strong-Bilt Panels withstand hard usage. Resist impact blows up to 6 times that of plaster. Presized at the factory. One coat of good paint usually is sufficient.

5. A beautiful finished job! Women love the distinguished appearance of the rich pebbled surface. This is the identical product used in many of America's finest homes. Easily kept clean.



Reasons such as these are influencing the type of improved interior wall linings being planned for many postwar homes. For free descriptive booklets covering both prefabricated and conventional construction, write The Upson Co., Lockport, N. Y.

Upson Quality Products Are Easily Identified by the Famous Blue-Center

UPSON PRODUCTS

UPSON STRONG-BILT PANELS

THE CRACKPROOF BEAUTY SURFACE FOR WALLS AND CEILINGS

AMERICAN BUILDER

AND BUILDING AGE

65 YEARS OF CONSTRUCTIVE LEADERSHIP

CONTENTS FOR JULY, 1943

Pass It On!

In these days of paper shortage and paper rationing you can help by making your copy of American Builder do double or triple duty. Pass it on or lend it to your friends and customers.

You have already noticed that, with the March issue, American Builder reduced its trim size slightly. This step has resulted in a considerable saving in paper and will enable us to continue to maintain our standard of service.

65th Year Vol. 65, No. 7

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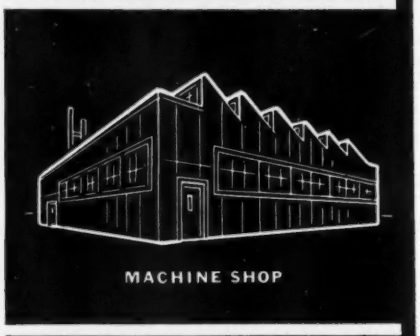
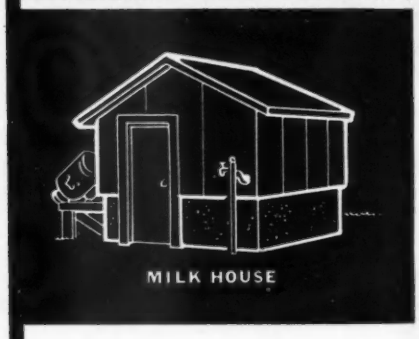
TEMPORARY OFFICE


BARN


MACHINE SHOP


HEN HOUSE


WAREHOUSE


MILK HOUSE

FOR ALL INDUSTRIAL AND FARM BUILDING AND REPAIR

GOLD BOND GYPSUM BUILDING BOARDS

WITH lumber and skilled labor at a premium today, you've got to have materials which are readily obtained, yet just as easy to use. Gold Bond Structural Gypsum Boards meet these requirements. Handles, saws and nails like lumber. Comes in standard lengths, which simplifies construction and reduces labor on the job. All 3 types available through local Gold Bond Dealers.

GOLD BOND GYPSUM ROOF PLANK replaces metal and wood for roof decks. For either flat or pitched roofs it forms a strong base for the roofing material. It is fireproof and weather-resistant and will last for many years. The underside is natural cream color with high light reflection. Sizes: 2′ x 6′, 8′, 9′, 10′ . . . 2″, 1½″, 1″ thick.

GOLD BOND EXTERIOR BOARD is the second in this trio of versatile gypsum boards. These heavy-duty panels complete the outside wall—sheathing and siding—in one operation. There are two types available. One has a durable overcoat of asphalt roofing. The other has a tough green-colored fibre covering. Both types are weather-resistant, insuring long, satisfactory service. Sizes: 2′x6′, 8′, 9′, 10′ . . . ½″ and 1″ thick.

GOLD BOND SOLID PARTITION PANELS meet the need for quickly erected plant and office partitions made from readily available material. New and simplified methods result in faster construction. Partitions are permanent for years of good service. Demountable, too, and if they are later removed, the panels are completely salvageable. Incidentally, they are a natural cream color, which can be left "as is" or papered or painted. Sizes: 4′ x 6′, 7′, 8′, 9′, 10′ . . . 1″ thick. Also 1⅛″, 1½″ thicknesses in same lengths, 24″ wide (or 48″ wide).

BUILD BETTER WITH

Gold Bond

Everything - for walls & ceilings

More than 150 different products for MODERN CONSTRUCTION AND WAR PRODUCTION

WALLBOARD...LATH...PLASTER...LIME
METAL PRODUCTS...WALL PAINT
INSULATION...SOUND CONTROL

NATIONAL GYPSUM COMPANY . . EXECUTIVE OFFICES, BUFFALO, N. Y.

21 Plants from Canada to the Gulf . . . Sales offices in principal cities

Publisher's Page

Post-War "Public Works" and Inflation

PROPOSALS for huge government spending on "public works" after the war are highly dangerous, because of the tendency they would have to cause ruinous inflation. The reasons are technical, but very real, and must be made more widely understood.

They were brought into the open by a recent controversy between President Moulton of the Brookings Institution and the National Resources Planning Board. Dr. Moulton asserted the Board's program was based on "deficit financing." The Board hastily denied this. Dr. Moulton had caused it acute pain by poking his finger into the most vulnerable part of the government spender's anatomy.

Government must raise money by taxation, by borrowing, or by both. Whatever it spends in excess of the taxes it collects causes a deficit, and is, therefore, "deficit spending," the money for which must be raised by borrowing. It borrows and increases its debt by selling its bonds. The federal government is expected to have a debt after the war of $300 billion. To defray ordinary government expenses and pay interest on that debt will require far more taxes than ever have been collected in time of peace.

How can the government raise billions annually, *in addition,* for "public works"? The public won't stand for the additional billions being raised by additional taxes—not merely because total taxes would thereby be made crushing to private business, but because, to raise them, a very great part would have to be collected directly from the largest voting classes—farmers and wage-earners.

The only alternative would be "deficit spending"—that is, constructing "public works" with money raised by selling government bonds and further increasing the government debt. But who would buy these bonds? Not the people; they will want to sell their bonds to buy things they are denying themselves during the war. Not business corporations; they will want to invest their capital in business.

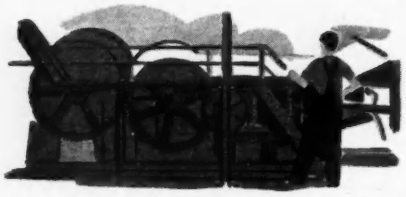
Only the banks are left. ***But for the banks to continue after the war to increase by billions a year their holdings of government bonds would soon cause inflation that would blow the nation's entire economy apart.*** Briefly, the reason is, that government bonds owned by *banks* are, directly and indirectly, a basis for the issuance of money or its equivalent. Therefore, the more bonds owned by banks, the more money issued. The more money, the higher prices go—until finally prices go so high that money becomes worthless, and almost everybody is broke, out of a job, or both.

Thus, such huge government spending on "public works" as the administration proposes would *inevitably* cause far more ruinous inflation than that which it has been trying somewhat ineffectively to prevent during the war. And real inflation would largely stop production and employment—not maintain them, which is the purported purpose of the "public works" program.

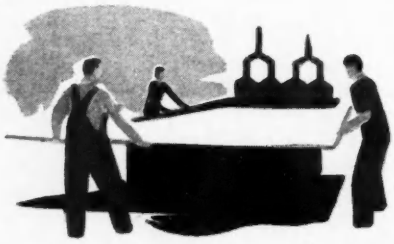
Of all the arguments against the administration's post-war "public works" program, its tendency to cause inflation is the most conclusive—but, unfortunately, also the most technical and the least understood. Even some important business interests are advocating big post-war government expenditures, because of belief that they would benefit. How can average people and politicians be expected to show economic intelligence when some business leaders show so little?

Samuel O. Dunn,

• Today, in the vast Northwoods, millions of trees are maturing—trees that were planted as a "crop", in forest conservation, to assure always a supply of "tall timber" for the American people.

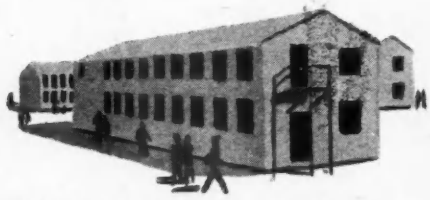


• One of the products made from wood and having many uses is INSULITE. The logs are brought to the Insulite Mills and, in special machines, are ground down until the wood fibres, the "sinews of the wood", remain.



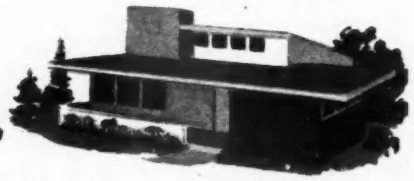
• These fibres are then processed into large, strong, durable boards—INSULITE. Insulite, when used as sheathing in home construction, has a bracing strength four times that of ordinary wood sheathing, horizontally applied.

FROM NORTHWOODS TREES!



• Insulite has many building advantages. Today speed in construction is important. War buildings must be erected, almost overnight. The large Insulite boards are quickly applied, rapidly nailed into place, thus saving valuable time.

• The concentration of war workers made serious housing problems in many places. In the quick construction of livable quarters for these workers, Insulite is proving of great aid. By providing effective insulation, Insulite reduces fuel consumption in winter, makes cooler homes in summer.



• When Victory is ours, America will face a serious housing shortage. In building the home of the future, Insulite will be an important help. Homes constructed with Insulite approved Wall of Protection have walls that provide a double barrier of insulation against extremes of temperature.

INSULITE
Division of Minnesota & Ontario Paper Company, Minneapolis, Minn.

MINNESOTA AND ONTARIO MANDO FOREST PRODUCTS PAPER COMPANY

INSULITE
STRUCTURAL INSULATION

LOOK FOR INSULITE IN THE RED PACKAGE

THE *ORIGINAL* WOOD FIBRE *STRUCTURAL* INSULATING BOARD

In your POSTWAR PLANS use this NEW FENESTRA WINDOW

EVEN OVER A DRESSING TABLE

A woman can always open it easily with one hand

Over a bedroom dressing table, over a dining room buffet, even over a kitchen sink, these new and better steel windows will open at a finger's touch . . . what satisfaction for homeowners!

But there will be many other advantages in Fenestra Postwar Windows: Safer and easier cleaning from inside, more daylight through larger glass areas, better ventilation, superior weather-tightness, screened in a jiffy . . . all at astonishingly low costs. Besides, low-cost ordinary wood-frame Storm Sash can be used with them.

Plan your postwar houses to use the Fenestra Windows that afford many new, modern advantages . . . Why not begin planning them *at once,* so you'll be ready to start construction without delay when peace comes?

DETROIT STEEL PRODUCTS COMPANY

Now Exclusively Engaged in War Goods Manufacture

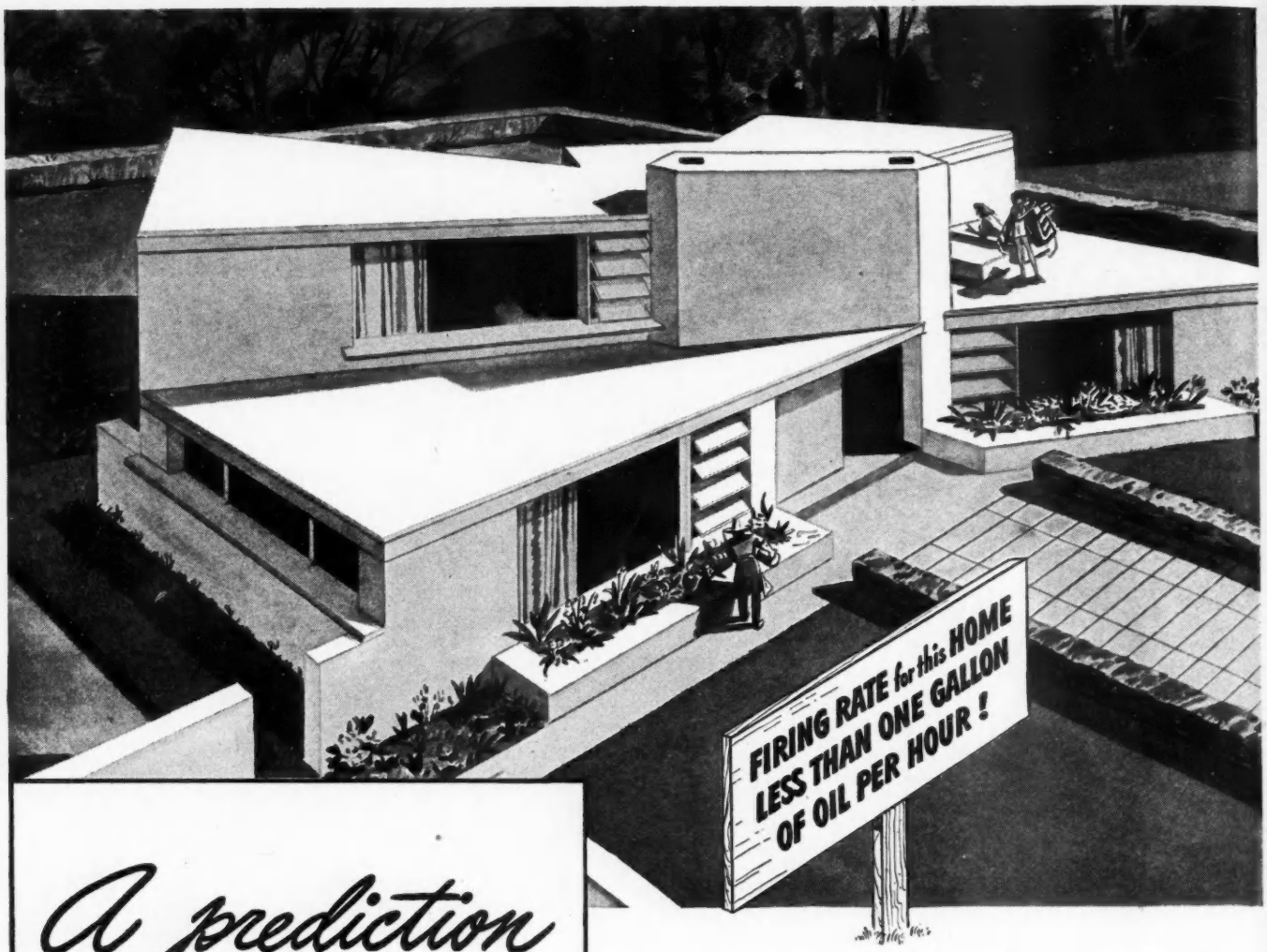
Dept. AB-7 · 2260 East Grand Blvd. · Detroit, Mich.

Pacific Coast Plant at Oakland, California

Fenestra

POSTWAR

PACKAGE WINDOWS



A prediction

After Victory a housing boom of unprecedented proportions is confidently expected.

Government estimates place the investment in new housing immediately following the war at billions of dollars.

Most of this money will be spent for well-built and well-insulated *small* homes. And, correspondingly, the demand will be for small, economical heating units especially designed for this service, and with firing rates as low as one-half gallon of oil per hour.

A GREAT OPPORTUNITY

The forward-looking merchandiser of automatic heating equipment will be alert to this opportunity. Conscious of the limitations of other types of power burners, he will turn to the Timken Wall-Flame oil burner . . . the *only type of power burner capable of operating efficiently, dependably and quietly at firing rates as low as ONE-THIRD OF A GALLON OF OIL PER HOUR.*

He will apply for the Timken dealership franchise *now.* He will *plan ahead* and *work ahead* to develop his list of prospective home builders. He will contact local architects and building contractors *ahead of time* so that he will be all set to begin Timken installations immediately when home building is given the "green light."

WHOLE-HEARTED BACKING

We at Timken are looking confidently to the future. We are keeping the TIMKEN name prominently before the public with hard-hitting magazine and newspaper advertising in all the principal oil heating markets. Everything has been done and will be done to help the Timken Dealers weather the war period . . . direct mail programs, special service promotions, service handbooks, new accessories to sell, personal help from T.S.A. field men, and everything else aggressive dealers need and want. Post-war equipment planning is already in action and literature on Timken-equipped post-war homes is in the hands of prospective home builders.

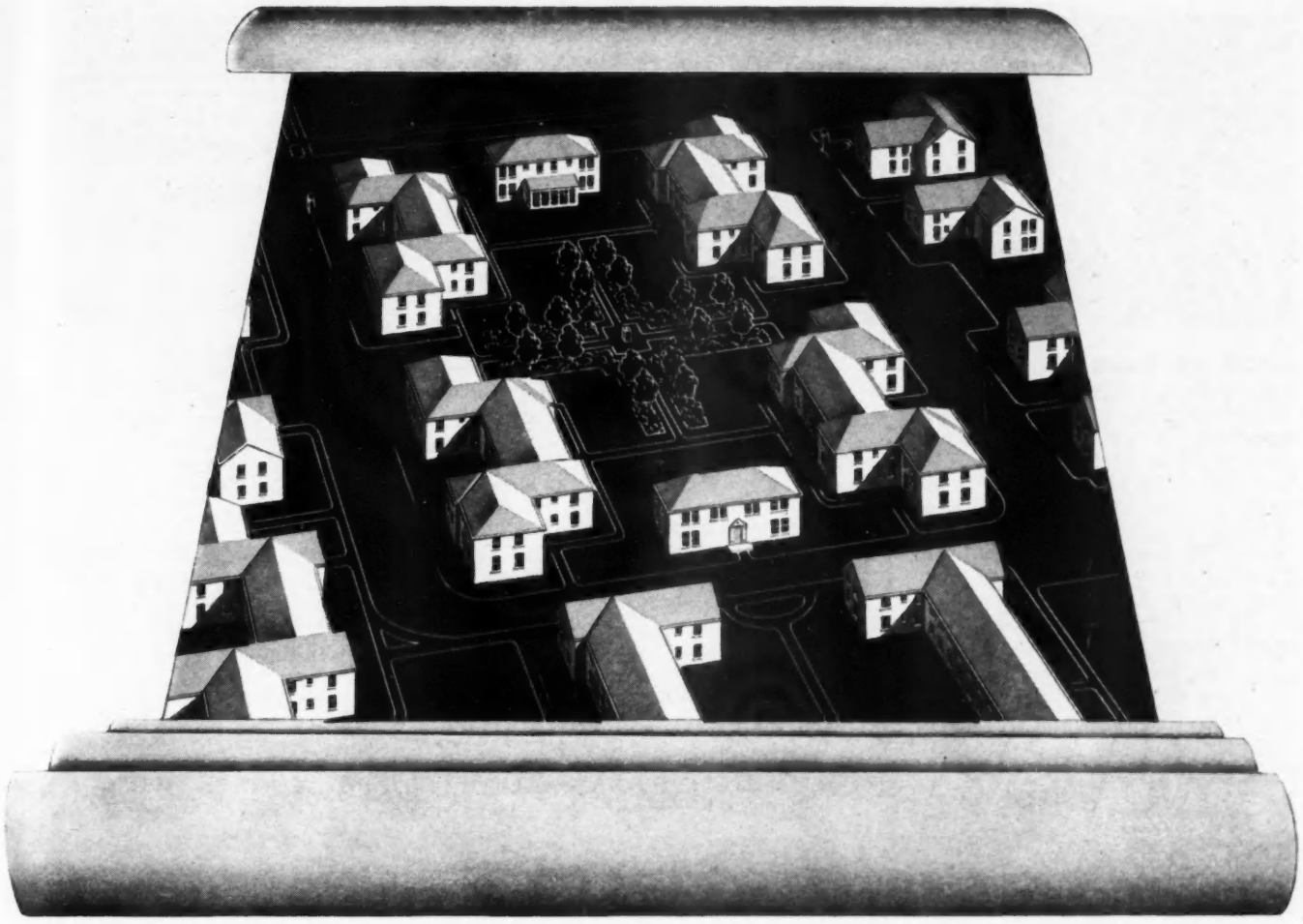
If you are looking for a profitable present *and* post-war opportunity, write Timken today!

ARMY E NAVY
For Production "Well Done"

TIMKEN *Silent Automatic*

OIL HEATING PRODUCTS FOR THE HOME

Division of THE TIMKEN-DETROIT AXLE COMPANY, Detroit, Michigan



Progress That Is As Practical As Steel Itself

No rapturous flight of fancy is essential to the concept of tomorrow's building designs. Progress will involve the application of improved methods, materials and practices to time-honored forms, while "inspired architecture" may well be a matter of dollars-and-cents value. The prospect is no less exciting for this. Stran-Steel engineered systems are practical, flexible, adaptable to varied requirements. They were applied successfully to housing projects of many types before the war, and are now meeting military building requirements for the armed forces. Stran-Steel is well qualified to serve the post-war building industry.

STRAN STEEL

DIVISION OF GREAT LAKES STEEL CORPORATION
1130 PENOBSCOT BUILDING, DETROIT, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

On and Off the Record

News, Views and Comments

FOOD IS KING—Food is now near the top of the priority list in Washington, and WPB will grant practically anything to aid in its production. A large tonnage of steel has been appropriated for farm equipment, and now 500,000,000 feet of lumber is being made available on AA-2 priorities. That means considerably more business for builders and dealers in farm construction.

POST-WAR FARMING—I have it on the authority of a top government food expert that the farm building market will be a live one, not only for the duration, but for several years after the war. Our farmers will be selling food all over the world in vast quantities. They will enjoy a period of prosperity such as they have never had before—and that means a tremendous volume of farm construction.

SOLDIERS ABROAD—Two million men will be required in the armed forces of the United States to police the post-war world, we are told. Those that elect to live in a distant land will have to be properly housed, and this suggests an interesting market for the building industry. Here is one place where the light-weight prefabricated demountable house may come into its own.

HOUSING IN '44—There is a mistaken notion that the need for housing for war workers is disappearing. As a matter of fact it is still on the increase and NHA Administrator Blandford recently estimated that there would be 1,100,000 in-migrants to war areas between July 1943 and July '44. This is due to the fact that some new plants are still being started, many others are still under process of construction, and the rate of production in most is still on the increase.

Even taking into consideration the number of new women workers and the selectees withdrawn from these communities, the Government figures still show a vast increase of "in-migrants."

FROM FOX HOLE TO FHA—The following V-letter came in the other day to FHA headquarters from "somewhere in the Pacific":

Dear Sir: Would you kindly send me information on the FHA plan. If possible would you include some pictures of the FHA homes? God, I'm serious! Thank you.—Lt. Guy C. Meets.

HAPPY DREAMS—Latest pronouncement on post-war housing is by J. W. Palmer of the Department of Commerce who estimates that there will be an immediate post-war demand for at least 4,000,000 family units. We entered the war with a deficit of 1,000,000 dwelling units and this is now mounting at the rate of 500,000 a year.

It's nice to contemplate in these priority-ridden days.

HIGHER PRICED HOMES—A large demand for houses over $6,000 in the post-war market is indicated by many experts. During the war tremendous numbers of cheap, low priced structures (you can't call them homes) have been built and will probably take care of a considerable part of the very low income need. If we have a fair degree of prosperity people will demand better houses on good sized lots with complete modern equipment. A big share of the market will consist of houses from $4,000 to $8,000.

BUILDERS REPRESENTED—The importance of having strong representation of residential builders in Washington was shown at the recent Lanham Committee hearings. Fritz Burns, president of the National Association of Home Builders of the U.S., made a strong presentation on the important part the private home building industry is playing. He was ably supported by Bob Gerholz of Flint, Mich., Carroll Shelton of Philadelphia, Joseph Merrion of Chicago, and others. Both during the war and in the period after, this industry will require strong and aggressive representation in Washington at all times.

PAY OFF FHA—Millions of home owners with FHA loans are being urged now to reduce their principal. Under the mortgage terms as usually written they are able to reduce the principal 15 per cent in any one year. Many home owners now enjoying an unusual prosperity have suddenly realized that this is an excellent form of investment for their excess funds. They can either reduce the amount of the payment or reduce the term of years—in either case a wise move and one that tends to counteract inflation.

PROMPT FLOOD ACTION—War Production Board field offices went into quick action following the recent serious floods.

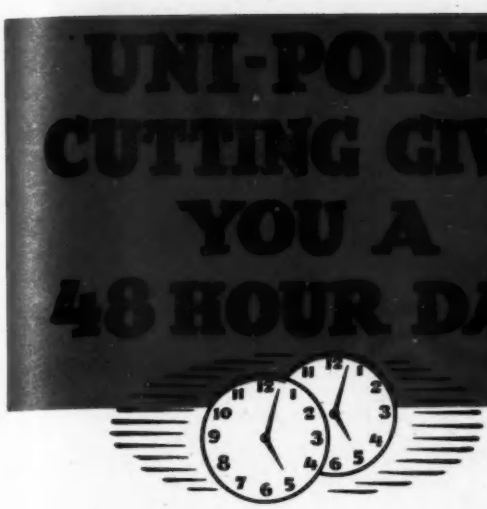
Priorities were quickly granted for such items as nails, pumps, wiring, bridge timbers, hardware, roofing, and emergency heating and plumbing equipment. Certainly the seriousness of the situation called for prompt and effective action.

BALD EMMERICH—Commissioner Emmerich of the Federal Public Housing Agency is disappointing to many because he does not have the long hair associated with public housers. As a matter of fact Emmerich is bald, business-like and apparently an administrator who gets results. He pointed out the other day that practically all the war housing FPHA is now building is of a temporary nature, that it is built on land that is leased from private owners and will go back to them three years after the end of the war. During the first four months of this year FPHA started 101,400 family housing units and completed 73,700, which, it must be admitted, is a record, for action.

Although the public housing people say this housing is temporary and will be torn down, there is still some doubt in the minds of many private builders. For this reason the Lanham Committee is being urged to definitely write into the new bill a provision that *all temporary war housing shall be demolished within eighteen months after the end of the war.*

LUMBERMAN'S PLIGHT—A friend of mine was talking with a lumberman the other day and asked him about a certain recent OPA order. "Hell, I never heard of it," the Lumberman said. Whereupon my friend pointed out the possibility that he might land in jail. "If I do," the lumberman said, "it will be the first time in two years I'll know where I'm at."

UNI-POINT CUTTING GIVES YOU A 48 HOUR DAY



With the Monarch UNI-POINT Radial Saw a wood-worker can increase his production as much as 100% to 200%. This machine of tomorrow for the miracle homes of tomorrow, and for war construction today, *cuts at the same point in the table* regardless of the angle — vertical, horizontal, or compound miter!

Save time? Ask the man cutting rafters with a UNI-POINT! He'll tell you, no doubt, that he established a production record!

Simple to operate? Ask the man who never used one before! He'll tell you it's a "slick" machine—simple as a miter-box.

Greater production? Easily proved! One point cutting with UNI-POINT guarantees more work per man hour, because the operator eliminates time lost waiting for the saw blade to stop—no time lost making adjustment of stops and resetting material for different angle cuts—no time lost making many other multiple motions usually required,—all eliminated by ONE POINT CUTTING THE UNI-POINT WAY.

Try UNI-POINT and prove it to yourself! Yes, time moves fast, so does the designing of machinery—and so will your lumber pile with UNI-POINT.

Write for Catalog 60

We also manufacture "modern design" Saw Benches, Band Saws, Jointers, Planers, Lathes, Shapers, Mortisers, Sanders, Swing Saws. Also a complete line of Saw Mill machinery.

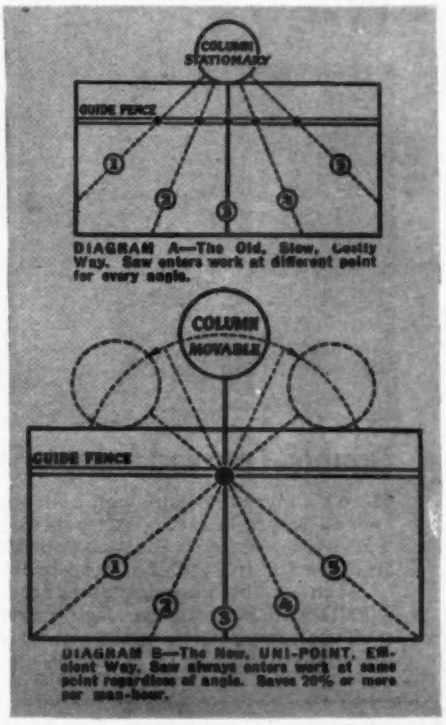


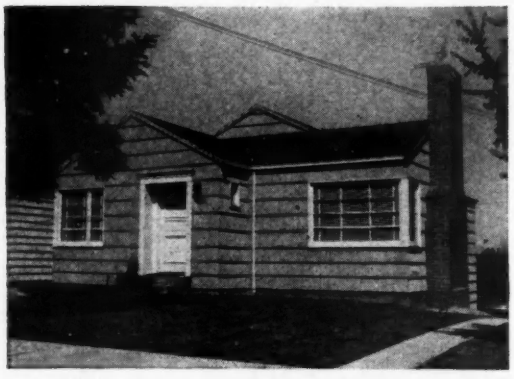
DIAGRAM A—The Old, Slow, Costly Way. Saw enters work at different point for every angle.

DIAGRAM B—The New, UNI-POINT, Efficient Way. Saw always enters work at same point regardless of angle. Saves 20% or more per man-hour.

MONARCH
UNI-POINT RADIAL SAW

AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, NEW JERSEY

They're planning their Home of 194—?



Double-Coursed Shingle Sidewall

Here's a method of sidewall construction that is well worth studying for postwar building. The wide weather exposure and use of No. 3 shingles for the under-course provides economy; the double coursing gives sturdiness and excellent insulation; the slight overlapping of the outer course gives most attractive shadow lines. See blueprint offer below.

DURING the residential and war housing boom of the past five years Certigrade Red Cedar Shingles have been one of the leading sellers for roof construction.

With these millions of substantial attractive roofs before the public, backed up by consistent advertising and promotion, it is obvious that postwar building will look favorably upon Certigrade shingles.

Free Blueprint Offer: Architectural blueprints of Certigrade application are yours for the asking. A set of these will be mailed you on request, including double-coursed, single-coursed and ribbon-coursed sidewalls; standard and staggard roof; over-roofing. Address:

RED CEDAR SHINGLE BUREAU
SEATTLE, WASHINGTON, U. S. A. VANCOUVER, B. C., CANADA

AB 743

RED CEDAR SHINGLE BUREAU,
White Bldg., Seattle, Wash.

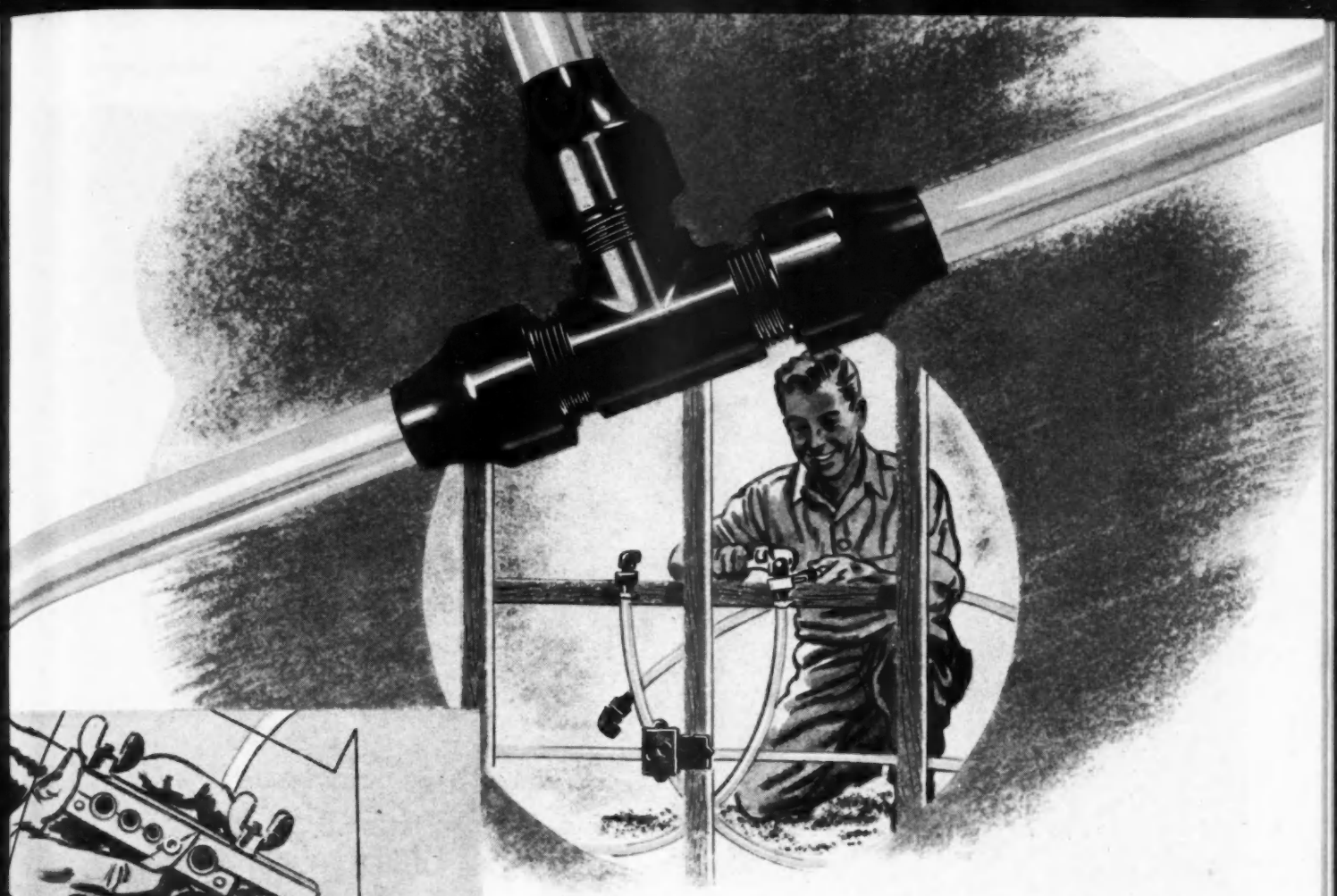
Please send me, free, a complete set of blueprints which show how Red Cedar Shingles are applied properly on roofs and sidewalls.

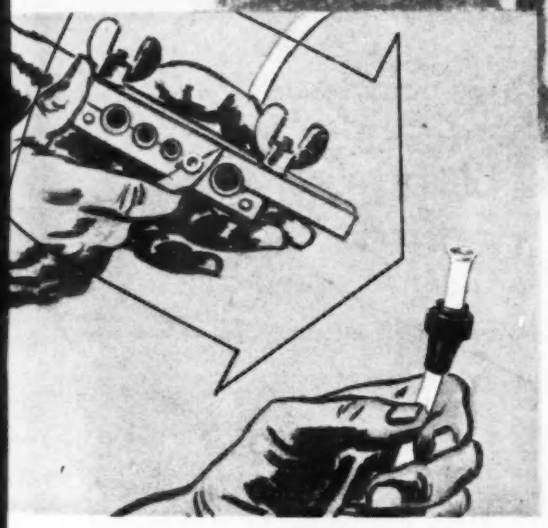
NAME.....

ADDRESS.....

CITY..... STATE.....

Red Cedar SHINGLES





Saran Tubing

INSTALLED EASILY AND QUICKLY

FLARING—
A STANDARD OPERATION

Saran tubing is readily flared with standard equipment. Installations requiring joints are thus quickly assembled by professional technicians. Joints are made leak- and vibration-tight with saran fittings which match all tubing sizes—from 3/8" to 3/4" O.D.

Rapid—streamlined installation methods mark an important advantage of saran tubing and fittings. These practical contributions to the industry are not only easily handled when in the expert hands of the plumbing craftsman—they actually simplify many operations through extreme flexibility and workability. This means that the proposed plumbing program for more than 15,000 war housing units can be speeded to meet our war needs.

Information on how tough, chemically resistant saran tubing will help you serve new and specialized plumbing needs is available on request. Dow and saran tubing fabricators are at your service.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • St. Louis • Chicago • Houston • San Francisco • Los Angeles • Seattle

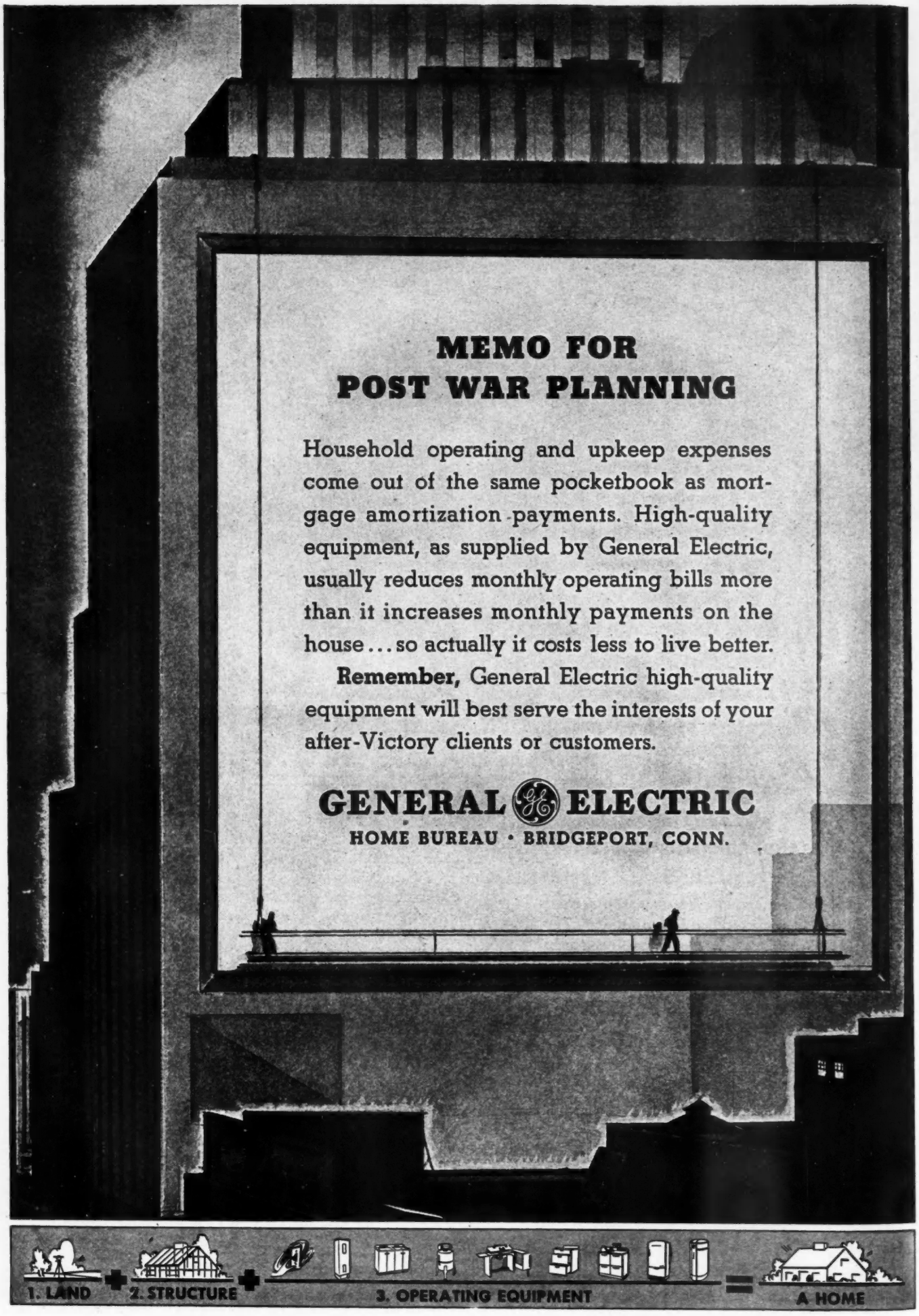
SARAN

DOW PLASTICS

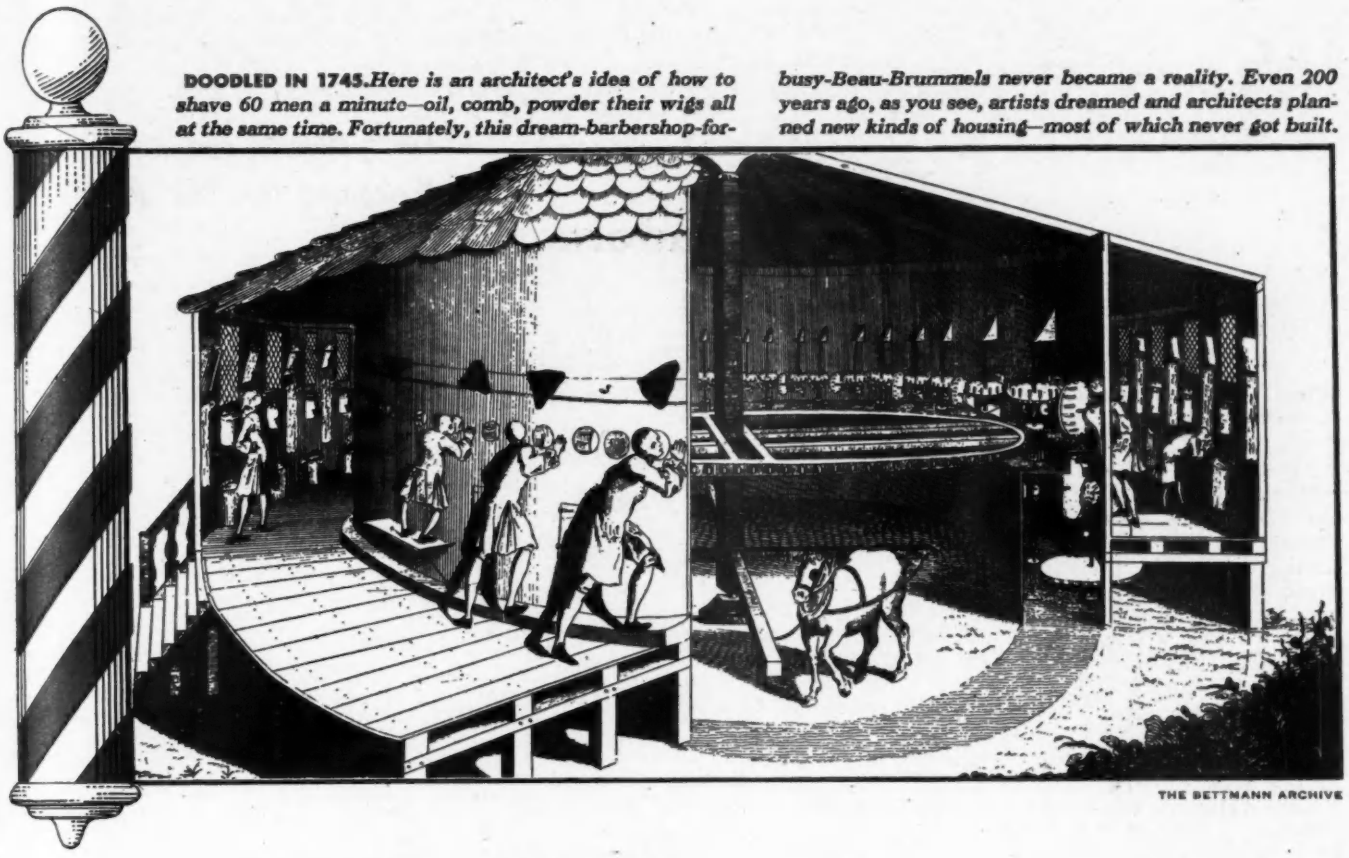
STYRON • ETHOCEL

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY


MEMO FOR
POST WAR PLANNING
Household operating and upkeep expenses come out of the same pocketbook as mortgage amortization payments. High-quality equipment, as supplied by General Electric, usually reduces monthly operating bills more than it increases monthly payments on the house... so actually it costs less to live better.
Remember, General Electric high-quality equipment will best serve the interests of your after-Victory clients or customers.
GENERAL ELECTRIC
HOME BUREAU • BRIDGEPORT, CONN.
1. LAND
2. STRUCTURE
3. OPERATING EQUIPMENT
A HOME

DOODLED IN 1745. *Here is an architect's idea of how to shave 60 men a minute—oil, comb, powder their wigs all at the same time. Fortunately, this dream-barbershop-for-busy-Beau-Brummels never became a reality. Even 200 years ago, as you see, artists dreamed and architects planned new kinds of housing—most of which never got built.*



THE BETTMANN ARCHIVE

Letters from Readers

Facts, Opinion and Advice Welcomed for This Dept.

Wants to join builders' association

Newark, N. J.

To the Editor:

We are interested in joining some association that speaks for builders throughout this country. It is essential that every builder join some group so that the voice of the building industry can be heard. There are many matters which must be taken care of by the builders throughout the entire country and it is only through some national association that they can have the proper voice. If they do not speak for themselves no one will.

For instance, the present FHA Title VI sets a maximum mortgage of $7500 on a two-family dwelling. Up until November 1st, 1942, FHA was granting a maximum of $7500 on two-family homes constructed of frame. As of about November 1st, 1942, the War Production Board in this area prohibited the use of frame construction and ordered that masonry exterior walls might be used. Masonry construction is more expensive than frame and yet the limit of the FHA maximum on mortgages has not been increased and the builder is limited to a $7500 mortgage on a more costly type of construction.

We believe that there should be some amendment to the FHA Act to permit a slight increase in the mortgage loans available under Title VI.

The writer is a subscriber to your magazine and has been for a good many years and considers the reading of your magazine monthly as part of his "keepup" on the building industry.—I. SAMUEL SODOWICK, President, George Building Co.

ANSWER: The two outstanding national associations of home builders are the National Assn. of Home Builders of the U.S., and the National Home Builders Assn., Inc. Both warrant your support, and as this issue goes to press, there are encouraging indications that these two groups will merge in one strong national association.

Frank W. Cortright is executive vice-president of, NAHB, with offices at 1737 K Street, N.W., Washington, D.C. William J. Guinan is executive secretary of NHBA, with offices at 1503 Dime Bank Bldg., Detroit.—THE EDITOR.

Lower builder profits?

Chicago, Ill.

To the Editor:

In studying your post-war program I notice that seven of the eight points stated were suggestions for interests outside the actual builders group. If I may in a spirit of very friendly criticism comment on this fact, it occurred to me that a program coming from a publication such as yours might make more definite suggestions as to how the *builders* may contribute to a larger and more effective post-war housing market.

Perhaps inclusion in the program of suggestions relative to lower individual unit profits by builders—such savings resulting from increased labor efficiency—might be appropriate for your further study. —MORTON BODFISH, Executive Vice-President, United States Savings and Loan League.

Heard in Congress

Washington, D.C.

To the Editor:

I received from Mr. L. C. Simms, president of Portland Home Builders Association, and also from Mr. Fred E. Arnold, president of Portland Real Estate Board, a copy of the Resolution adopted May 13 in which you and others participated in reference to home building and home ownership.

I agree most heartily with this Resolution and included the same in remarks on the subject in the House recently, and enclose copy for your information.—HOMER D. ANGELL, Member of Congress.

Need more of it

Denver, Colo.

To the Editor:

Your Private Enterprise Program strikes a responsive cord and this is exactly what we need, only more of it, from every direction.

I do hope that your magazine receives very wide circulation because it contains the meat of the subject. —VAN HOLT GARRETT, Garrett-Bromfield & Co.

Milwaukee builders ready

Wauwatosa, Wis.

To the Editor:

In your Post-War Planning Issue, it was gratifying to see that practically all experienced builders are very much in accord in their opinions about post-war housing.

Private enterprise must survive. It is the very foundation on which our constitution is resting—freedom of man.

Our Milwaukee Chapter of the National Association of Home Builders, of which I am secretary-treasurer, is ready to do its part towards this goal. All the members are ready, willing and able to help formulate a plan to build larger well-built houses after the war with long-term financing, patterned perhaps after the present FHA plan. The idea of advance sale of lots is a good one. It keeps the public home-minded.

At the present time our group, together with the co-operation of the Milwaukee Real Estate Board and labor organizations, is trying to obtain a new quota for Milwaukee. We are very anxious to build adequate housing for families with children. We think a three bedroom flat or duplex may be the answer. — MRS. HENNY MOLLGAARD, Realtor.

First in the field

Washington, D.C.

To the Editor:

Your Post-War Planning Issue gave me a lot of food for thought. Particularly interesting was your symposium of builder opinion as to the type of house and methods to be used in post-war production.

Since it seems very likely that the operative builders such as represented in this symposium are the men who will be first in the field when the war is over, all the professional and manufacturing groups seeking to participate in the post-war market will do well to take their comment pretty seriously.

I judge from the views presented that the "dream house," like the "dream automobile," is likely to be a second or third, rather than the first step in post-war production.—MILES L. COLEAN, Vice President, Starrett Brothers and Eken.

THE ALL-OUT WAR PRODUCTION OF TODAY—

MEANS BETTER STORE FRONTS OF TOMORROW

MONTHS before Pearl Harbor, Kawneer geared up its production to meet the tremendous demands of national defense. The pace has never slackened. Kawneer, in these recent years, has added immeasurably to its store of "know-how" on fabrication of rustless metals.

Stimulated also by the impact of new ideas, revealed in the recent Architectural Competition, Kawneer is now developing the new and better KAWNEER STORE FRONTS OF TOMORROW. Announcements will necessarily await the winning of the war, but when that time comes, you can depend on Kawneer to maintain its leadership in store front construction, established in 1905. The Kawneer Company, Niles, Michigan

Kawneer

ORIGINATORS OF THE
RUSTLESS METAL STORE FRONT
AND ALL-ALUMINUM
RESIDENTIAL WINDOW

TO HIT 'EM H-A-R-D-E-R

THE year 1943 promises to be the grimmest, hardest year this country has ever faced. Every effort, and every dollar of national income not absolutely needed for existence, should go into war work and War Bonds.

In the Pay Roll Savings Plan, America finds a potent weapon for the winning of the war—and one of the soundest guarantees of the preservation of the American way of life!

Today about 30,000,000 wage earners, in 175,000 plants, are buying War Bonds at the rate of nearly half a billion dollars a month. *Great as this sum is, it is not enough!* For the more dollars made available now, the fewer the lives laid down on the bloody roads to Berlin and Tokio!

You've undoubtedly got a Pay Roll Savings Plan in your own plant. But how long is it since you last checked up on its progress? *If it now shows only about 10% of the gross payroll going into War Bonds, it needs jacking up!*

This is a *continuing* effort—and it needs *continual* attention and *continual* stimulation to get fullest results.

You can well afford to give this matter your close personal attention! The actual case histories of thousands of plants prove that the successful working out of a Pay Roll Savings Plan gives labor and management a common interest that almost inevitably results in better mutual understanding and better labor relations.

Minor misunderstandings and wage disputes become fewer. Production usually increases, and company spirit soars. And it goes without saying that workers with substantial savings are usually far more satisfied and more dependable.

And one thing more, these War Bonds are not only going to help win the war, they are also going to do much to close the dangerous inflationary gap, and help prevent post-war depression. The time and effort *you* now put in in selling War Bonds and teaching your workers to save, rather than to spend, will be richly repaid many times over—now and when the war is won.

You've done your bit Now do your best!

This space is a contribution to victory today and sound business tomorrow by AMERICAN BUILDER

LIQUID GOLD *and a* MAGIC POWDER!

With oil so vital to a nation at war, it's a mighty fine thing that America has plenty of Lehigh Cement these days. Cement is the magic powder which provides concrete for construction of all kinds, including many oil installations.

Lehigh Cements, because of their availability, quality, and ease of handling, are used in the concrete needed for such major purposes as refineries, storage tanks, and oil wells. In many cases, where speed is a vital factor, Lehigh Early Strength Cement has proven its worth by providing a finer, denser concrete in ⅓ to ⅕ normal curing time.

Yes, the oil industries find Lehigh Cement a useful and adaptable helper. The same is true of other types of war and private work. Let Lehigh's Service Department help you with your special problems.

LEHIGH EARLY STRENGTH CEMENT
for **service-strength** concrete in a **hurry**

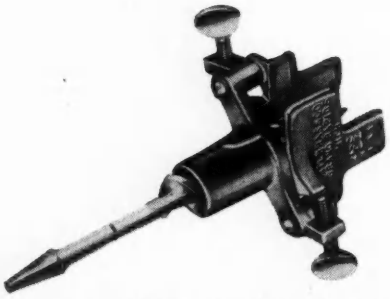
Lehigh CEMENT

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

FAST DRILL HOLE
VS
LABORIOUS MORTISING

DEXTER-TUBULARS

cut cost... save time... are guaranteed for life



Here's the tool that helps clinch sales. You can demonstrate how the Bit Guide avoids errors — speeds installation. Show your customer how it clamps on the door — self-centering, no measuring—it is a sound mechandising feature of the Dexter line. Write for details.

Place your confidence in DEXTER-TUBULARS — they will win, place, and show every time. They'll *win* precious hours in time and labor saved in their installation. They'll *place* you as a user of quality, dependable hardware, because DEXTER-TUBULARS are precision-built — backed with a lifetime warranty. They'll *show* you the way to lowered cost and faster completion of important War Housing and War Industry building jobs.

Conform with WPB Regulations including Hardware Order L-236

DEXTER TUBULAR
LOCKS and LATCHES

Available *today* in conformity with Government regulations — you are invited to write for full details. Let us send you the "Commander Line" Catalog illustrating DEXTER-TUBULAR Locks and Latches that conform with Federal regulations. Write today — no obligation.

Manufactured by **NATIONAL BRASS COMPANY**
GRAND RAPIDS, MICHIGAN

Washington News Summary

500 Million Feet of Farm Lumber on AA-2 Ratings

Delivery of 500,000,000 board feet of soft wood lumber will be made on AA-2 Preference Ratings to farmers during the months of June, July, August, and September. Builders, dealers and contractors should plan their farm work, therefore, immediately.

This allotment merely supplements the lumber obtainable on AA-3 and AA-4 Ratings provided by order M-208. Comparatively 500,000,000 board feet of lumber is only about 15 per cent of the normal annual farm use, excluding dwellings.

Actually the War Food Administration recommended to WPB that the emergency rating for agricultural lumber be applied to a total of 2,000,000,000 feet of lumber and, that in addition to this, at least another 1,500,000,000 board feet would be necessary to provide the minimum required maintenance and new construction program on farms for the coming year. The 500,000,000 feet of lumber just assigned to the third quarter of 1943 represents merely the first ration of the 2,000,000,000 emergency request of the War Board Administration.

The specially rated lumber will be distributed through the establishment of State and county quotas. All states, with the exception of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina have received quotas, and the States' War Boards are now arranging the county quotas.

Farmers living in counties that have

(Continued to page 72)

Unused Housing Priorities Revoked to Recover All Idle Critical Materials

Long pending and unused priorities for war housing projects, which have tied up critical material available for this purpose, will be recovered and reallocated to builders who are prepared to go ahead with construction, it was announced June 22 by the War Production Board and the National Housing Agency.

To this end, the War Production Board has issued an order revoking all outstanding P-55 preference rating orders except those which qualify under the Controlled Materials Plan. The revocation will become effective on the expiration date of the P-55 order, or on July 15, 1943, whichever is later.

By this means the critical material now available for war housing can be put into the hands of builders who are able to undertake construction.

The revocation order applies to war housing preference rating orders issued under earlier priorities procedures, where the builder has not taken steps to qualify his project under CMP procedures. Issuance of P-55 orders was discontinued April 1, 1943.

The new order does not affect outstanding P-55-b preference rating orders, the authorization issued under current war housing procedures. It also does not affect builders whose structures are authorized on CMP-4-C or CMP-H-1 forms.

If a builder holding a P-55 order files a CMP-H-1 form, requesting the National Housing Agency to allot controlled materials, before expiration of his P-55, or July 15, (whichever date is later), the revocation order will not take effect unless the CMP-H-1 application is denied. If denied, the revocation order then takes effect immediately.

Use PD-IX for Stocks Destroyed by Flood, Fire

Softwood lumber distributors whose stocks have been destroyed through fire, flood, tornado or other catastrophe may file emergency PD-IX applications for inventory replacement, the Wholesale and Retail Trade Division has declared.

Propose Federal Credit For Clearing Slum Areas; Local Builders to Rebuild

Redevelopment of American cities by private enterprise was given a strong boost when Senator Robert F. Wagner of New York introduced in the United States Senate, Bill S-1163, which proposes extension of federal credit to cities for the purchase of land in deteriorated areas. This land after being cleared would be sold or leased to private builders for redevelopment.

Providing $1,000,000,000 for loans and grants to carry out the program during the next fiscal year, the bill, if passed will make possible the immediate planning of large scale rebuilding programs.

Emphasizing that the proposal is not a public works bill, not a relief bill and not primarily a bill for public spending, but rather an encouragement to enterprise bill, Senator Wagner pointed out that this problem of neighborhood development and community planning must be met forthrightly before the war is over in order that industry and finance, as well as State and local governments, can be prepared and ready to act as quickly as the war ends.

Under the terms of the bill the Administrator of the National Housing Agency would be authorized to make loans to cities. Having purchased and cleared the land, the cities would sell or lease it to private builders for modern neighborhood development. Proceeds of land sales and rentals would be used to pay back the federal loans.

To be eligible for a loan from the federal government, a city would have to have a city plan sufficiently complete

(Continued to page 72)

How to File PD-872 Forms for Millwork

In obtaining deliveries under subparagraph (b) (5) of L-290 through the use of a PD-872 application, authorizations are granted only for specific orders from a definite *producer*.

The procedure for obtaining these deliveries is: 1, Place an order through your normal buying channels, either direct with a mill, or through a wholesaler, or any other intervening seller; 2, When such an order is placed, and not until then, make out and file Form PD-872 with WPB for authorization of delivery of your order.

On the front of Form PD-872 is a space marked: "From: Name and Address of Producer." In this space write the name of the particular mill that will manufacture and ship your order. Do not show in this space the name of a wholesaler or agent.

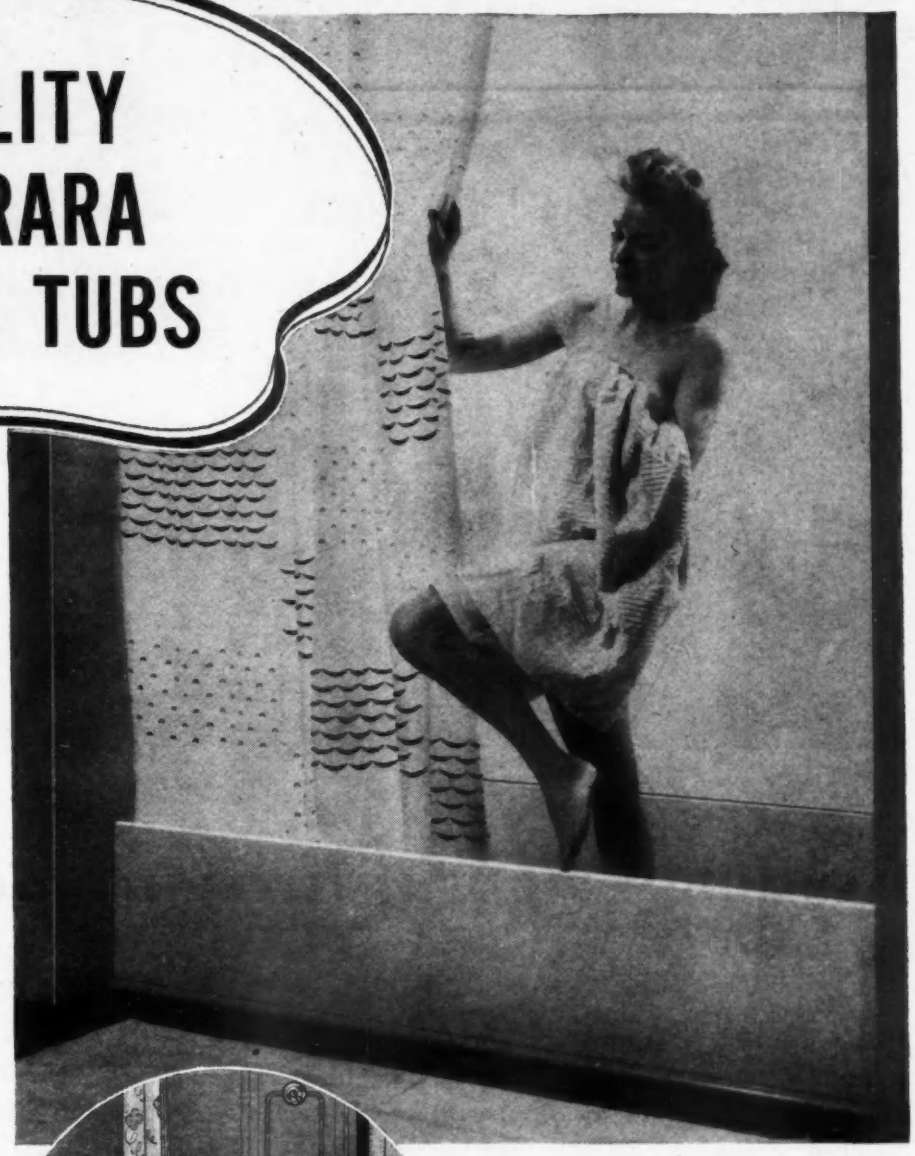
The authorizations are issued only to producers, and unless a producer has such an authorization, issued to him specifically, he may not make a restricted delivery.

Each application must cover delivery from only one producer. File a separate PD-872, and show the name of only one producer on each Form PD-872, for shipments originating at different mills.

Be sure to fill in name and address of purchaser on back of the form, as copies of authorizations are returned to his address.

Here's the answer to the Bathtub Shortage!

UTILITY CARRARA GLASS TUBS



THIS new development is timely, practical, low-cost — designed not only for present, but for future use.

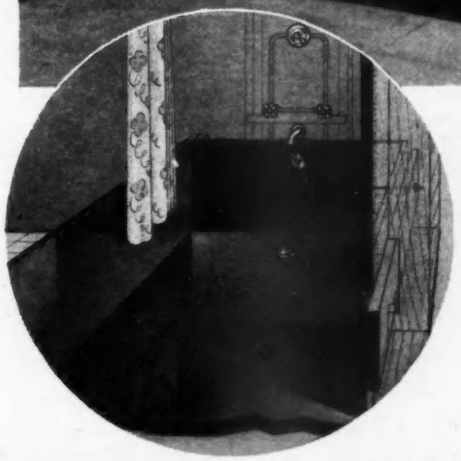
The new Utility Carrara Glass Tub is really a combination tub-shower. It proves exceptionally popular in the home . . . especially where children are still too young to use a shower safely.

IMMEDIATE SHIPMENT

Virtually no critical materials are required for its construction. It is immediately available, quick and easy to install, and priced so low that it is ideal for use in war housing projects.

It is good-looking, too. Made with handsome Carrara Structural Glass, you have a choice of five attractive colors . . . Gray, Ivory, Jade, Black or White. And the glass never checks, fades, crazes, stains or absorbs odors.

This is another development which brings Carrara Structural Glass within the budget of homes of every price class. Send the coupon, today, for descriptive literature on this and other uses of Carrara Glass.



QUICK AND EASY TO INSTALL! *Save for a few pieces of common lumber, all necessary parts for the Utility Carrara Glass Tub come to the job in one package—4 pieces of Carrara to form the enclosure, a pre-assembled Carrara receptor base, tie-rods and joint cement. Glass is factory-drilled for fittings of standard dimensions.*

"PITTSBURGH"
stands for Quality Glass and Paint

CARRARA
The modern Structural Glass
PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Plate Glass Company
2059-3 Grant Building, Pittsburgh, Pa.
Please send me, without obligation, free literature on Carrara as follows: (Please check)

- ____ Full-color booklet, "How to make Bathrooms and Kitchens Better Looking."
- ____ Complete facts about Ready-Built Carrara Glass Panels.
- ____ Data on Utility Carrara Glass Tubs.
- ____ Information about Prefabricated Glass Showers.

Name_____
Address_____
City_____ State_____

ALUMINUM PIGMENT IS PICKED FOR *Tight Spots*

Sea water and salt spray have ways of getting into places where they're not wanted. Metal-to-metal joints at hundreds of points aboard ship must be caulked to make them waterproof.

Some years ago a paint manufacturer developed and patented a caulking compound in which fine aluminum pigment was one of the important ingredients.

The purpose of using this pigment was to help provide resistance to sunlight, air and moisture. Thus, the caulking stays elastic instead of becoming brittle and breaking down. It provides an enduring, watertight seal.

This is an approved war use for Alcoa Albron, the pigment used in the caulking compound applied to many seams and joints on naval and merchant marine vessels. It plays a small but important role in the nation's shipbuilding program.

Its role in civilian programs, as a pigment for the best aluminum paint, must be filled by substitutes for the duration, but . . .

SOME DAY YOU'LL BE USING *Aluminum Paint* AGAIN

ALCOA ALUMINUM ALBRON

ALUMINUM COMPANY OF AMERICA

2120 GULF BUILDING, PITTSBURGH, PA.

MAKERS OF ALCOA ALBRON PASTE, MADE UNDER PATENTS OF METALS DISINTEGRATING COMPANY, INC.

AMERICAN BUILDER *Editorial*

Post-war plans start near home

WHEN we get right down to brass tacks about what is going to happen to the building industry after the war, we find it is largely a matter of *what the local building men* in every community decide to do.

Construction is first of all a local or community business, and depends on the initiative of local builders, realtors and material men. They ought to be organizing right now and laying far-sighted plans to rebuild their communities after the war.

True, certain broad national objectives can be sought, such as a national building code, standardization of materials on a national scale and a broad, flexible national finance plan. But the development of any *national* movement should rest on *sound local groups* and should be built from the local community *up* rather than from Washington *down*.

Slums a private responsibility

Private builders and business men, if they are going to oppose public housing or slum clearance, must assume a direct responsibility for the proper rebuilding of their own communities. Now is the time for them to organize post-war planning committees which will take an active part in local housing movements.

The housing and blighted area problems of every town are different, but it can hardly be said that there is any community that does not need improvement. By local organization, planning and vigorous effort, public spirited building men may gain control of the trend towards public housing. If federal assistance is needed because of the extent and nature of a badly blighted slum area, it can be sought in a way that will not destroy local private enterprise. Slum clearance can then be handled as a *local civic matter* with the housing built and owned locally rather than by the federal government.

There is a growing belief that a great part of the rebuilding of the nation's towns and cities can be done bit by bit through the rehabilitation and reconstruction of old structures. Much reconstruction of sub-standard dwellings can be done through rent subsidies to the tenant, thus putting such assistance on the same basis as that of providing food, clothing and other necessities of life to those who cannot afford them.

The gradual rebuilding of deteriorated houses and other structures bit by bit has the advantage that it encourages small business, which has aptly been called "the nursery of private enterprise."

Neighborhood Development Act

In most of the large cities of the country and many of the small ones, however, there exist large decayed and deteriorated sections which are not worth rebuilding bit by bit, but should be completely redeveloped. To meet the problems of such areas a bill has recently been introduced by Senator Wagner at the request of The Urban Land Institute, which should be given careful consideration.

Described as the Neighborhood Development Act, Bill S-1163 provides for the extension of federal credit to cities for the purchase of land in deteriorated areas which, after being cleared, would be sold or leased to private builders for redevelopment.

To stimulate private enterprise

The encouraging feature of the Neighborhood Development Act is that it is intended *to stimulate private enterprise action locally* and put the development and ownership of the rundown deteriorated areas where they belong—*in local hands*. Under the terms of the bill, cities or local housing authorities could finance the purchase of land at low interest rates over a period up to 99 years. After the land is cleared it could be completely replanned and laid out, some of it turned into parks and playgrounds, the balance leased or sold to private builders for approved housing and other structures. Eventually the land would be paid for out of income and the government loan retired.

An important feature of the bill is that it provides money NOW for use by local community planning agencies to develop sound post-war plans.

This appears to be a sensible approach to the future rebuilding of our cities and one that will enable local men to take an active and aggressive part.

Whatever government action may or may not be taken, the fact still remains that local building men should get organized now, forget their differences and take an active part in preparing post-war plans. Make a start by asking, "If peace came tomorrow, what would I be able to build?"

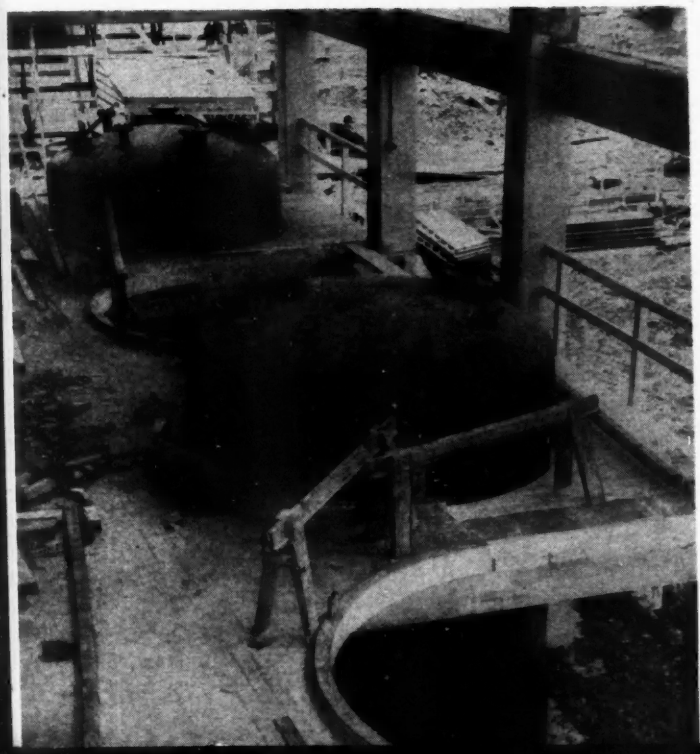
CANADA'S HOUSE CONVERSION JOB NO. 1—This fine old Ottawa, Ont., mansion has been leased from Col. Frazier Hadley by the Canadian Housing Administration for conversion into ten apartments at the low cost of less than $1,000 per unit.

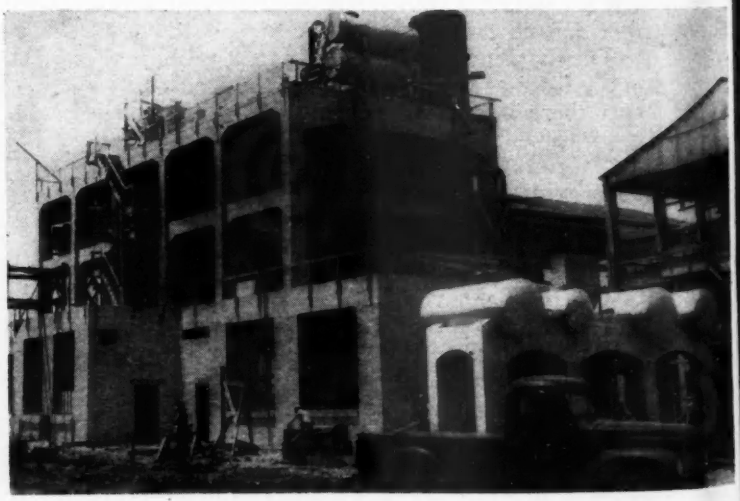
HEAD CONVERTERS— Above, Canada's Director of Housing F. W. Nicolls and Superintendent Davis on the job at the Hadley conversion at the left, which is being rushed to completion.

Building News Pictorial

Men on the Job of War Construction

ROADS TO PEACE—Grading and paving equipment (above) helps get the war housing project of W. Thomas Buckley Building Corp., Chicago, ready for occupancy; one of the duplex apartment buildings shown.

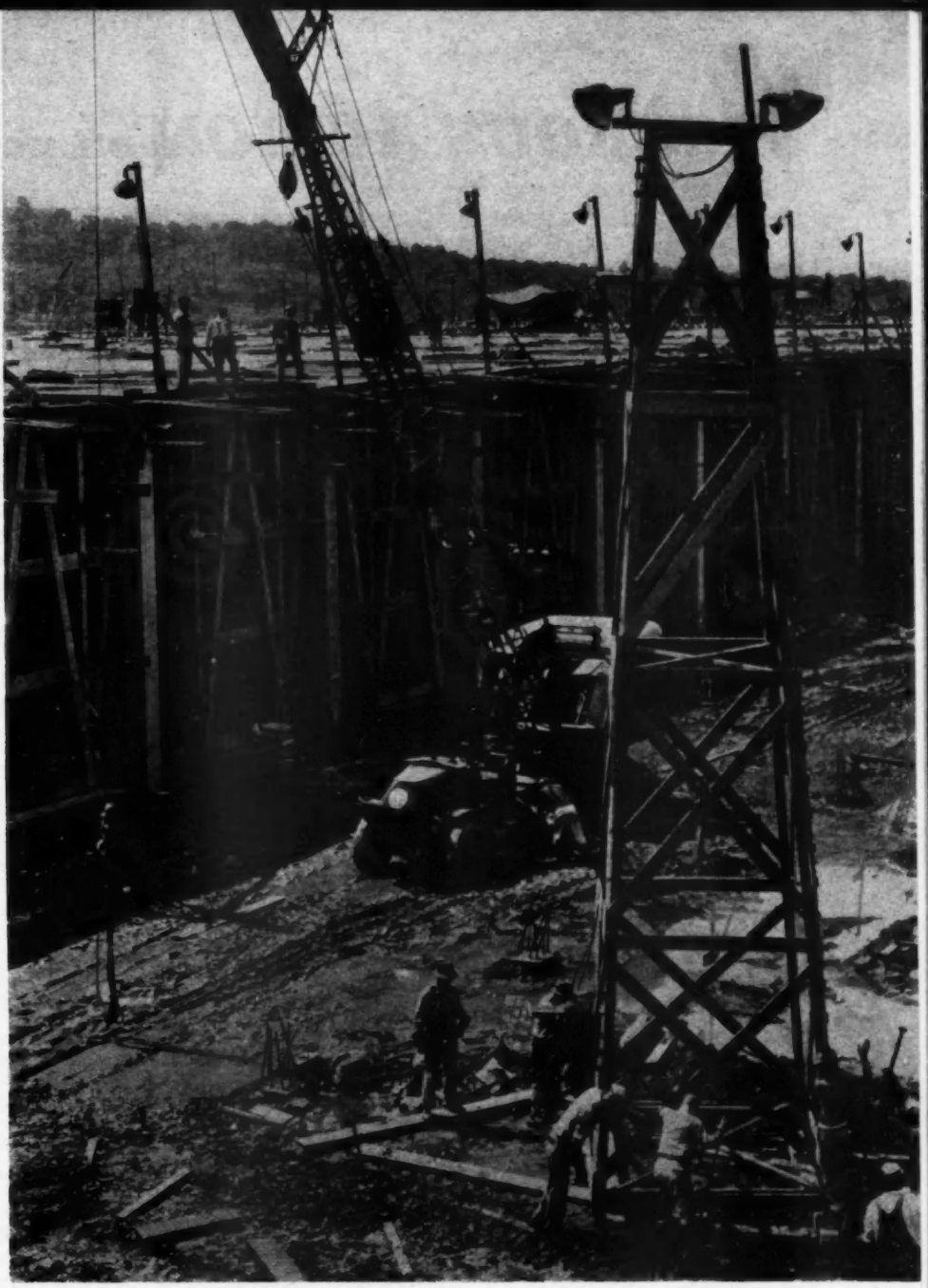


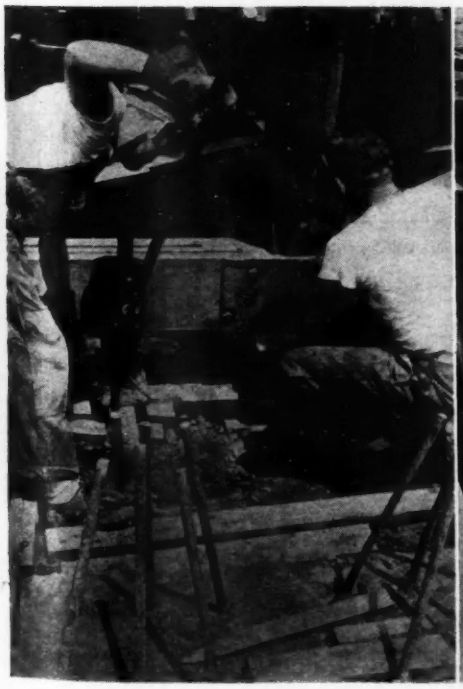


RUBBER IN THE BUILDING—One of the country's largest synthetic rubber plants (above) will soon be ready for operation by Goodyear. At the left are two reactors in place, open spaces to take two more. The well known Buna-S type of synthetic will be made here for tires and other military use; the product will be turned out in 75-pound blocks.

TIME SAVER—The large prefabricated Cemesto board panels that go into government buildings are cutting down construction time; workman with gun (above) is caulking joints where units come together.

SOMEWHERE IN NEW JERSEY—The first step in actual building of cyclone engines is pictured at the right. On this plant for the Wright Aeronautical Corp., a late "warspeed" method has been devised in the use of a traveling form basis to carry the complete single-story concrete structure. As pouring progresses, the movable forms travel to the next location; this way, they were used ten or more times and could have been used more times by prolonging the job somewhat. The form as designed was three bays long and was adapted to 50 days' pouring. It was chosen in preference to one only two bays long that would have permitted 15 uses but would have required 80 days for pouring. This method was worked out by the Mahony-Troast Construction Co., the general contractor; the plant was designed and engineered by Albert Kahn Associated Architects, Engineers, Inc.; Eggly Engineers working with Wright and U.S. men.





CLOSE-UP OF FORMS—At the left are two views of the new forming method used on the Wright plant, above, where supports were constructed with W-shaped bents, supported on rollers and jacks, with beam sides and bottoms hinged to facilitate decentering. The further view shows truing up one of the movable forms, readying for pouring a new section of roof; the other view shows one of the forms just before travel to the next position. The use of this method, together with a quick-setting cement, made possible the pouring of large areas of roof, and forms could be removed within 36 to 48 hours without resorting to re-shoring. As a result, it was possible to pour as much as 220,000 sq. ft. of superstructure per week.

VIGOROUS ACTION on post-war home front

1. ***Private enterprise groups take steps to assure sound post-war building program.***
2. ***Committee for Economic Development organizes 1,000 communities for "grass roots" post-war planning. Building men urged to take part.***
3. ***Producers' Council adopts post-war recommendations to insure high volume of construction and employment.***
4. ***U. S. Chamber of Commerce calls meeting to study post-war plans, work out co-ordinated program for all branches of building industry.***
5. ***Senator Wagner introduces Urban Development bill to encourage private enterprise action on housing and slum clearance.***
6. ***Canadian builders and housing officials consider adoption of post-war plan along lines proposed by American Builder.***

IMPORTANT actions to develop a workable, co-ordinated program of post-war planning took place during the past month, and to a remarkable degree were in accord with the broad program for private building enterprise outlined in *American Builder's* "War-to-Peace" plan published in June.

In an industry as diversified and disorganized as construction, it takes time and great organizing effort to get results. It is highly significant that so much progress has been made in the past months.

It is obvious that the business men of the building industry are determined to work out definite means to maintain employment and a high degree of building activity in the post-war period by means of private enterprise. They plan to do it both by organizing locally and nationally.

Producers' Council's 8 Steps

In a meeting at Cincinnati the Producers' Council, Inc., the national organization of building manufacturers, devoted a large portion of its time to discussion of post-war planning objectives. This meeting was the largest attended in history. The keynote was sounded in the following recommendations submitted by Russell G. Creviston, Chicago, general chairman of the post-war committee, and a member of the Advisory Board of the Committee for Economic Development:

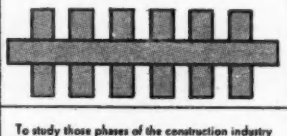
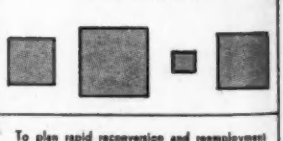
1. Accept as our over-all objective the providing and

POSTWAR PLANNING FOR THE CONSTRUCTION INDUSTRY

Allocation of Essential Planning Functions to The Producers' Council (Column 4), to Building-Product Trade Groups (Column 5), and Individual Manufacturing Firms (Column 6) And their Correlation with Postwar Efforts of Over-all Industry and Business (Column 1).

The objective—to bring about a sound general postwar economy and provide maximum employment and purchasing power—is achieved by the creation and maintenance of high national levels of production and consumption. These, in turn, are dependent on the development of extensive markets in all major industries—hence requiring planning industry by industry. Postwar studies by over-all industry and business organizations provide necessary background for industry planning. But industry planning is a necessary supplement to general planning.

For the Construction Industry—a major element in the general economy—this requires coordinated planning in which The Producers' Council program is the catalytic agent. The parallel listing of functions serves to eliminate duplication. By and large, the functions across the four columns are complementary, or together provide complete information for the individual manufacturer (the only one who "plans" in the sense of making commitments), and without which he would be required to make all general studies and industry studies, a vast duplication of effort.

	1 ALL BUSINESS AND INDUSTRY	2 THE CONSTRUCTION INDUSTRY (Material and Equipment Supply)		
		4 THE PRODUCERS' COUNCIL Cross-sectional Organization of Entire Building-Products Manufacturing Industry	5 TRADE ASSOCIATIONS Groups of Manufacturers of Individual Lines of Building Products	6 INDIVIDUAL MANUFACTURERS Private Companies producing construction materials or equipment
3 REPRESENTATIVE INDUSTRY ORGANIZATIONS	Committee for Economic Development National Association of Manufacturers U. S. Chamber of Commerce and Others			
7 GENERAL FUNCTIONS	To stimulate planning by individual firms, separate industries and communities, and to study the general problems of the entire national economy	To study those phases of the construction industry in the postwar period that are of common interest to all manufacturers of building materials and equipment	To analyze postwar markets for the products which their members produce and to coordinate their programs with industry-wide programs	To plan rapid reconversion and reemployment on a high level of production and to organize sales and distribution to assure maximum consumption
8 AIDS TO COMPANY PLANNING	Handbooks and case studies for employers Special studies—Local committees	Interpret CED and other handbooks to Building-Product Manufacturers-Industry case studies	Distribute material to its member manufacturers	Engage in special studies of the unique problems of the company
9 EMPLOYMENT	Study maximum employment for all industry and business—and demobilization	Develop means of achieving maximum employment in the construction industry	Encourage recruiting and training programs to expedite rapid reemployment	Determine organization required, plan retraining program and reassembly of personnel
10 MARKET RESEARCH	General market analyses Special studies, forecasts and reports	Detailed forecasts of all types of postwar construction markets	Analyze special product markets and competitive position	Evaluate company's position in construction markets
11 SUSTAINING OF MARKETS	Determine factors favorable to continuing high levels of business activity	Recommend industry programs to realize and sustain construction markets and to maintain favorable consumer relations	Develop group promotion programs and correlate them with industry-wide programs	Plan sales programs to develop the full possibilities of market for the company's products
12 DISTRIBUTION	Encourage planning of postwar distribution by wholesalers and retailers	Study over-all material supply to facilitate flow and reduce construction costs	Make studies of distribution and marketing of separate building products	Determine price policy and channels of distribution for postwar era
13 FINANCING CONSIDERATIONS	Studies of taxation and financial policy, reconversion and settlement of claims	Examine adequacy of finance for construction and means to assure investment stability	Study financing arrangements peculiar to the line of products	Determine financing requirements for reconversion and postwar production
14 TECHNOLOGICAL DEVELOPMENTS	Analyze impact on the national economy of technological developments	Ascertain acceptability of innovations in design, materials and construction methods Promote dimensional coordination (ASA A62) and correlation of building codes	Study suitability of products to postwar construction Develop application of dimensional coordination and standard building code provisions	Develop new products, redesign old products Adapt production methods to meet technological developments. Change to coordinated sizes when industry adopts them
15 GOVERNMENTAL POLICIES	Delineation of spheres of government and business most conducive to the public interest. Studies of long-term and war-born government and business policies, disposal of war plants, machines, and war contracts.	Study how government may best promote the general welfare through construction Study disposal of temporary war structures including war housing	Study the relationship of its programs to the programs of industry and government Study effect of governmental policies, including price regulation, on the interests of the group	Adjust the company operations to industry and governmental policies

THE PRODUCERS' COUNCIL, INC. April 16, 1943 Revised 5-11-43

PLANNING functions for post-war construction as charted by James M. Follin, managing director of the Producers' Council, Inc.

sustaining of a volume of construction and resultant employment in the post-war period sufficient to support a national economy of maximum employment, production and consumption.

2. Accept the responsibility for proper integration of this program to our own management to the end that it becomes integrated with our own company post-war plans.

3. Accept the responsibility of enlisting the interest and active participation of non-member manufacturers and non-producing branches, particularly those closely related to our own lines.

4. Secure data on length of time required for re-conversion.

5. Develop order by which our members of the armed services should be demobilized.

6. Determine possible general effect of technological developments on the future of construction and rate of change to be expected.

7. Ascertain rate of production in factories and on site which can reasonably be expected.

8. Request the Construction and Civic Development Department of the U. S. Chamber of Commerce to appoint a post-war sub-committee to co-ordinate the proposals of the Producers' Council and other branches of the construction industry, to bring about concerted action toward maximum employment in the construction industry in the post-war period and arrange for a general post-war conference of the construction industry late this year or early in 1944.

Following the Council's recommendations, Eric A.

(Continued to page 95)

Toward a rational post-war housing program

By Frederick M. Babcock

Following is a condensed version of Mr. Babcock's recent address before the Producers' Council meeting at Cincinnati. After analyzing the post-war views of various factors in the industry, the author suggested three principal goals: 1) A revitalized financial program. 2) Protection of consumers. 3) Improvement of cities. He then discussed each in detail, as follows:

GOAL No. 1: Financial Program. This portion of the program would be concerned with the modifications in Federal and state legislation dealing with housing and finance to adapt it to post-war needs and conditions. For illustration:

(1) We shall probably want to have an agency established within the Executive Branch of the Federal Government to carry out housing policies and to conduct research and advance planning activities in the related fields of housing, both urban and rural, the development of urban communities, and financing. This agency would provide the over-all supervision of all other housing agencies, notably the FHA, the FHLBA and the FPHA. It should be noted that the present National Housing Agency covers a narrower field and that there is not, as yet, any legal basis for its continuation after the war. This recommendation suggests that provision be made for a single super-agency after the war to make certain that the government will have the administrative facilities needed to maintain a unified housing policy.

FHA Refurbished

(2) The Federal Housing Administration should be refurbished to enable it to serve effectively in the post-war era. It may be desirable to rename it. We will probably want to restore intact the program provided in Section 203 of the National Housing Act (80% to 90% mortgages on one- to four-family dwellings, both existing and new construction) but to discontinue all the Title VI provisions (war housing mortgages) and Section 207 (Rental housing). Title I, Classes 1 and 2 (Repairs and remodelling loans and loans on non-residential new structures) should be retained but the Title 1, Class 3 provisions should be discontinued. Consideration should be given to the possible use of FHA insurance in connection with the private financing of demountable houses and houses engineered for short lives.

Many feel that the National Housing Act should make more adequate provision for the financing of rental housing. While from three-quarters to four-fifths of our families aspire to home ownership, nevertheless we should find means to provide great quantities of rental accommodations. Serious consideration should be given to the possibility of using the yield insurance formula as a substitute for the insurance of high-percentage mortgages on apartment projects. The yield insurance plan provides for the financing of projects by private capital, without the use of mortgages, and with provision for a guarantee of a minimum rate of return.

(3) There should probably be a revision of the legislation and program of the agencies which comprise the Federal Public Housing Authority. Many believe that there should be less emphasis on the erection of new structures to house low-income groups and more on the development of suitable formulas based on social diagnosis and the subsidizing of families as such. Probably the best plan of this kind is the one which utilizes selected existing properties. These are rented or purchased by local welfare boards, remodeled and repaired, and then leased to poor families at reduced rentals. The housing subsidy is then the difference between the costs to the board of furnishing the accommodations and the rentals collected from the tenants. There is adequate control over the use of the funds; poor families are not colonized, and reasonably good shelter is provided without heavy expenditures for new structures.

Loans to Cities

A thoughtful and unprejudiced examination of the social problem of housing the very poor will indicate that the construction industry can ill afford to assume a position which is wholly negative to public housing.

(4) There should be an examination of the need for and the desirability of State and Federal loans, and other assistance to enable public works to be built. We shall need many public improvement projects of intrinsic value to our communities—projects of the types which are normally built by public expenditure but without any thought of artificially stimulating employment.

It may be desirable to make provision for the establishment of facilities in the government to make loans to local municipal bodies for the acquisition of slums and blighted areas and for the redevelopment of such areas. While we must recognize that the fiscal condition of the Federal government after the war may not make it pos-

sible to make many such loans for years, nevertheless the proposed legislation should be adopted and used to a limited extent during post-war years.

(5) There are a number of other items related to the revitalizing of our financial machinery: The Federal Home Loan Bank system might be modified so as to enlarge its scope of activities and increase its services to the savings and loan associations. We should strive for more uniform state mortgage and mechanics' lien laws. Our land title system can be improved. There should be a re-examination of the legal distinction between real estate and chattels to find suitable means by which to combine the financing of realty and certain items of equipment.

New Risk Rating Body

Goal No. 2: Protection of Consumers. This portion of the program appears to offer more significant benefits to the construction industry than will any of the other proposals.

It is recommended that there be established an institution to render various forms of technical assistance to the public, to establish standards, and to make certified reports. The facilities would be designed to provide technical assistance to manufacturers, distributors, builders, local units of government, financial institutions, and others, including business firms, families and individuals, for moderate fees, covering appraisals, compliance with standards, inspection during construction, rating of investment risks, and land planning.

Such assistance would make available standardized services designed to enhance the probability of producing good environments, sound construction and stable investments by providing for competent and disinterested analyses, consulting services, and registered reports made from the point of view of the public interest and the interests of the consumers of the end products of the construction industry.

Wants Quality Work

If private industry bends all its efforts solely to the securing of a high volume of activity in post-war periods (and, of course, it will be fatal to our economy if it doesn't), the public acceptance of the product may tend to be short-lived. The greatest volume and the most sustained volume will emerge largely as a consequence of quality of the product. Furthermore, a greater share of the consumer's dollar can be attracted to construction by greater certainty of quality at moderate prices.

The influence which such an agency will exert should not be underestimated. It will be a factor which invites sound city planning, effective zoning, adequate deed restriction, urban redevelopment, and proper taxing policies. It should be a most favorable factor in preventing premature subdivision, faulty construction, unattractive architecture, overbuying, and overvaluation. The confidence it will generate should make real estate markets more active both for existing and new construction. All systems of financing will have a common yardstick and both insured and uninsured financing can thrive.

It will immediately occur to many that such an agency might be established within the framework of the Federal government. Others would prefer to see private business establish the facilities. All can readily agree that the boom conditions which will probably prevail in the early post-war period make the provision of such facilities highly desirable.

Why, some will ask, cannot the underwriting and technical facilities of the FHA, as now operating, serve the same purposes? There are several reasons. The appraisals

(Continued to page 93)

Canadians approve "War-to-Peace" plan; get own under way

LOOKING across the northern border, the American building industry can find plenty to confirm its concern over the need for proper planning now for post-war building by private enterprise. Our Canadian builder friends are already hard at work rounding out their program, which is broad-gauged, down to earth and, most important, co-ordinated. That proper groundwork for this was being laid became known when Canadian officials of the Housing Administration, which functions similarly to FHA, commented favorably on the "War-to-Peace" plan presented by this publication in the May issue. Members of the *American Builder* staff were invited to Toronto and Ottawa to confer with key men of the industry there, contribute data on the plan so that portions adaptable might be incorporated into the Canadian program and in turn find out what has been done in the Dominion that might augment the final proposals for the American plan to be made on these pages in October.

Several interesting developments were found to have already been accomplished there, or were well on their way toward an early realization. The first is a level of understanding and co-operation which has been reached within the building industry and the departments of government concerned with private building. Even allowing for the relative difference in size of the two programs, war housing in Canada has been handled much more smoothly and with a very evident lack of confusion and bungling that has, at times, slowed down the job here.

The second significant development is the current drive to organize builders into a strong, nation-wide group, the National House Builders Association. Such an organization will be able to provide for unified action through its officers on the various problems as they occur in evolving a post-war plan and eventually in carrying out such a plan.

Another step taken, and one which *American Builder* has been strongly advocating for this country, is the completion of a national building code. This job was finished under the stress of war, having been prepared under the joint sponsorship of the National Housing Administration of the Department of Finance, and the Codes and Specifications Section of the National Research Council of Canada. In the form of a 422-page volume, it represents the co-operative work of numerous committees, including advisory groups from government bodies, professional associations and industrial or trade associations, and has been described as a model code from start to finish. It is intended to be suitable for adoption "in toto" by municipalities desiring to use a building code. When this necessary local action has been taken, Canada will be ready to forge ahead unhampered by bottlenecks of inflexible and archaic local codes.

As soon as the Canadian post-war building plan is complete and approved, it will be presented to the American building industry by *American Builder,* as have other similar programs in recent issues. From all these, it is hoped an over-all, workable American plan will emerge.

N. P. NINNEMAN

How to Make A-1 Prospects for Your Post-War Houses

Budget plan starts lot buyers on regular monthly payments

N. P. NINNEMAN of Camp Hill, Pa., is manufacturing future home prospects by means of a smart "budget plan" for lot purchasers.

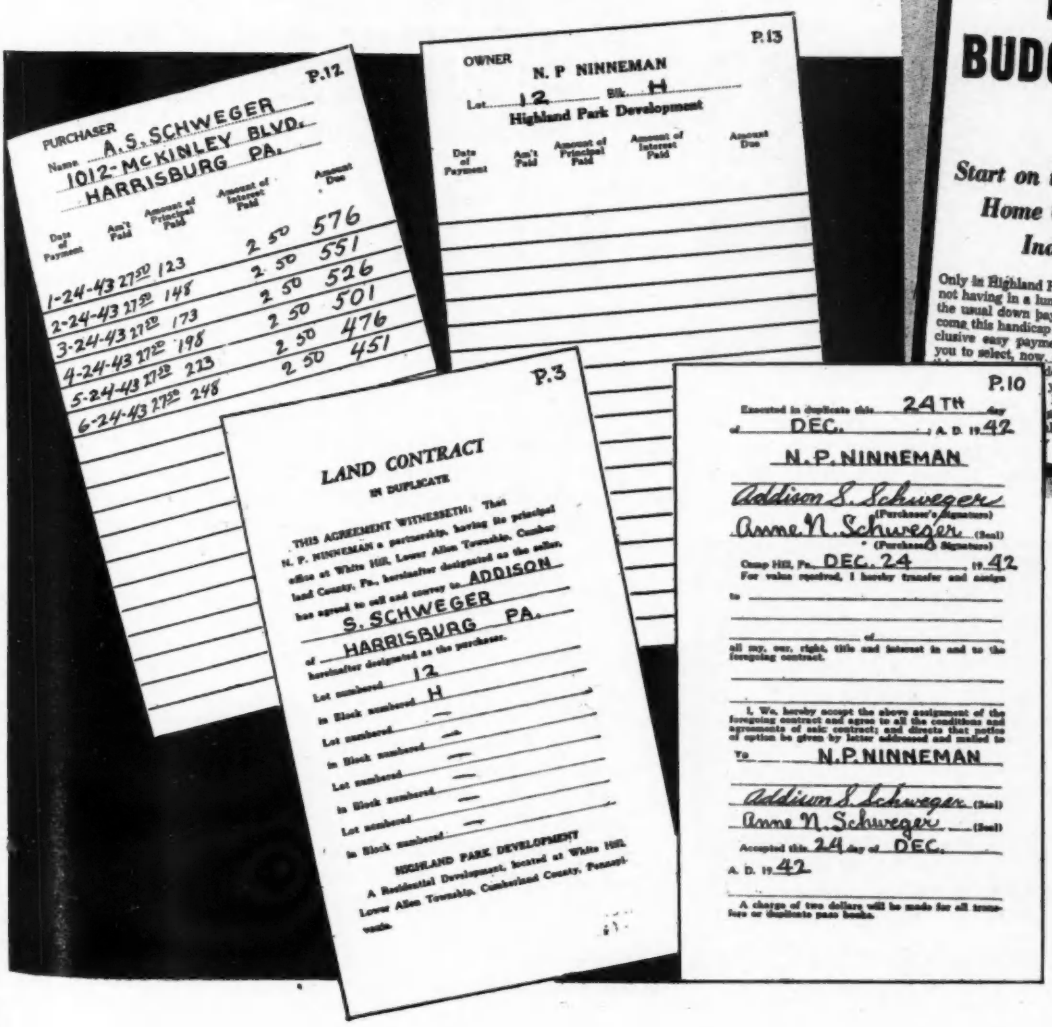
He is selling lots in his attractive Highland Park Community with down payments as low as $25 and monthly payments as low as $25.

"Plan today to own your home tomorrow," says Ninneman in newspaper and radio advertising. Under his budget plan the buyer signs a land contract calling for regular monthly payments until the lot is fully paid for. The buyer pays 5 per cent interest on the unpaid balance due on his lot. Each buyer gets an attractive 3½ x 6-inch budget book which contains the land contract, terms of sale and space for the entry of monthly payments, illustrated below.

Ninneman's budget plan of selling has proved very successful over a period of years. Before the war he started many people on the road to home ownership through the budget plan system, and as soon as their lots were paid for he built homes for them in Highland Park.

Since the war, the budget plan has proved even more successful and

(Continued to page 88)



NEWSPAPER advertisements such as the above and a 15-minute radio program have started 71 future home owners on N. P. Ninneman's budget buying.

3½ x 6-inch budget book contains land contract, terms of sale, record of monthly payment on the lot purchase.

CONCRETE FLOOR SLAB was laid over this waterproof membrane consisting of four layers of 15 pound felt. Joints were lapped with hot tar.

SOIL PIPES RISE from the continuous concrete slab of row of war houses at Norfolk. Shop-built plumbing assemblies were installed prior to placing of concrete slabs. Houses built under Title VI.

CONSTRUCTION VIEW of one end of row of Levitt's cinder block houses. Units are 21 x 30 feet; carry $2850 mortgage; rent for $33.

800 Houses—3½ Months

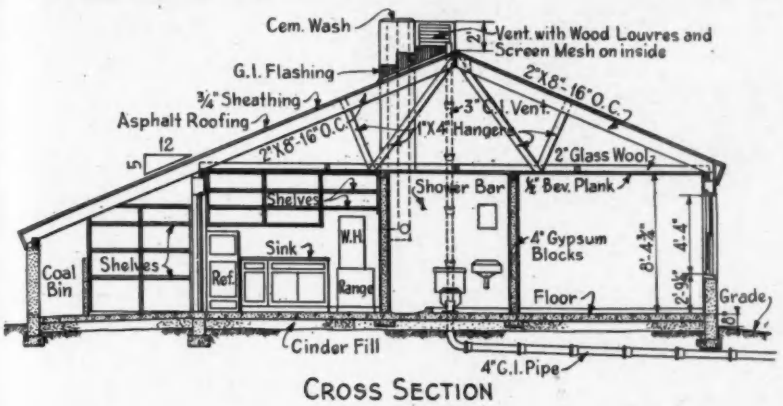
Continuous slab floors, cinder block walls used by Levitt & Sons in record production job at Norfolk, Va. Use of metal cut to 800 pounds per unit, lumber only 2500 feet.

WILLIAM and Alfred Levitt, whose first war housing job was described in the June, 1942, *American Builder,* have just completed another and even more interesting project at Norfolk, Va. Like anything the Levitts do, this mass production job has been attracting much attention.

This time the Levitts set out to build row type war housing with a minimum of scarce construction materials. That they succeeded is demonstrated by the fact that they used less than 800 pounds of metal per unit and less than 2500 feet of lumber per unit.

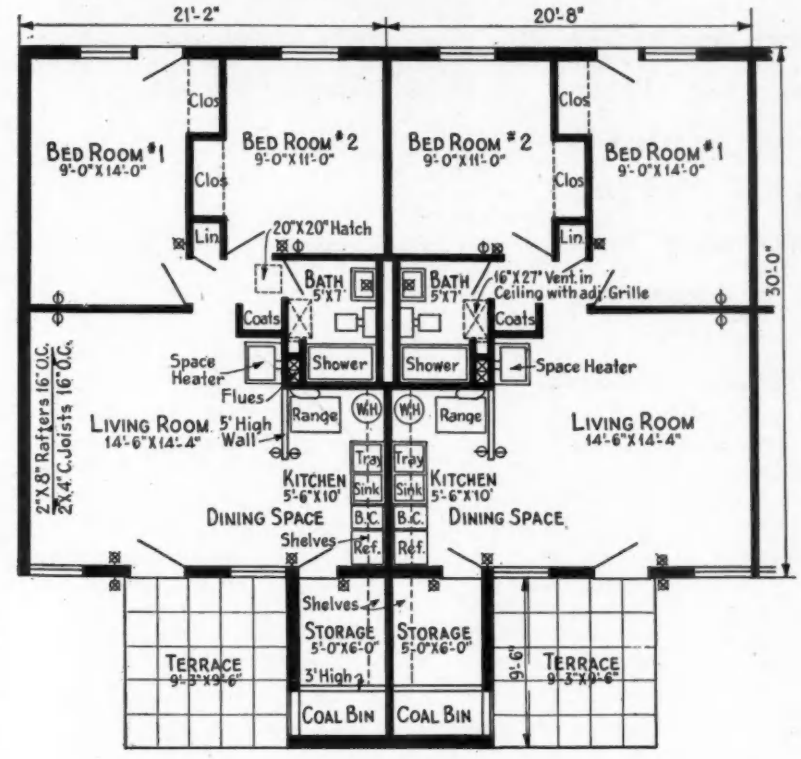
The 800-unit project was started January 11 of this year and completed late in April. Bad weather and difficult working conditions due to muddy ground were overcome to complete this large project in three and one-half months. Work was carried on on a 24-hour, 7-day-a-week basis, with night shifts working under floodlights.

The Levitt houses, as detailed herewith, are 3½-room units arranged in rows. The floor plans and construction details include many novel features. The houses were constructed under FHA Title VI to rent for $33 per month. Individual mortgages are $2850 each. Some indication of the remarkably low cost of the single dwelling unit is conveyed by this mortgage figure. All of the development cost, as well as all of the construction cost, had to be covered under it, including roads, sewers, water, two sewage disposal plants (which cost $43,000 each)

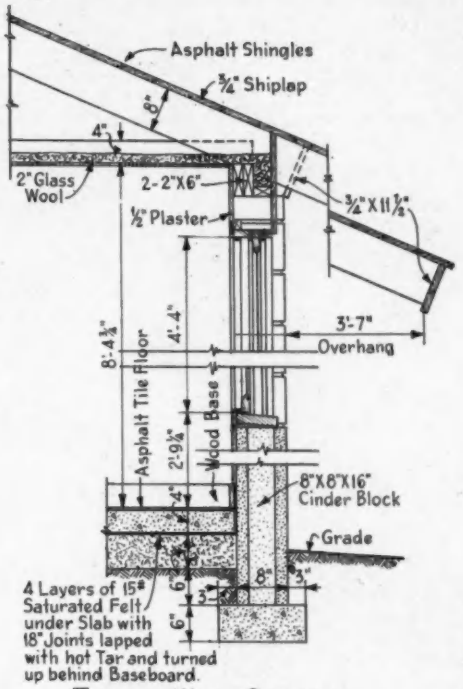


CROSS SECTION

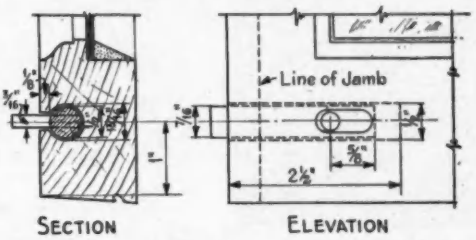
FRONT ELEVATION



FLOOR PLAN



TYPICAL WALL SECTION



DETAIL OF WOOD DOWEL ADJUSTER LOCK

DETAILED PLANS show floor slab waterproofing method, roof truss, economical plumbing and kitchen arrangement coal storage and other cost-cutting, time-saving and material-saving methods. Note wooden dowel window lock that eliminates metal catch. Asphalt tile floors are laid directly on concrete. Ceiling insulated with 2 inches mineral wool. Plaster applied directly to cinder block wall.

and a super-market and shopping center for the war worker tenants.

Having completed the first 800 units, the Levitts are now embarking on 800 more. One important change of procedure will be that the 6-inch concrete roadways will be built *first* in order to eliminate the terrific difficulties encountered on this job in moving materials, particularly the vast quantities of cinder concrete blocks.

To accomplish their objective of a minimum amount of critical material, the builders adopted a concrete slab construction with cinder concrete walls and a truss type roof. A continuous floor slab, 4 inches thick, was placed directly on the tamped earth site. To eliminate dampness, a waterproofed membrane was first laid on the earth, consisting of four plies of 15-pound felt with hot pitch between the joints. This waterproofed membrane was carried around the sides of the slab and up behind the baseboard of the house. Quick-setting ready-mixed concrete was used for the slab.

Before the floor slab could be placed, the shop-assembled plumbing sections were installed, complete with soil pipes projecting into the air.

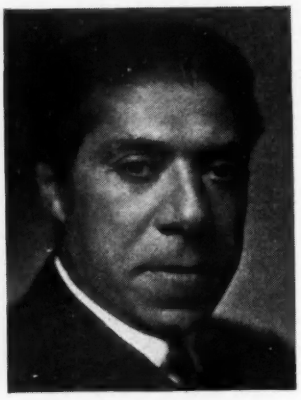
A finished floor of asphalt tile was laid over the concrete, providing a durable, attractive finish.

Walls consisted of 8 x 8 x 16-inch cinder concrete

(Continued to page 93)

"Build 'Em fo

AERIAL sketch of Rahway Gardens, N.J., showing livable grouping of units.



ARTHUR WEISER

Building garden type rental war apartments gives valuable experience for later peacetime projects patterned after Weiser's Rahway Gardens type of planning

ARTHUR WEISER, well known New York architect and builder, whose 208-family housing project for war workers has just been completed in Rahway, N.J., is convinced that housing for war workers can and should be built, in advantageous locations, that will long outlast the war, and that's the way he builds.

Weiser's unusual Rahway Gardens project provides eighty-eight 3½-room units and one hundred twenty 4½-room units, all built under WPB and NHA standards applicable at the time priorities were granted and all rented or to be rented to war workers. The structures are sponsored by private mortgage funds under Title VI, FHA. Construction was begun in September, 1942, and, despite what was probably the wettest winter in New Jersey's history, necessitating a considerable delay in the installation of roads, the 208 units were scheduled to be fully occupied by last May 15.

The site was laid out with the assistance of the FHA Land Planning Division. Although several of the buildings front upon an active traffic artery leading to numerous humming war plants, ample play yards and park space are provided in the interior of the project as seen above.

Weiser came to the Rahway Garden project with a sound and diverse background in the building field. His past operations have included the construction of many of the newer type apartments in New York City, including the 138-family "Colonnades" on Shore Road in Brooklyn; Riverside House, accommodating 240 families between 158 and 161st Streets, in Manhattan; and the 21-unit structure 517-521 E. 86th St., New York City which was awarded the First Prize in the Apartment Field by the First Avenue Association in 1939. Weiser also has done considerable remodeling of older multi-roomed apartments into a greater number of small units in Manhattan. He was the architect for the conversion of thirteen 14-room suites into thirty-seven small units at 929 Park Avenue which featured the now well known New York "dining balcony." This is a modified balcony consisting of a separate and complete room raised 6" from the general floor level.

Perhaps the nearest he had come to the production of compact housing was his 62-unit apartments at 310 West 55th St., New York City, built in 1941. These featured the so-called "efficiency apartment" which, though treated as a single room, consisted of a living room with a window the full width and built-in book cabinets and a writing desk; a bedroom with a wide window and built-in chiffonier and chest of drawers; a fully equipped modern kitchen with large window; an open dining space, and modern bath and shower.

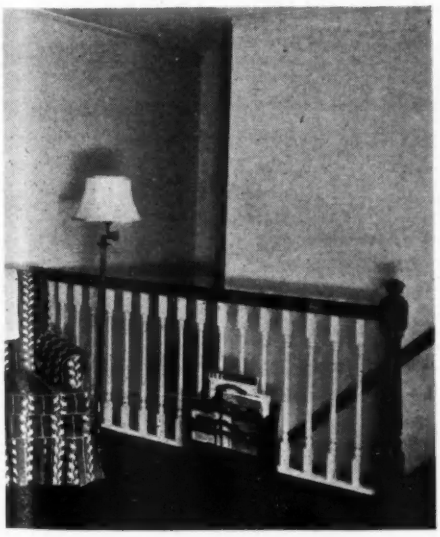
Weiser says that his experience here and in other operations, in utilizing every possible inch of floor space in the high-land-value areas of Manhattan where he has done most of his building, has helped him in building his war workers' apartments at Rahway Gardens. Every available square foot under roof had to be so planned and so

(Continued to page 92)

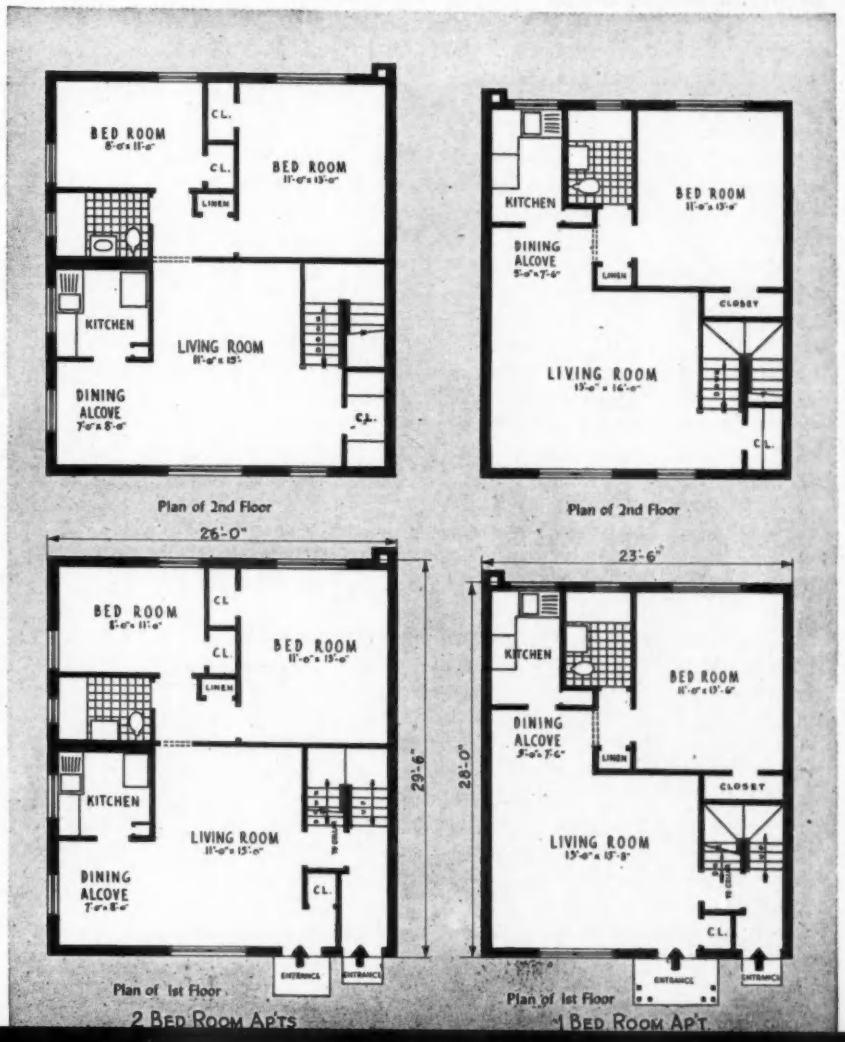
"Em for Keeps and You Will Keep on Building"

Says Arthur Weiser, well known New York architect and builder of apartments

ABOVE: Construction view of some of the six-apartment units in Rahway Gardens war housing project. Typical plans of one- and two-bedroom apartments are shown at right. Notice separate entrance to both first and second floors, instead of common vestibule.



FROM second-floor apartments, stairs lead down directly out of living room to entrance.



A BILLION dollars a year can be saved in fuel bills if all the homes in the country were insulated. This year they must be if the public is going to keep warm. The government is providing the promotion and the advertising. Tie in with your local lumber dealer and reap from this very essential campaign.

Uncle Sam Will Help You Sell Insulation

A BILLION dollars a year could be saved in fuel bills, if all homes in the country were insulated. This statement was made three years ago by the Bureau of Mines and it now appears that the coal mine strikes and war conditions are going to make it necessary for the people of this country to save that billion dollars. The alternative is to freeze.

The fuel situation this winter is not going to be a matter for conjecture. It is a matter for insulation. There will not be enough fuel to keep homes warm unless the amount used is drastically cut.

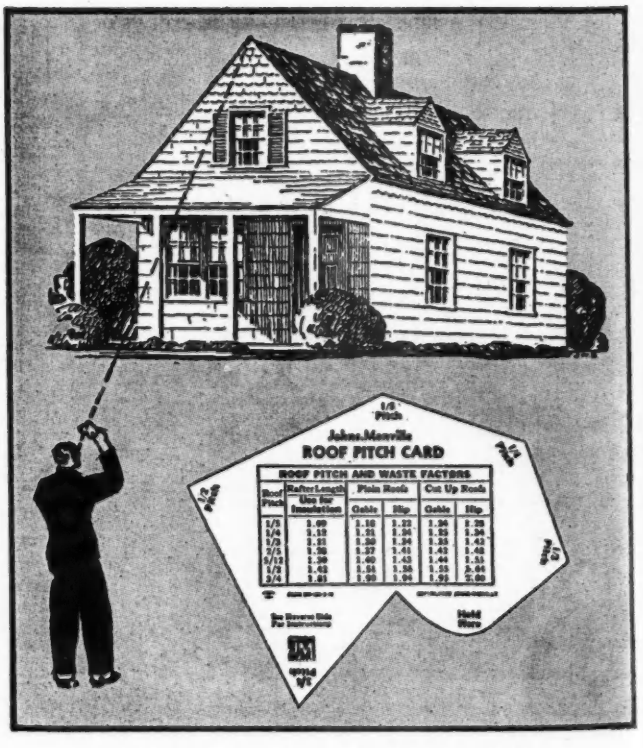
Heading up the various Government Bureaus interested in fuel conservation is the OWI, whose campaign is spearheaded by a radio program. "Prepare for Winter Now" is the slogan that is being spread throughout the land during this summer and early fall. People everywhere are being urged to order their coal, weatherstrip their windows, buy storm windows and storm doors (when they become available), and to insulate as rapidly as possible.

Thirty-nine net-work programs with eighty stations carrying spot programs are making an effort to dent the consciousness of the American public with the single idea that they had better insulate if they want to keep warm this winter.

With such an advertising campaign (free of charge) at the disposal of builders and contractors, only the lack of enterprise can keep them from cashing in on this major movement. The WPB, OPA, PAW, FHA and ODT are all working to develop fuel conservation programs this year, but for this winterproofing drive to reach its goal it is essential that builders and contractors get to work in their localities insulating homes.

Meetings of home insulation contractors, dealers, estimator salesmen and installation crews, have been assembled by the National Mineral Wool Association in Boston, Minneapolis, Chicago, Cleveland and Cincinnati, to help the campaign get a fast start.

That insulation can be sold has already been proved by campaigns which took place last summer and early fall. In many cases, the amount of insulation sold during a single week's campaign was equal to twice or three times as much insulation as had been sold in the previous year. *(Continued to page 87)*



PITCH card used to determine roof pitch.

How To Figure Insulation Jobs Quickly

By Herbert F. Lotz, Estimating Expert

HIP ROOFS: To estimate roof areas to be insulated with Type B or Blanket Type Home Insulation, proceed as follows:

1. Measure the outside wall lengths, place figures on a sketch and determine "flat" square foot area by multiplication.
2. Determine pitch of roof by use of Pitch Card. (See illustration on facing page below.)
3. Multiply "flat" area by:
   1.12 for ¼ Pitch — 1.21 for 1/3 Pitch
   1.42 for ½ Pitch — 1.81 for ¾ Pitch
4. To this total add for each dormer the amount of square feet given in Table 1.
5. Do not deduct for dormer windows as they have been deducted in Table 1.
6. For each added or omitted dormer window add or deduct 12 sq. ft.
7. Do not deduct for any chimney unless it exceeds 6 sq. ft.

GABLE ROOFS: Proceed as above, and add gable ends as follows:

8. Multiply width of gable by its height and divide by 2 for each gable.
9. Deduct for gable windows. Figure 12 sq. ft. each or by actual measurement.

FLOOR OR CEILING JOISTS: Find the square foot area of floor or ceiling to be insulated and deduct the area of the stair well opening or scuttle unless it is to be covered with insulation. Do not deduct for any chimney unless it exceeds 6 sq. ft.

WALLS: Find the square foot area of walls to be insulated and deduct the square foot area of all doors and windows, allowing 20 sq. ft. for each door and 12 sq. ft. for each window.

RAFTER INSULATION: If the headroom is sufficient, and if the customer intends to convert the attic space into additional rooms in the future, rafter insulation (including gables on gable roofs) is recommended.

CEILING INSULATION: This is recommended where the headroom is inadequate or where the house contains a sufficient number of rooms to make additional rooms in the attic unnecessary.

The difference in price between the two types of installations will vary as much as 54%. This is illustrated in examples 1 and 2.

Example I

Gable Roof Rafter Insulation	
Size—24′x28′ (with three 6′0″ Dormers) =	**672**
Pitch—½ (Pitch Factor) x	**1.42**
Roof Area	**954**
Dormers—Gable Type (½ Pitch) three 6′0″ wide @ 65 sq. ft. ea.	**195**
Gables—2-24′x12′÷2	**288**
	1437
Deduct Gable Windows, 2 @ 12 sq. ft.	**24**
Total sq. ft. Area	**1413**

Example II

Attic Ceiling Insulation	
Size—24 x 28 =	**672**
Deduct Stair Well—3′0″x9′0″ =	**27**
Total sq. ft. Area	**645**

WHEN ESTIMATING, ALWAYS FIGURE TO THE NEXT FULL CARTON.

Table 1

AVERAGE DORMER ROOF AND SIDEWALL AREAS

Includes Allowance for Waste and Openings

Width Lift Type	Roofing sq. ft.	Starter lin. ft.	Ridge lin. ft.	Flashing lin. ft.	Side Walls sq. ft.	No. Wds.
5′ 0″	79	6	----	40	88	1
6′ 0″	93	7	----	42	94	1
7′ 0″	106	8	----	44	100	1
8′ 0″	119	9	----	46	88	2
9′ 0″	132	10	----	48	94	2
10′ 0″	145	11	----	50	100	2
11′ 0″	159	12	----	52	106	2
12′ 0″	172	13	----	54	93	3
Gable Type						
5′ 0″	60	10	12	33	60	1
6′ 0″	72	10	12	35	70	1
7′ 0″	80	10	12	37	80	1
8′ 0″	86	10	12	39	70	2
9′ 0″	94	10	12	40	75	2
10′ 0″	100	10	12	42	85	2
11′ 0″	110	10	12	44	90	2
12′ 0″	120	10	12	46	80	3
Hip Type			**Ridge and Hips**			
5′ 0″	70	20	18	33	52	1
6′ 0″	85	22	19	35	58	1
7′ 0″	98	22	20	37	64	1
8′ 0″	104	24	21	39	52	2
9′ 0″	116	26	22	40	58	2
10′ 0″	128	28	23	42	64	2
11′ 0″	144	32	24	44	70	2
12′ 0″	160	32	25	46	57	3

*Any reference to base prices for material and labor of percentages added for labor profit, compensation insurance and sales commission, etc., are illustrative only and have been used in order to illustrate the method of estimating and are not intended to suggest in any way resale prices. All base prices for material and labor and percentages added for labor profit, compensation insurance and sales commission, etc., must be adjusted to meet your local conditions and the standards of your business practice.

Table 2

Type	Ful-Thik		Semi-Thik		1″ Blanket	Material Prices			*Labor Prices $1.00 per Hr. Plus 25%	
Sizes	15″ x 23″	15″ x 48″	15″ x 23″	15″ x 48″	15″ x 36′					
Batts per Carton	16	8	24	12	Rolls per Carton 2					
Net sq. ft.	38.4	40.0	57.6	60.0	90.0	Ful-Thik	Semi-Thik	Super-Blanket 1″	Ceilings and Floors	Studs and Rafters
Gross sq. ft.	40.0	42.6	60.0	64.0	96.0					
Sq. ft.	No. Cartons		No. Cartons							
20	½	½	½	½		$ 1.30	$ .88	$ .74	$ .32	$ .50
40	1	1	1	1		2.60	1.76	1.48	.64	1.00
60	1½	1½	1	1		3.90	2.64	2.22	.96	1.50
80	2	2	1½	1½		5.20	3.52	2.96	1.28	2.00
100	2½	2½	2	2		6.50	4.40	3.70	1.60	2.50
200	5	5	3½	3½		13.00	8.80	7.40	3.20	5.00
300	7½	7½	5	5		19.50	13.20	11.10	4.80	7.50
400	10	10	7	6½		26.00	17.60	14.80	6.40	10.00
500	12½	12½	8½	8		32.50	22.00	18.50	8.00	12.50
600	15	15	10	9½		39.00	26.40	22.20	9.60	15.00
700	17½	17½	11½	11		45.50	30.80	25.90	11.20	17.50
800	20	20	13	12½		52.00	35.20	29.60	12.80	20.00
900	22½	22½	15	14		58.50	39.60	33.30	14.40	22.50
1000	25	25	16½	16		65.00	44.00	37.00	16.00	25.00
1100	27½	27	18	17½		71.50	48.40	40.70	17.60	27.50
1200	30	29½	20	19		78.00	52.80	44.40	19.20	30.00
1300	32½	32	21½	20½		84.50	57.20	48.10	20.80	32.50
1400	35	34½	23	22		91.00	61.60	51.80	22.40	35.00
1500	37½	37	24½	23½		97.50	66.00	55.50	24.00	37.50
1600	40	39½	26½	25		104.00	70.40	59.20	25.60	40.00
1700	42½	42	28	26½		110.50	74.80	62.90	27.20	42.50
1800	45	44½	29½	28½		117.00	79.20	66.60	28.80	45.00
1900	47½	47	31	30		123.50	83.60	70.30	30.40	47.50
2000	50	49½	32½	31½		130.00	88.00	74.00	32.00	50.00

THIS old southern home in a critical housing area was useless in its previous condition but was altered inside as shown below.

Conversion Still an Important Source of War Housing

How Alabama gets four modern apartments out of unlivable mansion

HOUSING is still a critical need in many war production centers and conversions are an important source of additional units. For instance, in the Tennessee Valley section recently an old Southern mansion at Athens, Ala., contributed four modern apartments, two upstairs and two down. The work was done by W. Van Gilbert of Athens and designed by Albert R. Frahn, of Decatur, Ala., the architect.

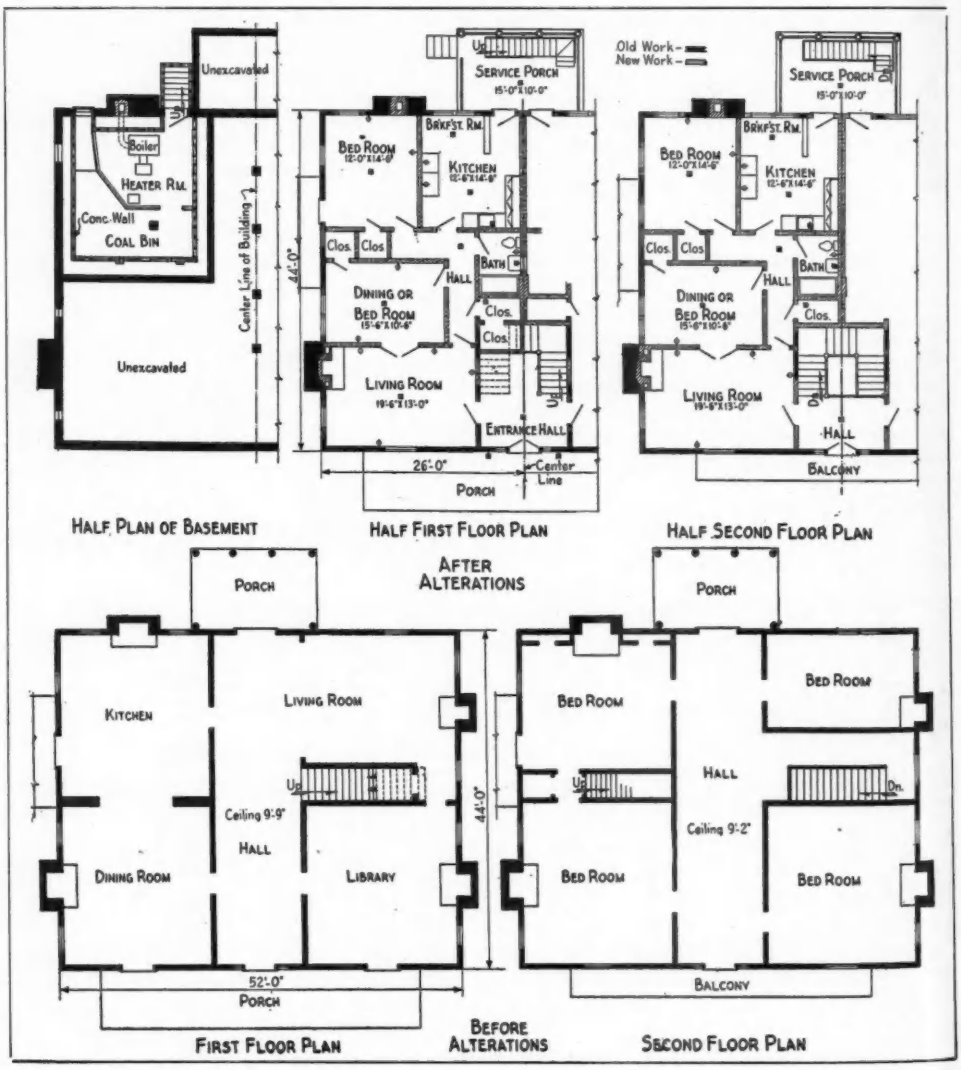
The old home, although erected about 100 years ago, still presented an attractive exterior with its iron grillwork and cupola and in its setting among giant oaks. But inside it was a barny affair in ill keeping with modern living standards as it had no bathrooms, no central heating plant and no closets or other built-in features. Its distinguishing feature was a wide hallway (really wasted space) extending down the center on each floor, flanked by unusually large rooms with high ceilings. The place had become all but unlivable and in fact had been occupied for a time by a funeral parlor.

Conversion of the building into the apartments was complete, no halfway measures being permitted. False ceilings were installed, 8½ feet high, this concealing the exposed wooden beams in some of the rooms. The existing ceiling was about 10 feet high. Oak floors were installed with inlaid linoleum in the kitchen and breakfast nook.

The exact squareness of the building permitted considerable uniformity in the arrangement of the four apartments. The chief problem was in the proper utilization of the large hallway space. A part of this near the front entrance was converted into a common entrance for all four apartments and the balance divided by a partition down the center and used for a closet, a bathroom and for part of the kitchen in either apartment. On the second floor much the same arrangement was utilized. Each apartment also has a back entrance.

The 4-room apartments are arranged so that the dining room may be utilized as a second bedroom if desired, as a breakfast nook is provided also. The tiled bath includes a shower and there are ample closets in each apartment.

Space was excavated for a basement and hot water heating system installed; also individual electric hot water heaters. The exterior character of the building was not changed except for repainting, so it in no way detracts from the neighborhood.



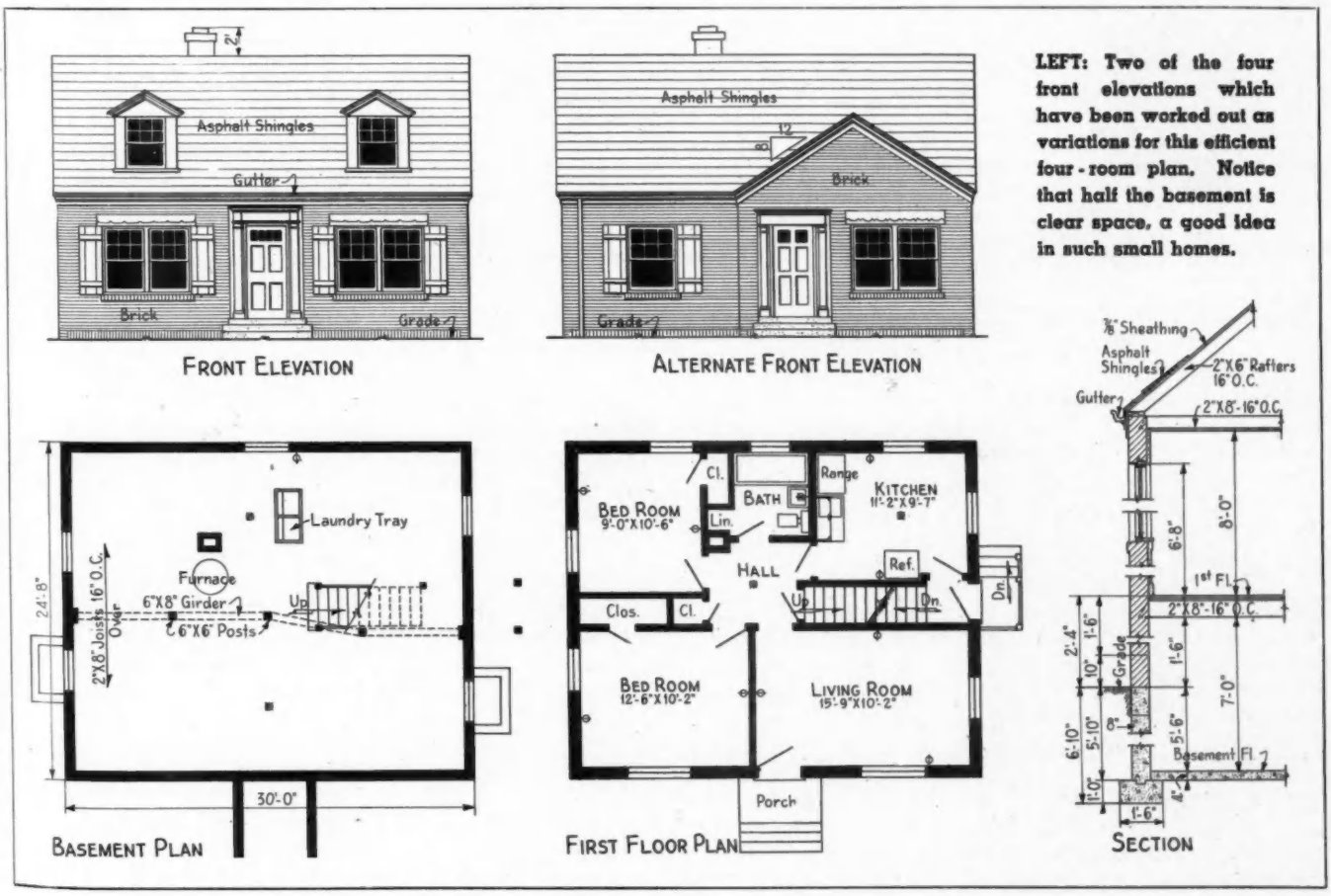
ON-THE-JOB view at Mills' Westbrook development of war housing near Chicago: workmen splicing wood gutters in the foreground.

Mills & Sons Rush Houses for Chicago War Workers

AS are other builders throughout the country, Mills and Sons are going ahead at a fast pace on this year's war housing after a delayed start due to extremely bad building weather. Their current operations in both their Westbrook and Ivanhoe projects near Chicago include solid masonry single-family units and duplexes. The lumber situation forced this change from last year's program of single-family frame construction.

The same high standards have been maintained, however, with well built four-room houses, nicely placed along the curved streets of their new Westbrook project. Rustic fence-enclosed plantings along the highway side of the site and plantings along the streets of houses completed last year now present an attractive community appearance. The houses themselves retain the floor area of approximately 720 square feet and were not increased to the new WPB maximum because, as in other high cost areas, increases in size are not economically possible under the Title I price ceiling and maximum rents allowed. However, the same type of house could be built two feet deeper without much change in plan. Space in the attic for an extra bedroom is left unfinished.

Changes in materials other than from frame to brick include 6 x 8 wood girders, wood sash instead of steel, redwood gutters replacing sheet metal, and wood cabinets substituting for steel.



LEFT: Two of the four front elevations which have been worked out as variations for this efficient four-room plan. Notice that half the basement is clear space, a good idea in such small homes.

Wire Post-War Homes For Service

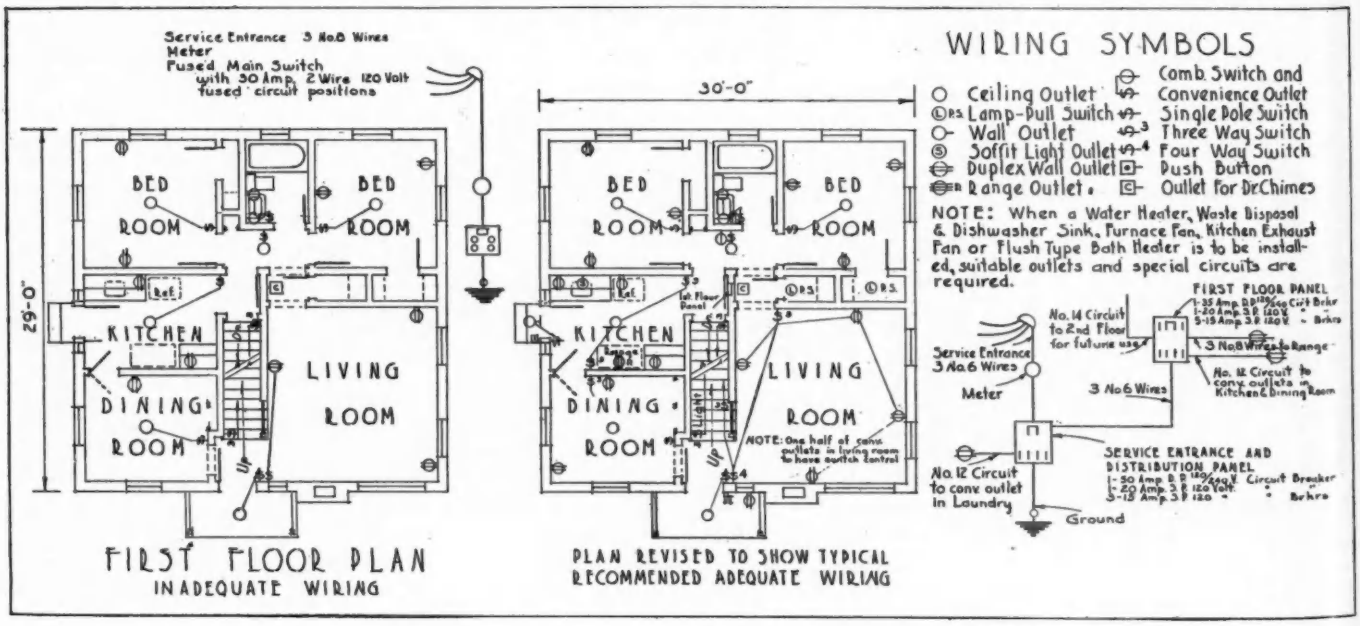
IF you have not already made a practice of installing three-wire 60 ampere service in your houses, it is because the war has interfered with progress. For if it had not been for the war the need for this minimum adequate wiring would have made itself apparent.

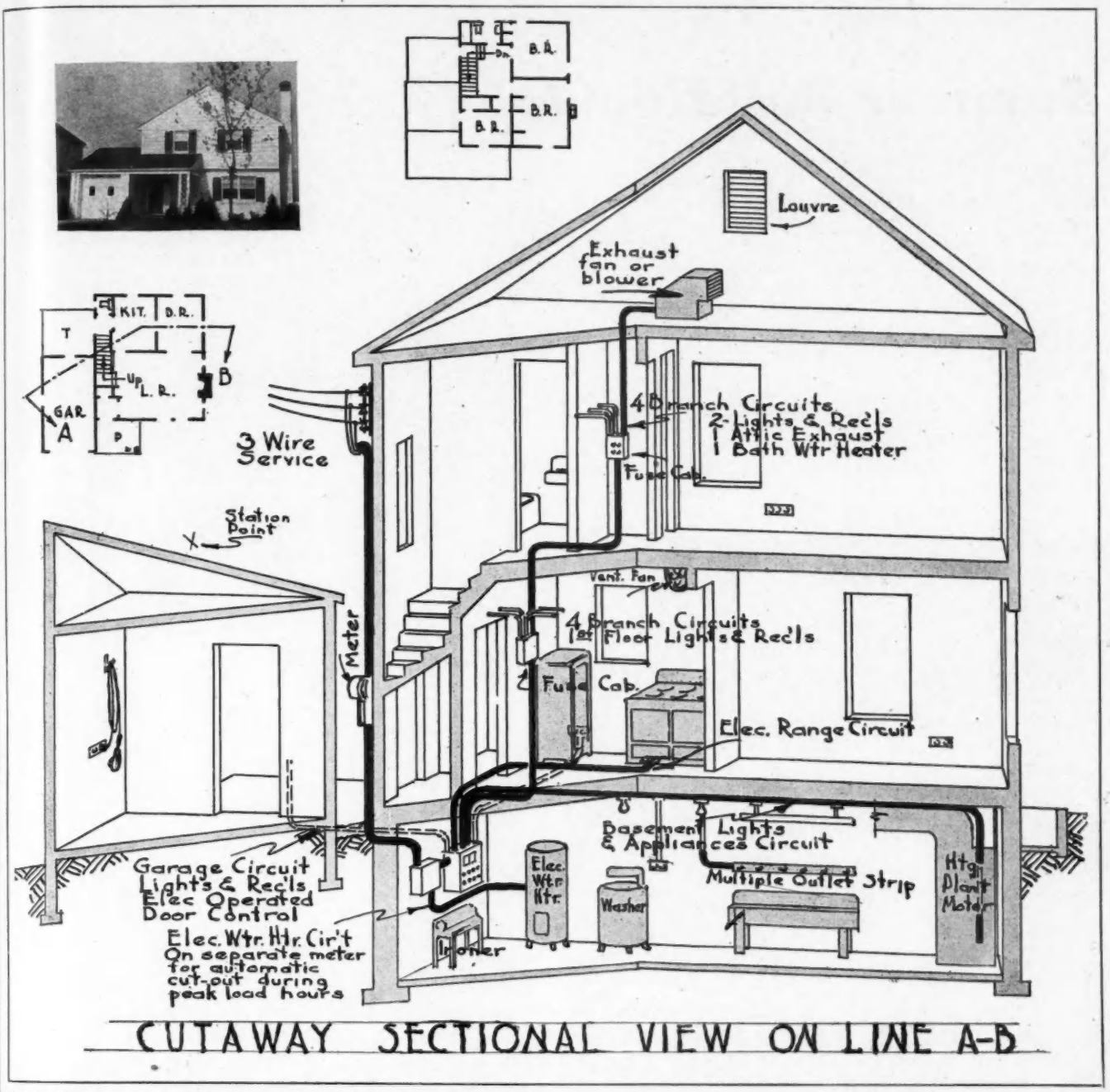
The post-war home itself sometimes seems to be almost as much of a dream as some of the designs put out for its future construction. But the house referred to in this article is the same house that was being built in 1940-42 before the building ban was put on; and the electrical equipment and wiring referred to is the same wiring that could have been or should have been used then.

Adequate wiring merely means wiring a house for service in such a way that the home owner is not limited in using the ordinary electrical appliances that are obtainable; it means building a house for service, and this service or comfort or convenience, or whatever it is called, is a strong selling point.

With electrical appliances more numerous and lighting levels higher, the subject concerned with what can be termed adequate wiring needs to be reviewed. In 1928

WIRING diagrams below show the relative difference between an adequately wired first floor and one inadequately wired.





SECTIONAL view above indicates the number of appliances that even a modest home will have after the war. The wiring of the various lighting and power circuits must be planned to take the load.

the average annual home consumption of electricity was about 460 kilowatt hours, but by 1939 it had reached 900 kilowatt hours and with the exception of wartime restrictions this electric load has continued to increase.

Attic ventilating fans and similar heavy equipment have become increasingly common; range loads, which once averaged 5,000 watts, today average closer to 10,000. Indirect floor lamps with 300-watt bulbs are more common; electric dryers are being used, and of course mangles, washing machines, garbage disposal units, coal stokers and oil burners are all found today in general use. In the kitchen of tomorrow the electric dishwasher will be even more common than it is today, room coolers will be usual and no house will be considered adequately wired unless provision is made for a range. It is estimated that the television sets that will be with us shortly after the war will call for 500 watts.

In simple language this will mean that three-wire 60 ampere service will be the minimum installation, for this service will provide for the usual 115 volt lighting and small appliance service, as well as the 230 volt service for range and motor loads.

That many houses are inadequately wired can be readily seen from the dimming of lamps when such appliances as refrigerators, electric irons, electric cookers are put into service. This dimming warns of a high cost of electricity. It is a sure sign of an inadequate or improperly designed wiring system. The slowed operation of irons, toasters and other current consumers results in their use long beyond the normal time, with a consequent dissipation of current due to heating in the wires, which merely means that the house owner is paying for the burning of electrical energy that never reaches his appliance. The general rule is, the larger the wire the less likelihood there is to be heating; the more current available the less likelihood there is to be a loss of current through heating. Overloading increases the cost of the electric bill.

In one St. Louis case study, it was shown that the difference between adequate and inadequate wiring costs

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Summer Building Jobs

SINCE people are taking their vacations at home this summer, it is an excellent time to sell your customers on the idea of making their own back yards, terraces and porches so comfortable and attractive that the usual summer trek to the woods and lakes will not be missed.

There is a plentiful supply of brick, concrete and many other materials, and following the suggestions on these two pages, there should be many jobs you can sell in creating or fixing up spots for outdoor living.

OUTSIDE DINING on a terrace of the more picturesque type, with bricks spaced so that grass grows between. Rustic outdoor furniture such as this can be easily made with materials available.

BRICK porch floors should be laid smooth and even so that furniture will be level. Notice brick walk, and portion of circular pool in lower part of the picture, which is faced with brick.

PRIVACY is assured with a screen of lattice lumber. Brick may be laid in a herringbone pattern, as above, to form a floor for an arbor-like terrace. Or fieldstone or flagstone are equally attractive.

SINCE there is no shortage of concrete, an already roofed-over porch or terrace can easily be turned into an outdoor living room, usable at almost any time, by first laying a concrete floor. The areas to be screened in a porch of this type are small. Lattice work at the outside corners, later covered with climbing vines, provides shade and decoration.

CONVERTING what might otherwise be wasted space at a side or back door entrance into an attractive patio-like area, is suggested above. There is an attractive brick floor, with brick steps to door.

GATE ARCHES, trellises and arbors beautify a property and contribute to the pleasure of outdoor living. The above design is sturdy, and once patterns are made it can be produced in quantity.

Largest Department Stores of Many Cities Promote Post-War Home Savings

I wish to become a member of The OWN-YOUR-OWN Home Club. The down payment I want to save is approximately $ 385.00

I intend to save the down payment in ☑ 1 year; ☐ 2 years. *(Please check one)*

I understand my payments will be $ 7.41 per week; $ ..... per month— *(Please fill in one)* in cash or War Savings Bonds.

Name Otis T. Hayflower

Street address 10247 Michigan Ave

City Chicago State Ill.

Employer's or business name Dobbe Dry Goods Store

Business address 11133 Michigan Ave

City Chicago State Ill.

THIS EASY REFERENCE CHART SHOWS HOW MUCH TO SAVE FOR THE DOWN PAYMENT ON YOUR NEW HOMASOTE HOME

No. of rooms	Total down payment needed	To save this amount in ONE year, you deposit MONTHLY or WEEKLY		To save this amount in TWO years, you deposit MONTHLY or WEEKLY	
3	$210	$17.50	4.04	$ 8.75	$2.02
3½	245	20.42	4.72	10.21	2.36
4	280	23.34	5.39	11.67	2.70
4½	315	26.25	6.06	13.13	3.03
5	350	29.17	6.74	14.59	3.37
5½	385	32.09	7.41	16.05	3.71
6	420	35.00	8.08	17.50	4.04

CARD reproduced above is being used by department stores in large cities to get prospects signed up on a savings plan that will enable them to have the down payment (and money for their furnishings) all saved up when home building resumes after the war. The chart shows customers exactly how much they must save.

"CAN the department store successfully merchandise housing?" is the question buzzing in many builders' minds.

"Can I order a new home along with the rugs and furniture, in the post-war era, and expect to move in with my family a week after the department store gets the order?" is the query customers are wondering about today.

The answer to both of these questions must be deferred until the war is over, but certainly the ground work is being laid through the promotion of "Own Your Own Home Clubs" in many of the largest department stores of the country where prefabricated houses have already been displayed.

Backing this move is the Homasote Company, Trenton, N. J., whose prefabricated home has already been displayed in model form in such stores as Carson Pirie Scott & Company of Chicago, R. H. Macy & Company, Inc., of New York City; G. Fox Company of Hartford, and Bamberger's of Newark. Thousands of people have flocked to these displays and put their names on the dotted line, signifying their interest in buying a new home and in obtaining further information on the plan.

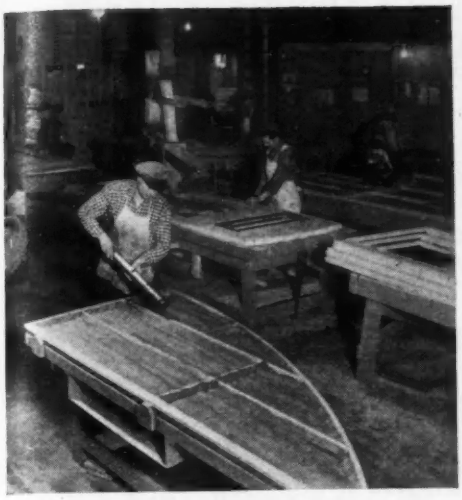
While apparently the department stores are not going to tackle the actual construction, they are planning the merchandising and the financing of these homes through the medium of getting people to join in saving money for the down payment.

It has been pointed out that 74 to 84 per cent of the people coming to these department store exhibits are interested in owning a home. Forty-six per cent own their own lot; 35 per cent own half an acre or more; 26 per cent have already saved their down payment; and 45 per cent need entirely new furnishings.

If the prospective customer has the money for the down payment he is given a priority number on joining the club. No interest is paid on the money saved until the down payment is complete. No strings attached, the money may be drawn out for any other purpose.

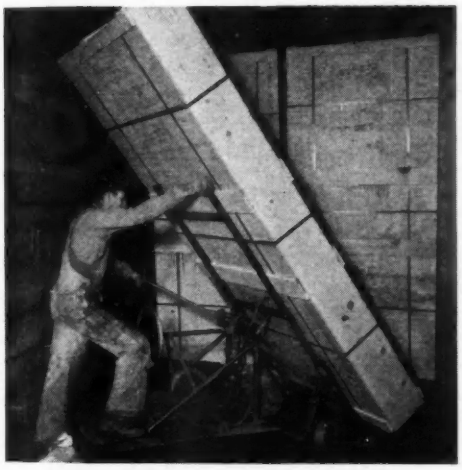
(Continued to page 88)

AT LEFT and below are views of the house model and crowds that have taken an eager interest in the Homasote prefabricated house wherever it has been shown. The model represents a house selling for approximately $4,600, but the plan is to build houses ranging from $1,800 to $40,000, and to include architect planned houses re-scaled to fit the prefab sections.



Worker above on production line is applying glue before nailing plywood over insulated prefabricated sections of U. S. Navy huts.

Labor-saving assembly tables, jigs and power equipment speed production of plywood end panels for Navy huts in West Coast plant. Plywood is glued and nailed to light frame of 1⅝" stock in converted millwork plant as seen in foreground of view above.



Handy power rigs load the boxed hut section in a box car with minimum effort. Five standard sections are crated, handled in one box.

Factory-built Navy hut 20 by 48 by 10 feet in size, of type shipped all over the world to house fighting forces. Exterior is of insulated sheets on a Stran-Steel frame; ends are of double plywood wall construction with insulation placed as in drawing below.

Steel and Plywood Huts House Fighters

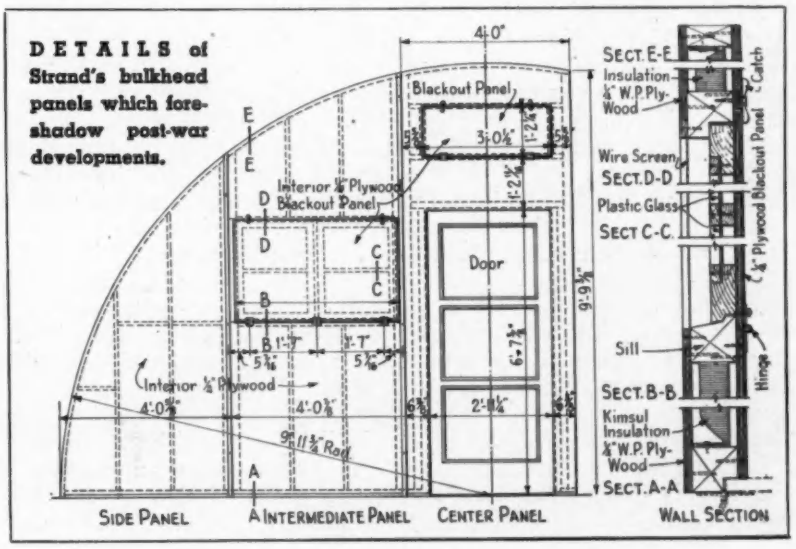
WHEREVER Uncle Sam's fighting forces go, snug and weather-tight shelter goes with them. Pictured above are shelter huts of insulated sheet steel and plywood; they are shipped knockdown, go right along with the troops, and are quickly set up when, where and as needed.

The production of these fighting buildings has proved to be big business and some of the best talent of the engineering and construction industry has been called upon to work out the details and deliver the units in an ever increasing stream.

These are curved roof structures, 20 feet wide, 10 feet high and 48 feet long. The roof covering is corrugated sheets, insulated, and applied in the field to an assembled frame of light steel ribs (Stran-Steel). A number of roof windows are inserted for light and air.

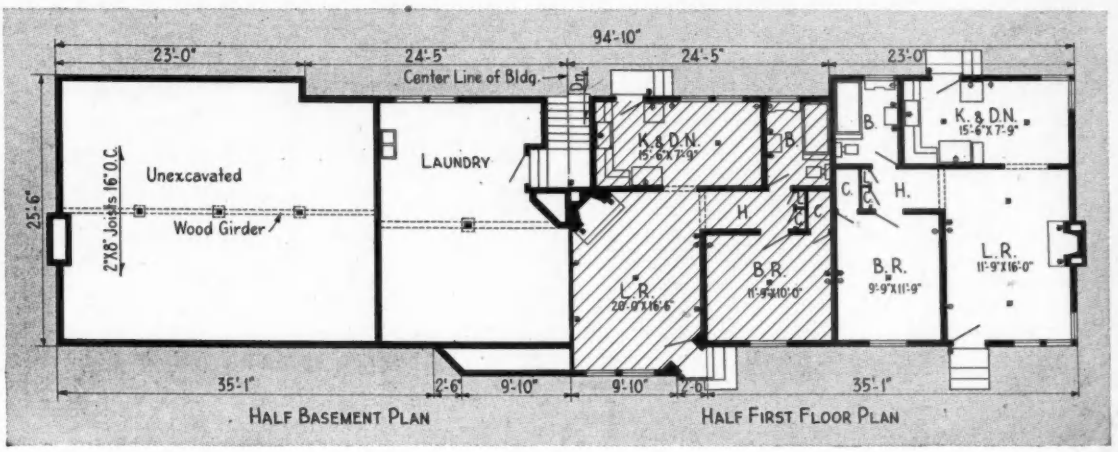
(Continued to page 91)

DETAILS of Strand's bulkhead panels which foreshadow post-war developments.



"Court King"

ONE of Sandberg's four-family rental units in Portland, Ore.; each apartment rents for $50 a month.



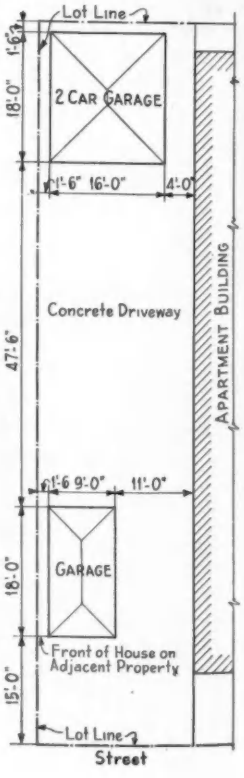
PLAN of this four-apartment row shows practical arrangement of rooms; note how offset of two center apartments breaks what would be an uninteresting elevation.

Edwin Sandberg of Portland, Ore., develops popular row unit design; foresees spread of bungalow courts

A STRONG trend to the homey, domestic type of multiple housing, as offered in the well-planned bungalow court, is seen by Edwin Sandberg, prominent Portland (Oregon) contractor and builder. Because of its popularity with renters and its low cost and rapidity of construction, he expects to see many more of these courts built in war industry areas, even under present restrictions. And for the post-war period he predicts that many good residential communities, that have previously barred all flats and apartments, will hang out the welcome sign for these good looking bungalow courts.

Sandberg's experience with this type of home building dates back more than a decade, and has included both brick and wood-sided structures. In size, they have run four-family, six-family and larger, up to 14-family size. Each family unit, however, is uniform in size and layout regardless of the number of units in the building; and the favored size is what is known as a 3½-room apartment. This is a one-bedroom unit consisting of living room, bedroom, bathroom, three closets and the kitchen with dining nook in connection—which is counted as the ½-room.

All rooms are bright, cheerful, well lighted—with all outside light, since the buildings are kept narrow. The 4-unit buildings are straight rectangles, and the larger groups are



THIS portion of the plot plan indicates how Sandberg places garages for three cars at rear of hundred-foot lot. Concrete drive also serves the rear entrance.

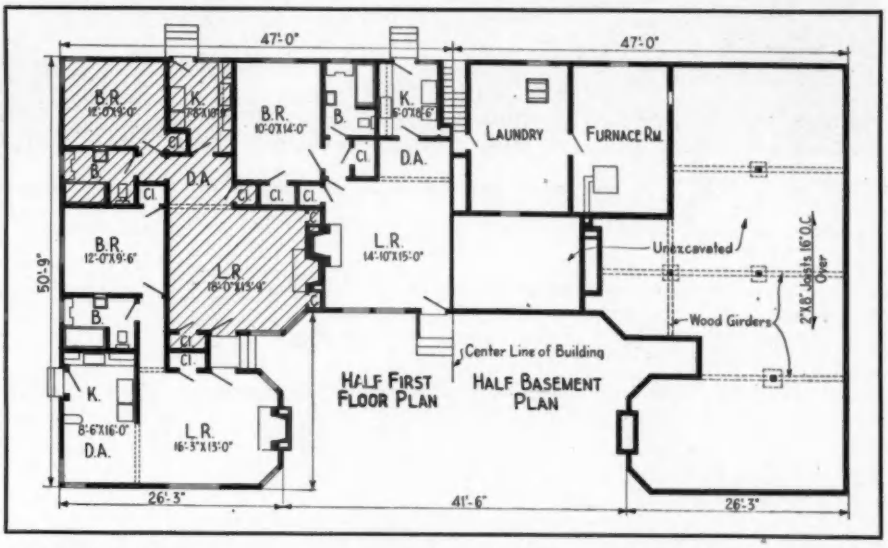
Builds for War Workers, Plans for Future

ANOTHER of Sandberg's one-story apartment courts, this one containing six units of 3½-room size, found particularly adaptable to the rental market on the West Coast.

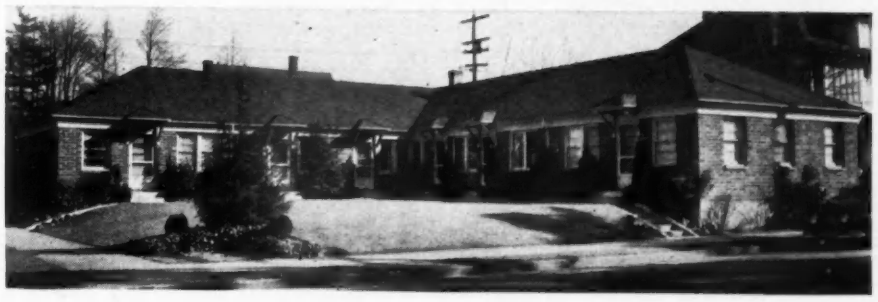
laid out in L-form, U-shape or, for the 14-unit courts, E-shape. In this way, all apartments are equally desirable. The partitions separating the family units are sound-insulated.

Under present rental conditions in Portland these 3½-room units are snapped up quickly at $50.00 per month, heated. Each family unit in these court apartments has its own exclusive front entrance and back dor. Access to the basement spaces is, however, in common and the basement laundry facilities are shared by the tenants. A commodious storage locker-room is provided for each family unit. Heating is from a central basement gas-burning air conditioner, thermostaticly controlled. A wood-burning fireplace in each living room is a popular feature and saves quite a little general heating expense.

Sandberg has found that his apartment courts are quickly salable on completion; and he has passed most of his production along to private buyers to operate. However, the ownership of some he has retained, and is leasing and managing them himself. He wants to experience both the builder's and the owner-operator's side of this rental court business. He reports that he is finding them both mighty interesting from the profit angle.



PLAN of six-apartment group above is designed to fit on a 60 by 100-foot lot. Laundry and furnace room facilities are in portion of basement shown in the half-plan.

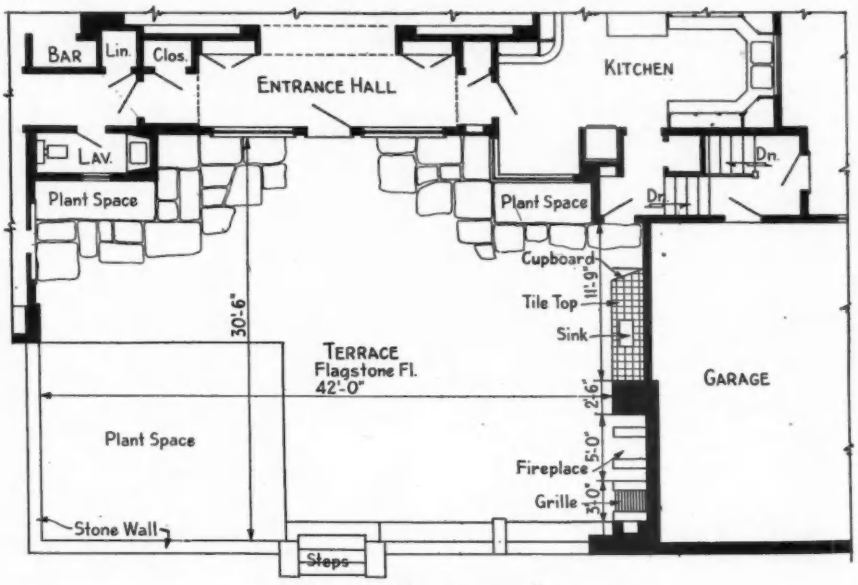


TWO additional variations in arrangement of 3½-room units into various shapes of bungalow courts. The lower seven-apartment one is an L-type plan, while the upper one has extensions from the end units to give a more enclosed court. This layout is particularly effective with proper landscaping used on a 135 by 100-foot corner lot.

How to Build Grilles and Fireplaces for

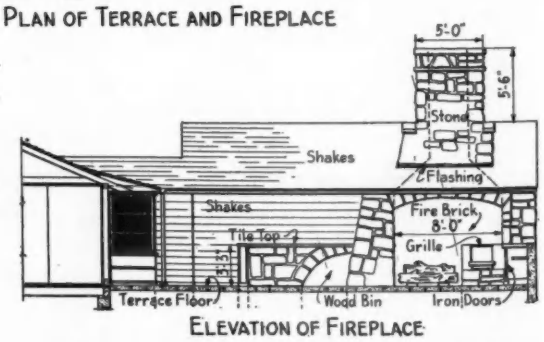
OUTDOOR FIREPLACE and grille are features of entrance yard in W. F. Coleman's Seattle home. William Bain, architect.

THIS IS the peak of the outdoor season, and in this war year the back yard will, to a large extent, be the nation's playground. Even if meat is scarce, what is available cooked over an outdoor fireplace always seems to taste better than kitchen cooking. So the chances are that your customers will be looking for ideas on how to get an outdoor fireplace or grille around which the family can gather. On these pages are examples of both simple and more elaborate designs; many variations can be worked out according to what is desired. Fortunately not much critical material is required, and in many cases grates, dampers, etc., are still available from manufacturers' and dealers' stocks.



PLAN OF TERRACE AND FIREPLACE

ON this page is shown an attractive entrance court which features a combination outdoor fireplace and grille with built-in sink and cupboards under a canopy, formed by a projection of the garage roof. It is part of the home of W. F. (Bill) Coleman, *American Builder's* West Coast advertising representative, built near Seattle, across Lake Washington. Rustic benches and table are a useful and attractive addition to the flagstone-paved terrace, and as well as for cooking outdoor meals, the fireplace adds a cheery note on chilly evenings. The only critical materials needed are a metal grille and hardware. Wood doors can be substituted for those in iron; scrap metal can usually be found for the cooking grate, and even the sink might be a flat-rimmed second-hand one set into the tile top work counter.

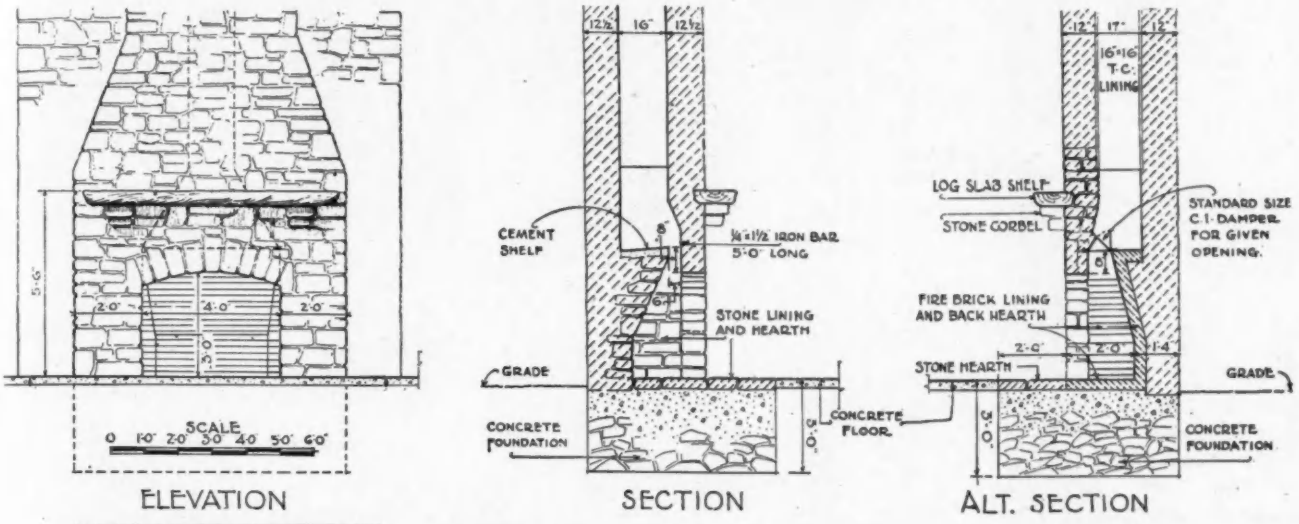


ELEVATION OF FIREPLACE

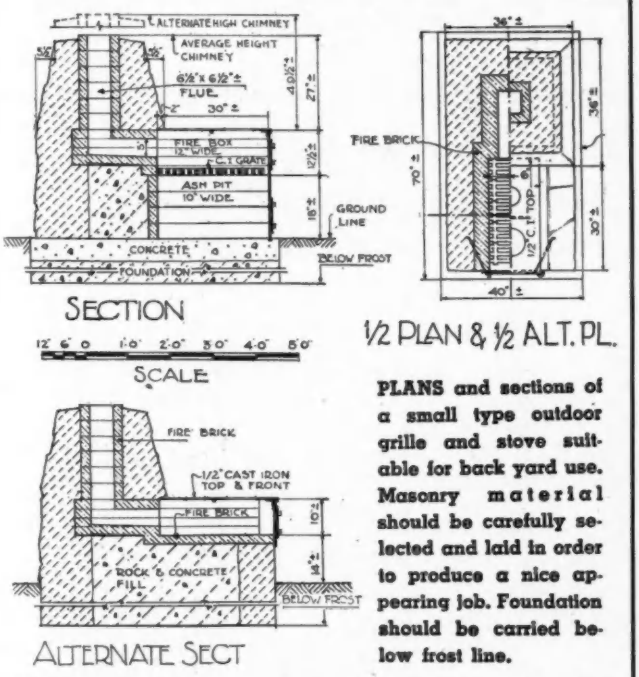
ABOVE: Plan of the entrance portion of the Coleman home showing the relation of kitchen and garage to outdoor fireplace. Elevation indicates other details.

"Stay-at-Home" Vacationers

Back Yards Have Become This Summer's Play Spots



PLAN, elevation and two sections of an outdoor fireplace suitable for building within a shelter. Important in such a project is getting the proper design to eliminate any smoking. Sections show dimensions and construction to get proper draft; the back of the fireplace should slope forward to the rear of the throat, as shown. Maximum heat can be radiated by splaying the sides. Sections show construction either with or without damper. Horizontal net sectional area of the flue should be about 1/12 to1/10 of the area of the fireplace opening. If the fireplace is abnormally high, then the area should be increased, and may be as much as ⅛ of the fireplace opening.



PLANS and sections of a small type outdoor grille and stove suitable for back yard use. Masonry material should be carefully selected and laid in order to produce a nice appearing job. Foundation should be carried below frost line.

TO meet minimum requirements for back yard cooking, a grille such as shown above will suffice. The alternate section saves materials by eliminating grate. To be avoided in building such projects are excessive size of fire-box; incorrect construction in attaching bars and top plates to masonry without making provision for expansion; spacing of bars in top grate too far apart; making stone masonry walls too thick; lack of adequate flat wall space on which to set utensils.

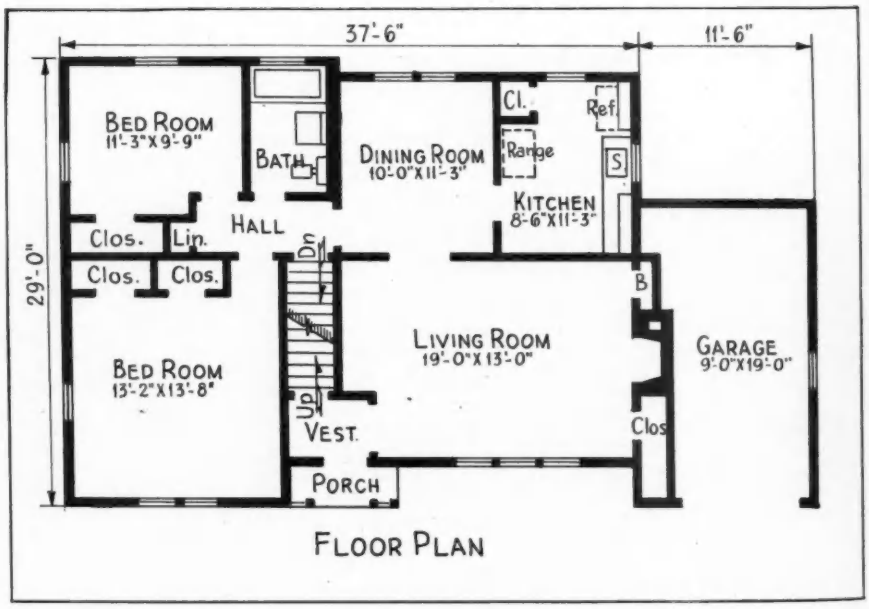
THE de luxe version of outdoor cookery is the use of a combination vertical firebed barbecue, as shown above. Also provided in this design is a horizontal frying plate (interchangeable with barbecue grille) and a fireplace below; other features, warming oven, fuel bin, cupboards. Design from Allen Selby Associates, Chicago.

THIS six-room home built by L. Roberts Maxwell's Country Homes, Inc., from plans and specifications by Mott Brothers, Inc. Exterior is impressive, plan is livable, efficient.

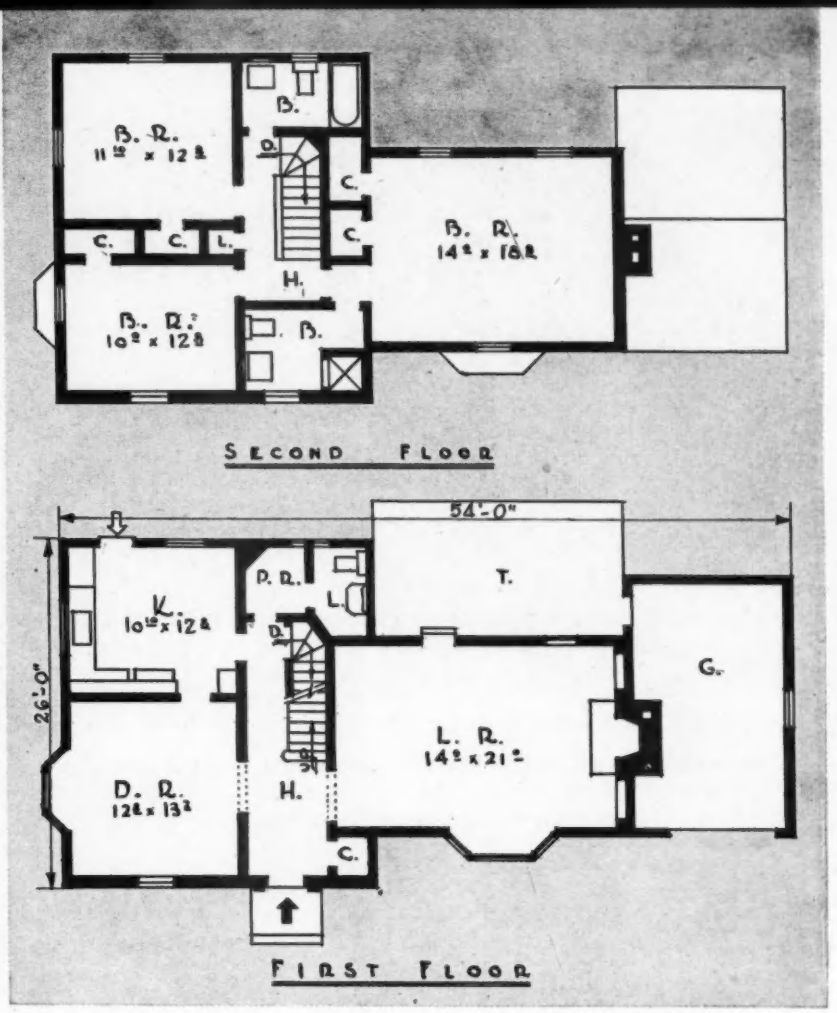
Two Popular Styles from the East for the Post-War Market

Present prospects are that home market after the war will be particularly bright for better middle-bracket homes like these shown; expect some V-day surpluses in lower-priced houses.

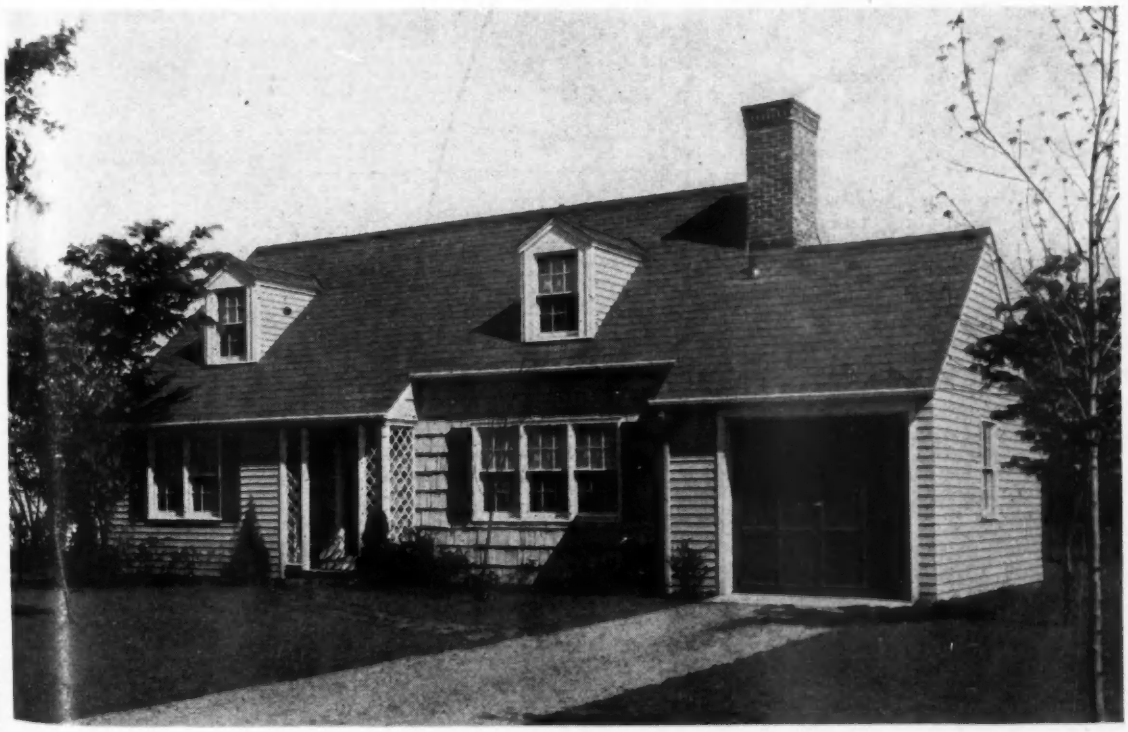
MEN who know the building market agree that adaptations of the Cape Cod style of design for five- and six-room one-story houses will continue to be popular in the post-war market. An appealing home of this type is shown in the plan and exterior at the right. One of the last on Long Island to be completed just before the war, it presents an arrangement that allows exterior variation to eliminate a standardized appearance while staying within the bounds of economy of construction. Like other homes built in Old Hills development, proper landscaping of the 7800 square foot plot has added charm to the exterior.



FLOOR PLAN



IN the two-story standard six-room type of house, Mott Brothers, Inc., New York, have worked out many attractive designs that offer strong customer appeal at reasonable cost. In the above home, built from their plans in Country Homes, Tenafly, N. J., there are many points which should make it popular for some time to come. In plan, the center hall provides good circulation to all first floor rooms, including the handy powder room and lavatory at the rear. The terrace fits nicely into the plan with handy garage storage.



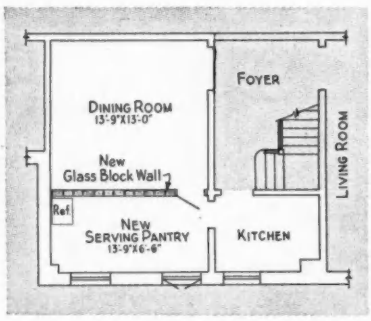
DESIGNED by Architect Theodore W. Davis, a recognized authority on small house design, this Port Washington, L.I., home has a compact floor plan within its attractive and unusual exterior.

More Practical Job Helps on War Building

How-to-do-it answers to today's problems of conversion and repair

How to Make Two Rooms Out of One with Glass Block

THE ingenious use of a wall-high glass block partition in a New York apartment hotel, as illustrated here, suggests similar jobs when converting for additional rooms. Here a new serving pantry was created to give more space for kitchen purposes. Advantages of such glass block screens are: non-critical nature of the material which is easily erected; transmission of light; decorative appearance which looks permanent, not makeshift; complete salvage if removed.



PLAN showing glass wall.

LEFT: Dining room side of new wall is lighted from windows in new serving pantry, but food preparation cannot be seen.

How to Estimate, Select for Concrete

WITH the help of the two tables given here, the builder can quickly select the proper concrete mix for the particular wartime job he is doing and calculate the required amount of material. The table right gives recommended quantities of water for different classes of work and suggests proportions of portland cement to fine and coarse aggregate to use in trial batches. It may be necessary to vary the proportions of fine and coarse aggregates slightly from those given to obtain a smooth, plastic, workable mix. The amount of water should not be varied from the quantities shown. If the trial proportion used results in a mix that is too wet, fine and coarse aggregates in small amounts should be added until the right degree of plasticity is obtained. Table below indicates the number of sacks of portland cement, cu. ft. of fine aggregate and cu. ft. of coarse aggregate required to produce 1 cu. yd., or 27 cu. ft. of mixed concrete for the different suggested trial mixes.

How to Estimate Materials Required for 100 Sq. Ft. of Concrete of Various Thicknesses

Thickness of concrete, in.	Amount of concrete, cu. yd.	Proportions 1:1¼:2 mix			1:2¼:3 mix			1:2¾:4 mix		
		Cement, sacks	Aggregate		Cement, sacks	Aggregate		Cement, sacks	Aggregate	
			Fine, cu.ft.	Coarse, cu. ft.		Fine, cu.ft.	Coarse, cu. ft.		Fine, cu.ft.	Coarse, cu. ft.
3	0.92	7.5	12.9	14.7	5.8	12.9	17.5	4.6	12.9	18.4
4	1.24	10.0	17.3	19.9	7.8	17.3	23.6	6.2	17.3	24.8
5	1.56	12.5	21.9	25.0	9.8	21.7	29.6	7.8	21.8	31.2
6	1.85	15.0	25.8	29.4	11.5	26.0	35.2	9.3	26.0	37.0
8	2.46	20.0	34.6	39.8	15.4	34.4	46.8	12.3	34.4	49.3
10	3.08	25.0	43.8	50.0	19.3	43.2	58.5	15.4	43.2	61.6
12	3.70	30.0	51.6	58.8	23.1	51.8	70.4	18.5	51.8	74.0

How to Select Proper Mix

Recommended proportions of water to cement and suggested trial mixes

KINDS OF WORK	Add U. S. gal. of water to each sack batch if sand is			Suggested mixture for trial batch			Materials per cu.yd. of concrete*		
	Very wet	Wet (average sand)	Damp	Cement, sacks	Aggregates		Cement, sacks	Aggregates	
					Fine, cu.ft.	Coarse cu.ft.		Fine, cu.ft.	Coarse cu.ft.
5-Gal. Paste for Concrete Subjected to Severe Wear, Weather or Weak Acid and Alkali Solutions									
One-course industrial, creamery and dairy plant floors, etc.	3¾	4	4½	1	1¼	2	8	14	16
5-Gal. Paste for Concrete to be Watertight or Subjected to Moderate Wear and Weather									
Watertight floors, such as industrial plant, basement, dairy barn; watertight foundations; driveways, walks, tennis courts, swimming and wading pools, septic tanks, storage tanks, structural beams, columns, slabs, residence floors, etc.	4¼	5	5½	1	2¼	3	6¼	14	19
7-Gal. Paste for Concrete not Subjected to Wear, Weather or Water									
Foundation walls, footings, mass concrete, etc.	4¾	5½	6¼	1	2¾	4	5	14	20

*Quantities are estimated on wet aggregates using suggested trial mixes and medium consistencies—quantities will vary according to the grading of aggregate and the workability desired.

It may be necessary to use a richer paste than is shown in the table because the concrete may be subjected to more severe conditions than are usual for a structure of the type being constructed. For example, a swimming pool ordinarily is made with a 6-gal. paste. However, the pool may be built in a place where soil water is strongly alkaline, in which case a 5-gal. paste is required.

How to Finish Exterior Walls with Non-Critical Gypsum Board

FOR structural and weather protection requirements of such war buildings as warehouses, repair shops, recreation centers and barracks, a White Rock Gypsum wallboard is available. This material comes one inch thick, of two laminated plies, finished either with mineral surface or smooth roll roofing. It is shiplapped on the long edges of all sizes, 2 x 8, 2 x 9, 2 x 10 feet.

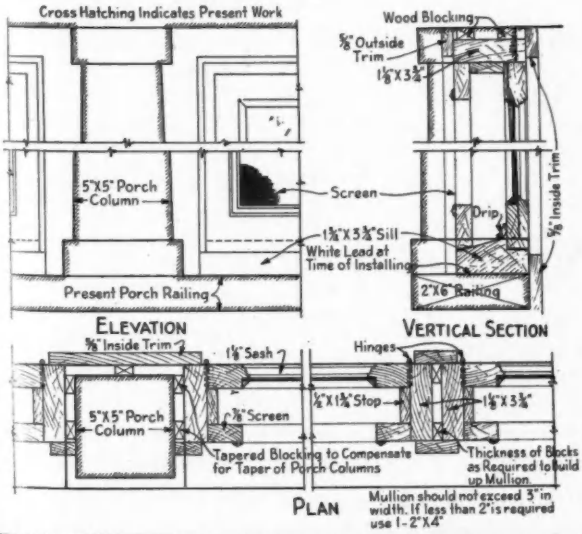
SHOWN at the right, workman is caulking joints with gun as mineral surfaced gypsum board siding is applied.

How to Remove Oil from Concrete Floors

WITH many old buildings being put back into service these days, it is frequently necessary to clean concrete floors in home basements or factories in preparation for painting or resurfacing. Use of an inflammable solvent. such as benzine or gasoline, is seldom desirable, even if available. Better procedure is to use a dry absorbent such as dry portland cement, or hydrated lime; spread over the oiled spots, these will be absorbed after several days. If stain is persistent, a solution of trisodium phosphate mixed four ounces to a gallon of hot water, with four ounces of washing soda added to this, can be used for washing down the concrete. This is followed by flushing with clear water to remove all the solvent solution.

How to Enclose an Open Porch to Provide a Year 'Round Room

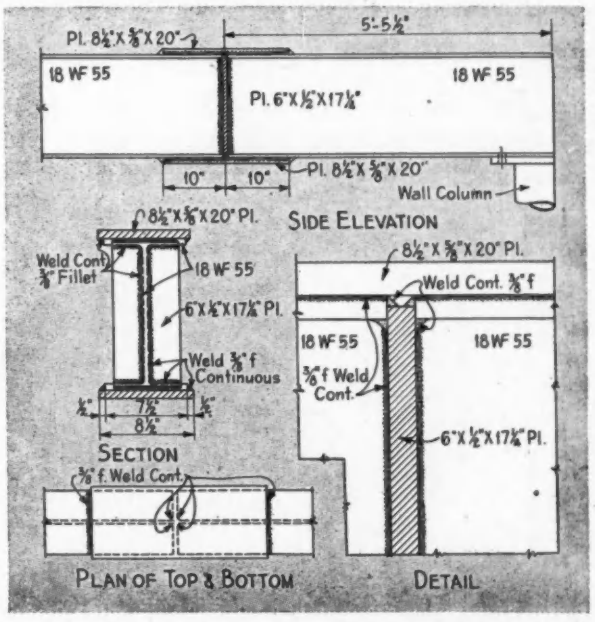
WITH residential space at a premium, many people are turning to builders to enclose old fashioned, open porches and add a room to the house. Detailed below is one way of building in sash and screen between columns of such a porch. Hinged sash are indicated, but some of these could be fixed with just enough movable sash for ventilation.



How to Splice 18" Beams by Welding

HERE is how some of the short pieces of 18" beams which were on hand were used with the aid of a quick and economical manner of splicing them together to meet the requirements on a building job. Mr. Fred Horowitz, welding operator at the County Iron Works plant, Port Chester, N. Y., submitted a detail (below) of the welded splice and received the architect's approval to proceed at once.

In comparison with riveting, this work was done at a surprisingly low cost and the architect was very much pleased at the neat and finished appearance of the work. No after treatment was necessary.



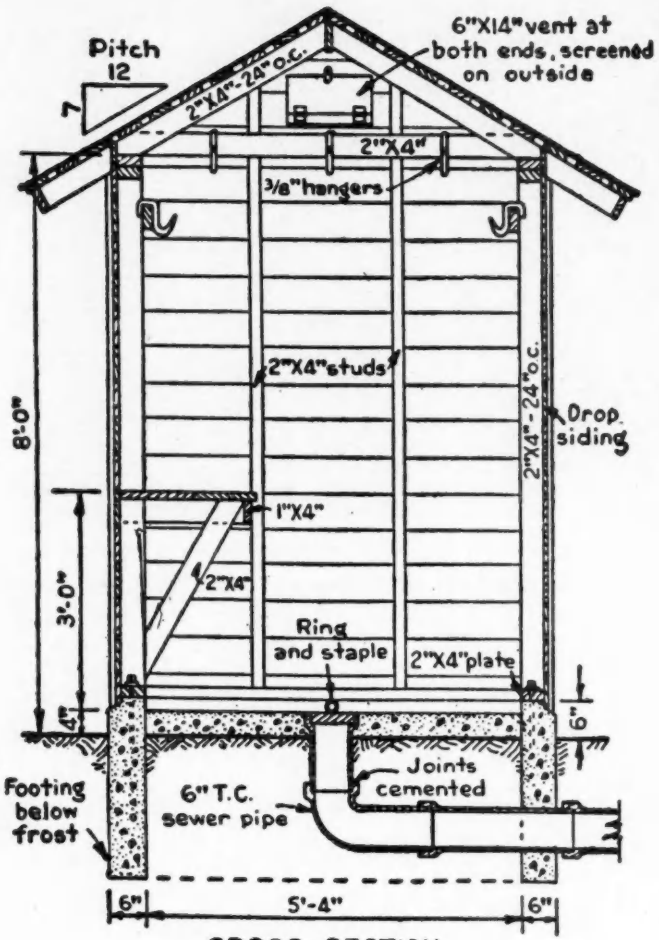
Comparison of Costs: Job consists of splicing 18 WF 55 Girders

*Riveted Splice		Welded Splice	
Material, inc. 60 Rivets	$ 7.00	Material	$3.50
		Rods	.50
Labor	23.00	Labor	5.00
Total	$30.00	Total	$9.00

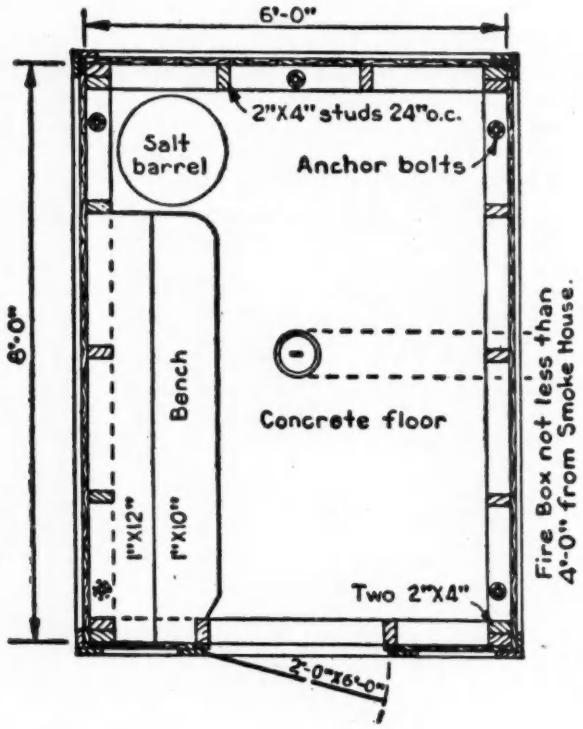
***The previous method used for splicing which required punching each member.**

The above splices were made using a 300 Ampere Hobart Welder and 3/16" Coated Electrodes.

How to Build a Farm Smokehouse



CROSS SECTION

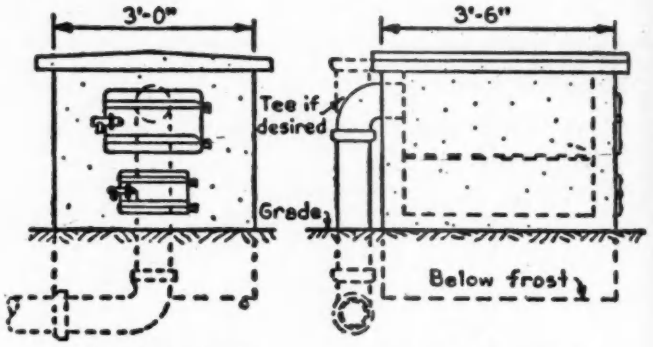


Above are diagrams showing details of a smokehouse, a valuable feature on any farm. In some instances substitutions for the metal needed have been suggested in the bill of materials accompanying diagrams, in other cases builder will have to rely on his ingenuity.

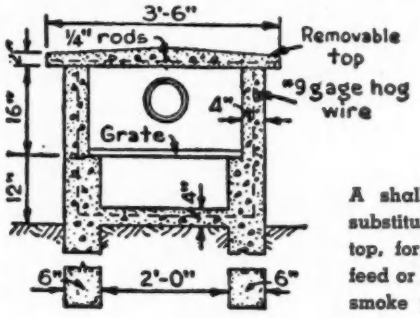
IMPORTANT to any farm is a smokehouse. With an outside firebox, frame construction may be used in this smokehouse without fire hazard. A pipe leads the smoke from the firebox to an opening in the center of the floor, and ventilating flaps in each gable may be opened or closed depending upon the direction of the wind. The meat is hung from beams spaced so the pieces will not touch.

Tight construction is necessary since temperature is controlled by the gable vent. Sometimes it is necessary to kindle a vapor fire in the building to start the draft so that smoke will be drawn through the pipe.

The outside stove will have a wider use if a hole large enough for a big kettle is left in the top slab, or if a metal vat is used in place of the slab. If used for some other purpose than smoking meat an auxiliary smoke pipe may be added and a damper provided to keep the smoke from entering the house.



FRONT ELEVATION SIDE ELEVATION



A shallow vat could be substituted for the concrete top, for heating water for feed or butchering. Provide smoke pipe and T.C. tee.

SECTION

BILL OF MATERIALS

(Note: Substitues may have to be used for some metal items.)

CONCRETE MIX 1:3:5

7 bags cement ¾" cu. yds. sand ¼" cu. yds. gravel

LUMBER

21-2" x 4" x 8'-0"	13-2" x 4" x 10'-0"	1-2" x 4" x 12'-0"
2-2" x 4" x 14'-0"	4-1" x 3" x 8'-0"	26-1" x 4" x 8'-0"
2-1" x 4" x 10'-0"	3-1" x 4" x 16'-0"	9-1" x 6" x 10'-0"
1-1" x 10" x 6'-0"	1-1" x 12" x 6'-0"	

270-ft. BM 6" drop siding 1100-shingles

MISCELLANEOUS

3-lin. ft. galv. wire screen 10" wide for vents

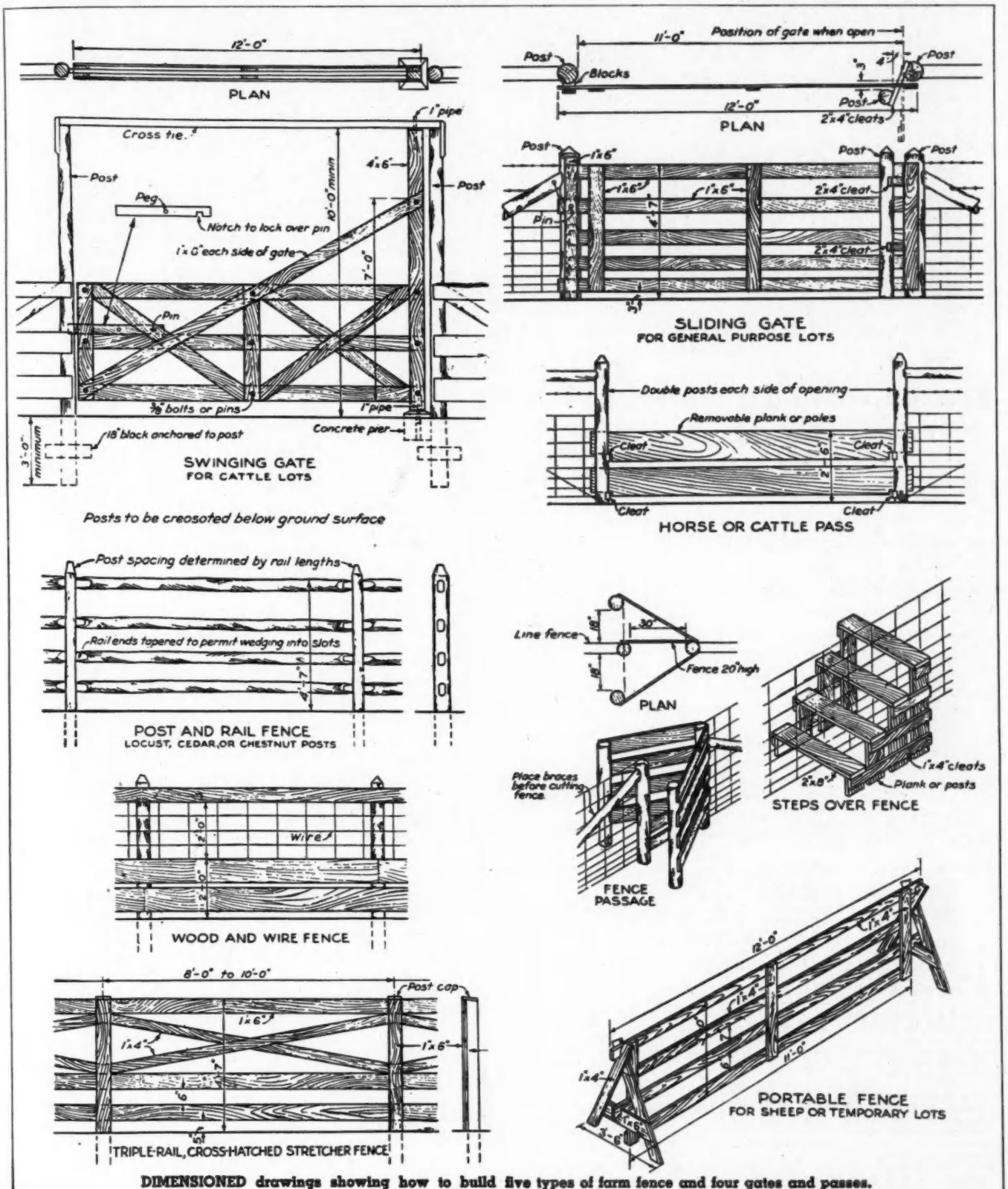
(Continued to page 79)

THE AUGUST issue of AMERICAN BUILDER will feature a special section on farm buildings

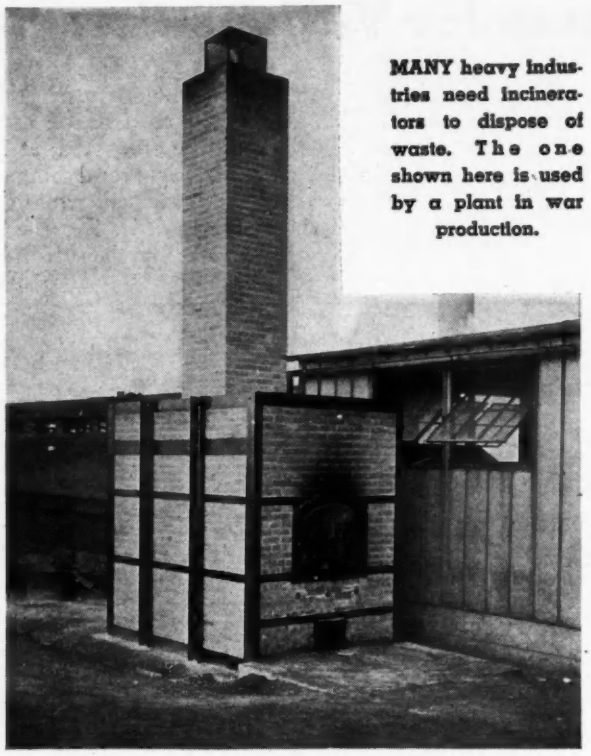
How to Build Farm Fences for Various Uses

ON this page are details on how to build several types of farm fences and gates using a minimum of metals; these plans were prepared by the Department of Agriculture to meet the war-created shortage. Lumber materials for some of these can be prepared in off-seasons on the farm where they are to be used.

Variations can be worked out to fit local requirements, but more durable kinds of wood should be used if long service is expected. This is particularly true of certain species of fence post which should be creosoted, at least the portion to go in the ground. Field and boundary fences of sawed lumber can be whitewashed, while those enclosing the domestic area can be painted. For the split rail fence, now popular, concrete posts may be substituted.



DIMENSIONED drawings showing how to build five types of farm fence and four gates and passes.



MANY heavy industries need incinerators to dispose of waste. The one shown here is used by a plant in war production.

You Can Build Incinerators for Apartment, Commercial and Industrial Use

Materials are available—here's how to figure various capacities

INCINERATORS offer an opportunity to the war-bogged mason contractor, because they are one of the few structural units for which metal parts may be secured—also because there is widespread need for better disposal of wastes to maintain health.

Two mistaken ideas have restricted the sales and construction of incinerators. One is that the field is chiefly residential; the other is that unless an incinerator was included when the building was built, it is practically impossible to provide incineration.

Hundreds of business concerns, from the small corner store to the huge war plant, need incineration to solve their disposal problems. It is easy to provide an incinerator for most buildings that have none, if you adjust yourself and your customer to the idea of outdoor operation.

This may mean utilizing an existing stack by adding a flue. It may mean, in rare cases, utilizing an unused flue. Quite frequently it calls for a separate stack.

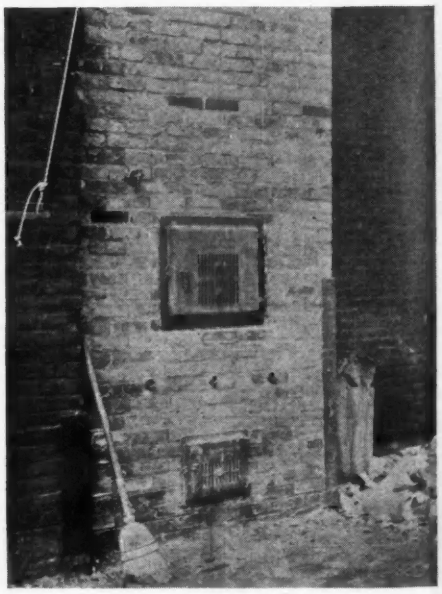
The size of an incinerator depends on the anticipated quantity of refuse, as well as the speed of burning. Dry rubbish burns faster and gives greater capacity with smaller dimensions than in the case where moist garbage is the principal refuse, since the latter must dry somewhat before it ignites.

The sectional capacity of the firing chamber must be determined with reference to the steel frame that carries the grate bearings. These frames rest upon a course of masonry, giving the grates uniform support of a whole section of the structure. In size, they vary from about 18" by 18" for a small residence to approximately 48" by 30" for large commercial or apartment use. Still larger sizes are used in factories chiefly.

Where the residence type incinerator is fed through a hopper door in the stack, the commercial or factory type is fed through the fire door, dispensing with the hopper door.

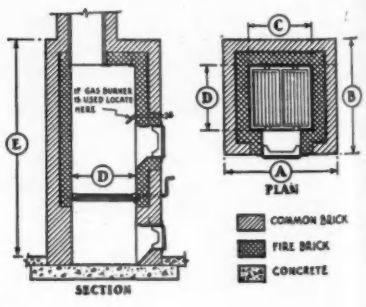
Designs indicate a masonry structure that offers few complications to the experienced mason. Points to bear in mind are that the grates should be substantial and preferably of a type that can be removed and replaced through a fire door of suitable size. This means free bearings supporting the axis of the grates. The steel bearing support, mentioned above, is so provided. Advantage of easy removal will be appreciated when it is necessary to repair or replace a grate.

Due attention must be paid to local regulations with regard to chimney height, also that the foundation is adequate for the weight and meets climatic conditions. The section shown is a guide for interior construction where there is no frost problem.

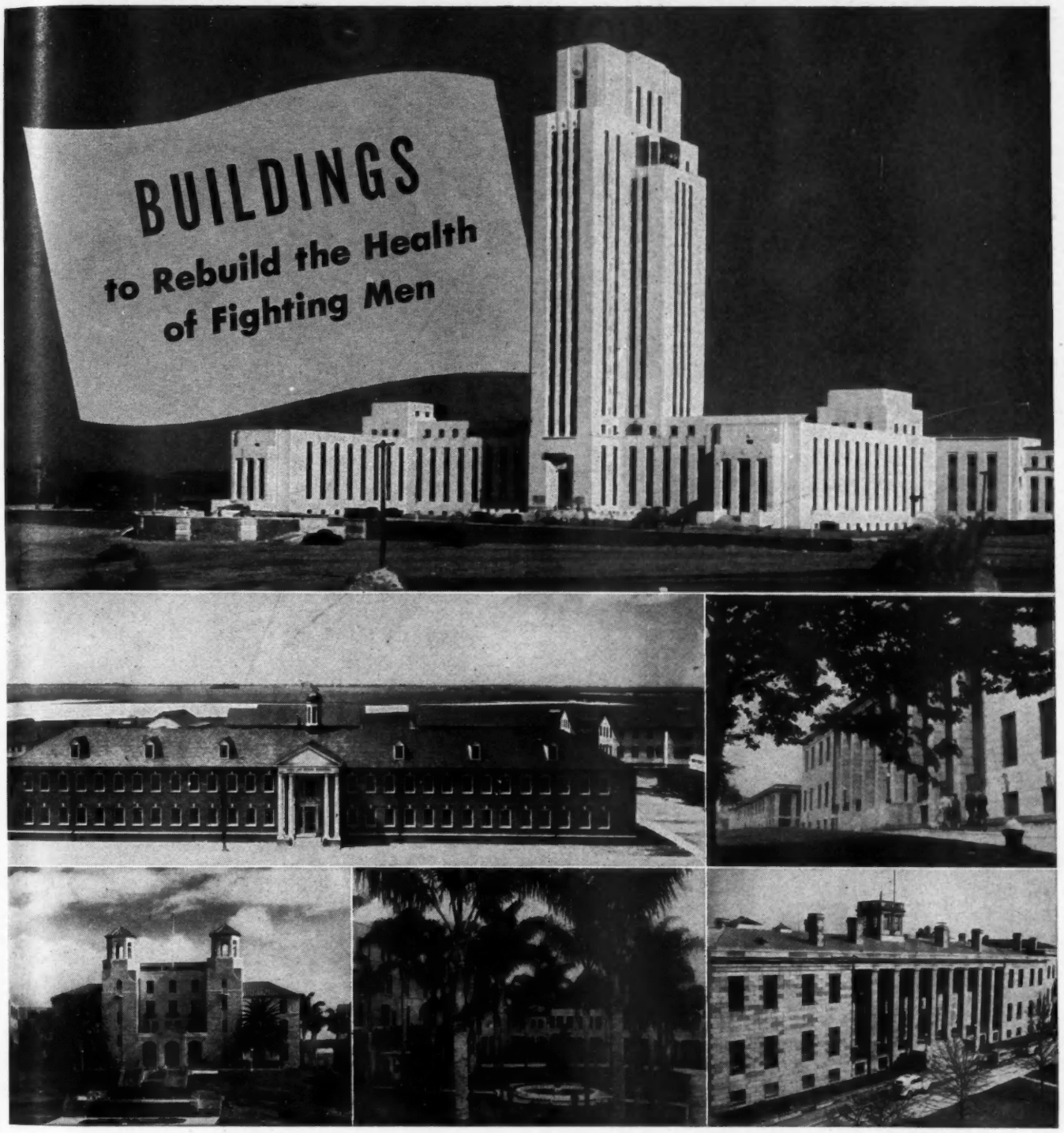


THIS incinerator built in an alley serves a row of stores and a number of apartments that are located on the floors above them.

Recommended Use	INCINERATOR DIMENSIONS Outside Dimensions of Brickwork A	B	Inside of Combustion Chamber C	D	Height Outside E	Minimum Inside Size of Flue to Use	BRICK REQUIRED TO BUILD (Includ. 5% Allowance for Waste) Based on Wall Thickness	Height	Common Brick	Fire Brick
Res. 5 to 7 Rooms	38½"	36½"	18½"	18½"	6'6" to 7'2"	11¼ x 11¼"	9"	7'0"	550	340
Res. 5 to 10 Rooms	40¾"	41"	22¾"	23"	6'6" to 7'8"	11¼ x 11¼"	9"	7'0"	675	390
Res. 8 to 14 Rooms Apts. to 18 Rooms	52¾"	36½"	34¾"	18½"	6'6" to 7'6"	11¼ x 11¼" If 2 Fls. 15¾ x 15¾"	9"	7'0"	765	430
Large Residences Apts. 18 to 40 Rms.	50¼"	48¼"	32¼"	30¼"	6'6" to 8'2"	15¾ x 15¾"	9"	8'0"	980	575
Apts. 40 to 80 Rms. Hosp. under 50 Beds Schools under 300 Students Small Stores under 6 Group	53¾"	52¾"	35¾"	34¾"	6'6" to 8'2"	15¾ x 15¾" If 5 Fls. & over 20 x 20"	9"	8'0"	1080	640
Apts. 80 to 120 Rms. Hosp. 50 to 90 Beds Schools 300-600 Students Small Stores 6-8 Group	65½"	48¼"	47½"	30¼"	6'6" to 8'2"	15¾ x 15¾" If 5 Fls. & over 20 x 20"	9"	8'0"	1160	682



IN THE incinerator construction drawings above, the letters refer to the dimensions given in the table at the left for various capacities.



No fighting man in history has ever had medical protection and care to equal that organized for America's soldiers and sailors of today. To provide proper hospital facilities in every military area, much new construction has been necessary, and scores of great medical centers now stand ready to serve, with more being built.

The hardware for doors, windows, cabinets in these vast projects runs into millions of units, much of it made by Stanley.

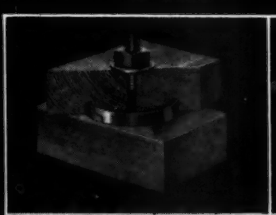
To supply this need, and the hardware requirements of other vital buildings for war is the foremost job of The Stanley Works today. The "E" flag we proudly fly over the Hardware Division is convincing evidence that Stanley workers are doing this job well. The Stanley Works, New Britain, Connecticut.

1843 STANLEY 1943
TRADE MARK

STANLEY
HARDWARE

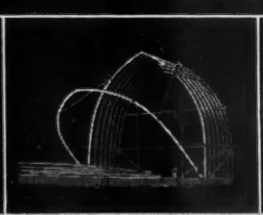
Engineering

Engineering in Lumber is progressively increasing the efficiency of wood as a structural material... Modern wood products are making important contributions to better, more economical construction.

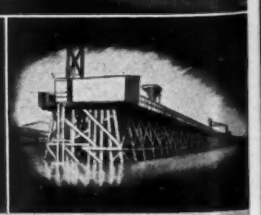


Teco Metal Timber connectors make it possible to join wood members; utilize 80% or more of the working strength of wood.

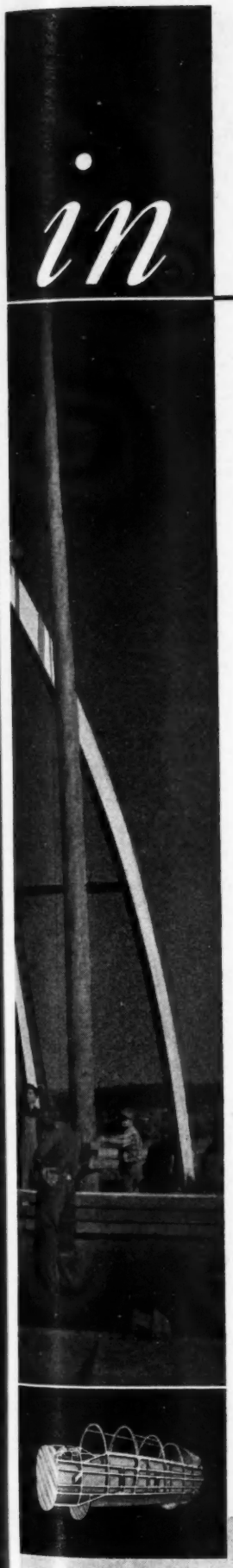
Modern structural glues make possible Glued Laminated Wood roof trusses, arches, plybeams and other structural members.



Glued wood laminated framing members combine roof and side-wall in a unit, giving stronger, more wind-resistant buildings.



New processes for the treatment of wood extend its service life, broaden its uses, and increase its value in many fields.



in Lumber

extends the service of wood

TODAY, if you were to visit the lumber mills or modern wood fabricating plants you'd come away with a completely new conception of the present results and future possibilities of Engineering in Lumber.

The log, which continues to yield such items as timbers, boards and dimension, is, under the stimulus of engineering and research also delivering today more workable, more versatile materials which are serving vast new fields of use.

New ways of forming and shaping lumber, new methods of joining and bonding it, have developed wood laminated structural members, various types of plywood and many other new products for improved construction.

Pictured at the left is a giant airplane hangar in the process of erection. Its framing members, known as beam arches, are of wood laminated construction. They are engineered to meet the job requirements. These arches are accurately fabricated in modern plants, under supervised production controls, finished and delivered to the job site ready for erection.

Wood laminated roof trusses, arches, rafters, ply-beams and other structural members are destined to serve increasingly important construction needs. America is already experiencing the benefits of their new values in rigidity . . . in wind and load bearing features for civilian, farm, and military uses.

SEE YOUR 4-SQUARE DEALER ABOUT ENGINEERED 4-SQUARE BUILDING SERVICES

Contractors and Builders may be working on "post-war" jobs sooner than they expect. In the meantime, it will pay you to familiarize yourself with the 4-Square Home Building Service and the 4-Square Farm Building Service, as well as the A B C budget payment plan. Ask your 4-Square Dealer about them.

WEYERHAEUSER SALES COMPANY

FIRST NATIONAL BANK BUILDING • SAINT PAUL, MINNESOTA

Plywood is proving its versatility in countless applications. Shapes and strengths can be predetermined for specific uses.

4-SQUARE LUMBER

Need for Wartime Materials Met with New Products

Prefabricated Shower Cabinet

THE Marsh prefabricated shower cabinet manufactured in its entirety by Marsh Wall Products, Inc., of Dover, Ohio, is one of the most recent contributions to the conservation of both time and critical materials in building war housing projects. In order to speed production of the shower units, and to facilitate other war work to meet today's demands, the company has set aside several sections of the plant.

That shower cabinets provide a short cut in war housing construction is amply demonstrated by the fact that the cabinet may be assembled at the point of use in four quick, easy steps. The entire shower cabinet consists of but five major parts, including two side panels (one of which includes the plumbing panel), a front assembly, a back assembly and a concrete base receptor. When shipped from the plant, each cabinet requires only two cartons and is complete to soap dish, plumbing fixtures, shower rod and curtain.

PARTIALLY assembled shower cabinet, with side and back panels attached to concrete receptor and with front assembly being set in position.

Marsh shower cabinets meet NHA-FPHA specifications and are fully approved by that government agency. Superstructure corners and top rails are of heavy hardwood construction, tied together with metal corner braces attached with wood screws. Waterproofing is accomplished by caulking all joints. No metal of any kind is used except a few attachment lugs at the base, top corners and on the shower spray assembly. Both sides of all panels of the shower cabinet are high-heat-bake plastic-finished Marlite, having a lustrous finish which is easy to clean and keep clean and sanitary.

Penetrating Concrete Hardener

THE Wilbur & Williams Co., Park Square Building, Boston, Mass., has announced Dye-Crete Color Hardener to meet the demand for a penetrating concrete hardener which would eliminate the need of etching to neutralize the alkaline content of concrete, yet penetrate and carry color deep into the cement. It is available in six colors and clear.

In using this material in colors, Dye-Crete Color Hardener in the desired color is first applied, and allowed to dry from one to two hours, depending on drying conditions. This is followed by a finish-coat of Dye-Crete Defensite Coating. If an enamel finish is required, this finish coat should be in the same color as the first coat. If a gloss-texture finish is required, Clear Dye-Crete Defensite Coating should be used for the finish coat.

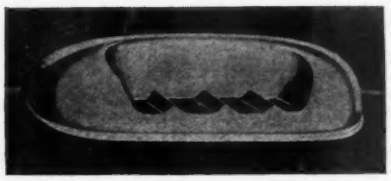
In cases where a concrete floor is dusting, but no color is required, the Clear (uncolored) material is applied in two coats, the first coat being allowed to dry 12 hours before application of the second. Two coats are essential in using the Clear material.

Coverage should range between 250 and 400 square feet per gallon, depending on the surface.

Plastic Bathroom Fixtures, Accessories

A NEW line of all-plastic bathroom fixtures and accessories has been developed by Eclipse Plastic Industries, Inc., 5151 N. 32nd Street, Milwaukee, Wis. Named "San Duro," it includes such accessories as soap dishes, tooth brush and tumbler holders, towel bar, toilet paper holders and a wide variety of fixtures such as faucet handles, radiator valve handles, self-cleaning shower heads, tank valve guides, tank floats, and many others.

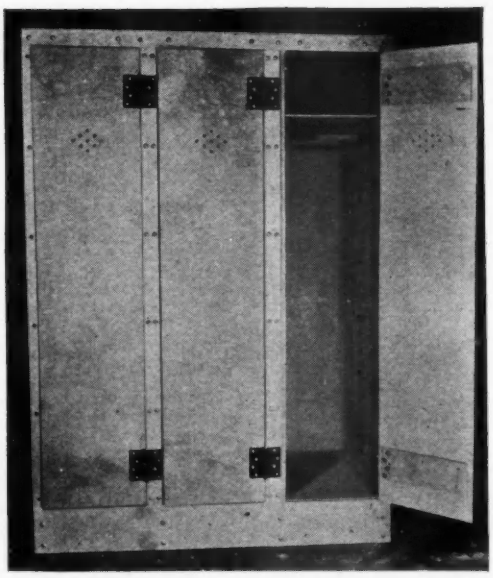
The soap dish illustrated has been given a backward slant to prevent dripping of unsightly soap water over edges and walls, and also preventing soap from slipping out of the dish.



SOAP dish is one of new line of plastic bathroom accessories.

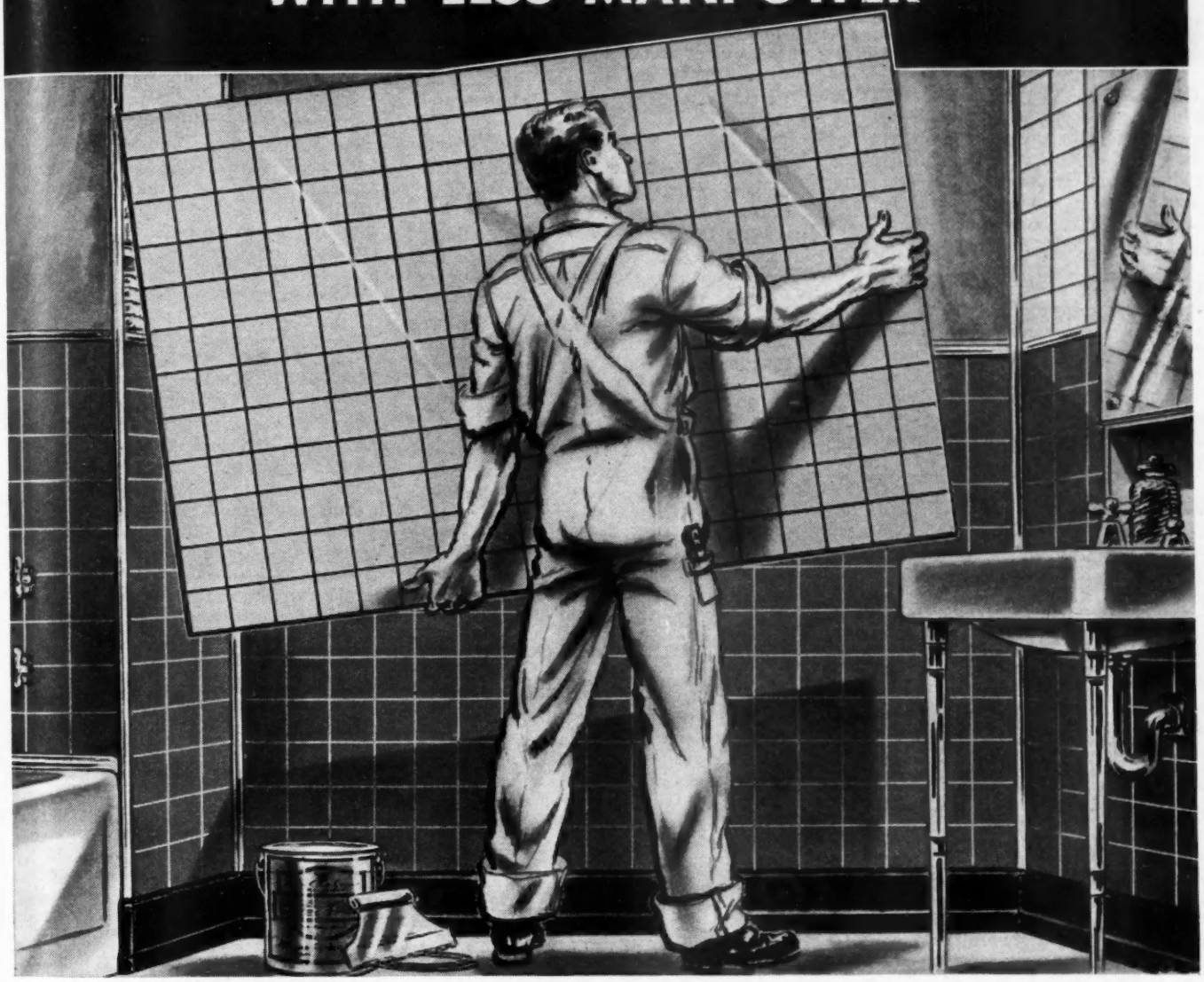
Lockers of Asbestos-Cement Sheathing

ANOTHER answer to the shortage of metal is a newly designed, durable, highly efficient locker now being made with Careystone (Asbestos-Cement) Flat Sheathing, a product of the Philip Carey Manufacturing Company, Cincinnati, Ohio. This material provides an excellent substitute for metal, since it is produced by combining selected portland cement and asbestos fibres under tremendous pressure, resulting in a stone-like substance which will not rust, rot, or corrode, and is fire- and rodent-proof. This material is available in sheets 48" by 96", and 3/8" thickness is recommended for constructing lockers.



LOCKERS of Careystone flat sheathing are fireproof and vermin-proof; save critical materials.

HOW TO DO MORE REMODELING WITH LESS MANPOWER



YOU can use available manpower to the best advantage on remodeling jobs when you use Armstrong's Monowall for walls and ceilings. Widely used for public buildings, commercial interiors, and for kitchens and bathrooms in homes, Monowall is increasingly popular for all kinds of new construction and renovation.

For average-size rooms, the installation of Armstrong's Monowall is a one-man, one-day job! One man can do it working alone because the convenient large-size boards go up quickly and are cemented directly to old plaster or almost any other kind of dry and firm surface. Because the boards are large (up to 4 x 12 feet) even large wall areas can be covered with very few joints or seams. Any competent workman can install Monowall quickly and efficiently with ordinary carpenter's tools, using the easy-to-follow instructions included with every shipment from the factory.

Monowall's mirror-like surface, in a variety of smart, practical colors, is applied at the factory. There's no finishing to do after installation. Your customers will appreciate Monowall, too, because they will be spared many hours of cleaning time. The only care needed to keep Monowall gleaming like new is an occasional wiping with a damp cloth.

We'd like to send you complete information and samples of Armstrong's Monowall. Write to Armstrong Cork Company, Building Materials Division, 1607 Lincoln Street, Lancaster, Pennsylvania.

ARMSTRONG'S MONOWALL

MADE BY THE MAKERS OF TEMLOK INSULATION—SHEATHING, LATH, DE LUXE INTERIOR FINISH

War Housing Items from the CAPITAL

By Frank W. Cortright

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

ORDERS TO BE MODIFIED. Unless unexpected difficulties arise several new directives of a constructive and helpful nature will be announced. Administrative officials have recently dropped their optimistic attitude, and started to take corrective action. The private builders' inability to keep up to their construction schedule was the result of not one, but a multiplicity of restrictive orders. Pleas that some of these orders be substantially modified has finally been heard, and action is being tardily taken. Although priority allocations will be few and far between, those rugged survivors still in the field may look forward to somewhat improved operating conditions.

STANDARDIZED PLANS. One reason for FPHA's increased volume of construction during the last six months is their adoption of a few standard plans and unit material specifications. As the result of a number of conferences here in Washington with government officials, Fritz Burns, president, NAHB, is convinced that a greater volume of construction can be secured, and that processing can be greatly speeded by standardizing plans. In consultation with FHA, therefore, the country has been divided into ten zones in which construction is of a similar type because of climatic conditions and general building practices. To obtain the best typical plans for each zone, presidents of local chapters of NAHB have been asked to select and send in several of the best plans in their areas. These must have been recently approved by FHA, must conform with the latest standards, and have PD-105A's attached. After these have been checked by FHA they will be made available to builders through NAHB Washington office, and through local associations. There will be a small charge made to cover the cost of reproducing and mailing. These typical plans and material lists will also be published in the *American Builder* and other magazines.

PLANS FOR SMALL BUILDERS. Not only will these plans benefit small builders, but standardization will encourage construction in many outlying areas. The plans will not necessarily be absolute minimum plans, but will be those most acceptable both to the government and to the builders. Wherever working drawings and economical framing and wiring schedules are available they will be attached. In this way substantial savings can be made of critical materials, particularly in the use of lumber and copper.

LANHAM ACT. Cutting a few corners, the Senate Committee on Education and Labor has all but finished processing the new $400,000,000 Lanham Act extension. Late last week a special subcommittee of the Committee took the measure up in executive session. Time-consuming public hearings were ruled out in the interest of speed. The subcommittee merely sat around the table with NHA Administrator Blandford, FPHA Commissioner Herbert Emmerich and a few other top officials who are playing an active part in the program. After a brief discussion, the new measure was approved as submitted and referred to the full Committee. Favorable action will probably be a matter of routine procedure and is expected to be taken momentarily.

HOUSE HEARINGS COMPLETED. On the House side, the Committee on Public Buildings and Grounds has finally wound up its hearings and started yesterday to meet in executive sessions to take action in reporting out the bill. Chairman Fritz Lanham has made it clear that every effort will be made to expedite matters. It now appears that Congress will not be able to recess as soon as had been expected, and Capitol Hill observers believe that there is a good chance that all the requisite legislative steps can be taken on the measure before the summer "breathing spell" is taken.

CONTRACTORS HAVE SAY. In its final public hearings on the bill, the Lanham Committee listened to the views of the Associated General Contractors as expressed by B. L. Knowles. This group had no recommendation to make as to the size of the appropriation, but generally disapproves of federal expenditures for construction that cannot be justified on the grounds of social or economic necessity. Mr. Knowles made it plain that his Association opposes the recent FPHA directive giving its regional offices almost unlimited authority to specify the prefabricated type of construction. He voiced the fear that this may have the effect of making the entire program lean toward factory prefabricated houses. Contractors would be glad to use such a system if it saved either time or money, but he expressed doubt that it does.

COMMUNITY FACILITIES. Chairman Lanham of the Public Buildings and Grounds Committee has introduced a Bill authorizing an appropriation of $200,000,000 for community facilities under Title II of the Lanham Act. Heretofore provision for community facilities has been made in the Lanham Act itself, but this time it is believed that a separate bill is desirable. Testimony before the Committee, as well as the findings of the investigating subcommittee have shown that community facilities are directly related to the war housing program. In many places it is impossible to program additional housing, either public or private, or to complete construction already underway, due to the lack of these essential defense public works—extension of water supply systems, sewage disposal plants, and schools.

REALTORS' WASHINGTON COMMITTEE. Pursuing an aggressive policy of establishing proper safeguards in the expenditure of Lanham Act funds, Realtors' Washington Committee meeting with Administrator Blandford last week, passed the following resolution:

"RESOLVED, that the Realtors' Washington Committee give its general approval and support to the 1944 fiscal year War Housing Program as submitted recently to the Congress by Administrator Blandford.

"We urge that every possible safeguard be set up in the legislation and in its administration to make certain that all war housing that private enterprise can build will be allocated to the private builders.

"We recommend that program in process be reviewed and continuously scrutinized to the end that no public housing is built purely on the theory that the immigrant war worker is unable to pay the rental required by private housing and that wherever possible advance notice be given that priorities in each area are about to be allocated.

"Finally, we urge that Section 303 of the Lanham Act be amended to provide funds for the removal of all temporary housing within eighteen months after the termination of the emergency, excepting for those few projects essential to early post-war production."

URBAN LAND INSTITUTE. Senator Robert F. Wagner of New York has introduced in the Senate their Bill to encourage the redevelopment of American cities by private enterprise and by public improvement. The bill (S.1163) proposes that this be done by an extension of Federal credit to cities for the purchase of land in deteriorated areas, which, after being cleared, would be sold or leased to private builders for redevelopment. It further provides $1,000,000,000 for loans and grants to carry out the program during the next fiscal year. The

(Continued to page 68)

a glimpse into the FUTURE

IT IS a far cry from the bathroom of the 90's to the convenient charm and practical efficiency of the bathroom of pre-Pearl Harbor days. But the question today is "What about the future?" What will Mr. and Mrs. America want in plumbing and heating when the war is won? Already many builders are making plans for the homes they expect to build after "V" Day. To aid them in this planning, Crane Co. is conducting a broad program to determine the desires and preferences of those who intend to build homes after the war.

So extensive is this investigation—so broad in scope that it covers every state in the Union—cities, towns and villages—and reaches families in every income group.

It is too early to draw any conclusions on this investigation, but of this, builders may be certain: the Crane line of the future will continue to reflect the same high quality in materials and workmanship, the same advance in design and construction as in the past. And above all, it will be designed to meet the established preference expressed by thousands of home owners.

If you would like a copy of the colorful booklet and questionnaire being widely distributed to future home owners, mail the coupon below.

CRANE CO. AB 7-43
836 S. Michigan Ave., Chicago, Ill.

Please send me copy of booklet "V" Day and questionnaire.

Name.....

Address.....

City.....*State*.....

CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVENUE, CHICAGO

VALVES • FITTINGS • PIPE • PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

(Continued from page 66)
plan can be started immediately upon passage of the measure.

FOR PRIVATE ENTERPRISE. Emphasizing that his proposal is "primarily a private enterprise bill," Senator Wagner pointed out that a large-scale rebuilding program would necessarily require the cooperation of Government. "It is not a public works bill," he said, "it is not a relief bill, and it is not primarily a bill for public spending. It might be called rather an encouragement-to-enterprise bill."

NHA MAKES LOANS. Under the terms of the bill, the Administrator of the National Housing Agency would be authorized to make loans to cities or other appropriate local agencies for the purchase of land in deteriorated areas for redevelopment. Having purchased and cleared the land, the cities would sell it or lease it to private builders for modern neighborhood development and would sell or lease land for public improvements to appropriate municipal agencies. Loans would be paid back to the Federal Government over a long period of time not exceeding ninety-nine years. To be eligible for a loan, a city must have a city plan sufficiently complete to indicate definite local improvements in traffic, public transportation, public utilities, and recreational facilities, and other public facilities.

HOUSING FOR NEGRO TENANTS. As the manpower problem becomes increasingly severe, negroes are being called upon to take over a very substantial part of the war production job. It is interesting to note that they will occupy approximately 88,000 public housing units, representing 12% of the total public housing program. Approximately half of these dwellings have been constructed under the war housing program, and negro construction workers have earned more than $33,000,000, representing 12% of the total payroll expenditures. FPHA states that more than a thousand negroes are currently employed as managers, engineers, clerical and custodian workers. 130 are in charge of projects; 140 are employed on the departmental staff in Washington; and 40 are working in FPHA Regional Offices.

PRIVATE BUILDING FOR NEGROES. In some areas private builders have endeavored to construct large projects for negro occupancy, but difficulties have usually arisen which builders have been unable to surmount. One prominent Chicago builder acquired land many months ago to construct some 500 units, but local lending institutions seem fearful of the stability of income of this type of tenant. In addition to this hurdle, building costs have risen so that it is difficult to construct housing of adequate size to meet the rent level generally required.

FRITZ BURNS PRESENTS CASE TO LANHAM COMMITTEE. In a forceful statement outlining the framework of the NAHB presentation, suggesting corrective measures, president Fritz Burns stated in part:

"As President of the National Association of Home Builders of the United States, I am charged with the responsibility of speaking for the membership of our association. In so doing I believe I am speaking for the large majority of the builders of this country currently engaged in constructing privately financed war housing.

OUR RESPONSIBILITY. "Private enterprise has been charged with the responsibility of supplying as large a part of war housing as possible, and we feel it is our duty to discharge this responsibility fully and completely. Experience has proven that private enterprise can construct housing more economically, better and faster than any agency of government. We naturally should like to relieve the government of the entire burden, but we recognize that some of the housing must be purely temporary in character, and must be financed by the taxpayers' money.

DEFINITION. "Funds authorized under the Lanham Act are to be used only to provide (and I quote from the Act) 'housing in those areas where it cannot otherwise be provided by private enterprise when needed.' There-

(Continued to page 70)

(Continued from page 68)

fore we contend that such housing should be limited, beyond the possibility of any future misinterpretation, to the following situations:

"First: Housing to serve plants in relatively isolated areas, which plants are not expected to operate in the post-war period; and such other cases where private builders are unable to finance their projects.

"Secondly: To a minimum number of dormitory facilities for single workers.

LOCAL COOPERATION. "The Regionel Offices of NHA are primarily responsible for the determination of the character of the accommodations required, and the division of priorities in their respective areas as between publicly and privately financed housing. As these determinations are of necessity largely a matter of judgment, we believe that NHA Regional Representatives should constantly consult with the best informed local groups, particularly the Builders Associations, Real Estate Boards and the Chambers of Commerce, instead of exploding priority quotas on communities only after long periods of private, inter-agency deliberations.

PERFORMANCE BY PRIVATE BUILDERS. "During 1942 private builders financed and constructed approximately 300,000 dwelling units. The over-all program for 1943 calls for 170,000 units, only a little more than one-half of our construction for 1942.

"Because of governmental restrictions and redtape, private builders will have only been able to finance and start about two-thirds of the quota assigned to them in the first half. It is apparent, therefore, that unless prompt and effective relief in the matter of procedures is given, we will produce considerably less than the volume of housing required of us, with the result that war plants will be unable to meet their schedules. We, therefore, are impelled to testify at this time as to the need for procedural relief.

PROBLEMS. "Some of the numerous problems which combine to retard private construction are:

"A too close adherence to the peacetime insuring philosophy of FHA has resulted in much delay and a reduced volume of construction. Title VI was enacted by Congress as a wartime measure which recognized the necessity for a more liberal insuring policy during the emergency.

"The reduced personnel in some active FHA offices has been insufficient to accomplish rapid processing. We would suggest that, temporarily, employees might be shifted from less active areas into these critical offices.

"In view of the steadily increasing costs of construction throughout the country, it is hoped that FHA will more promptly make adjustments to reflect current costs.

"Inability to secure deferment of key men (superintendents, foremen, etc.) for the period of construction of large projects.

"Unwillingness of OPA to permit the collection of the first and last months' rental payments in the leasing of new accommodations to transitory war workers.

"Inability to secure priorities to construct housing for immediate sale. Some elements of government have recently given evidence of an ideology opposed to the fundamental principles of home ownership. We are convinced that home ownership is a labor stabilizing factor, and an effective counter-inflationary measure. The greater the number of home owners, the greater the stability of any government."

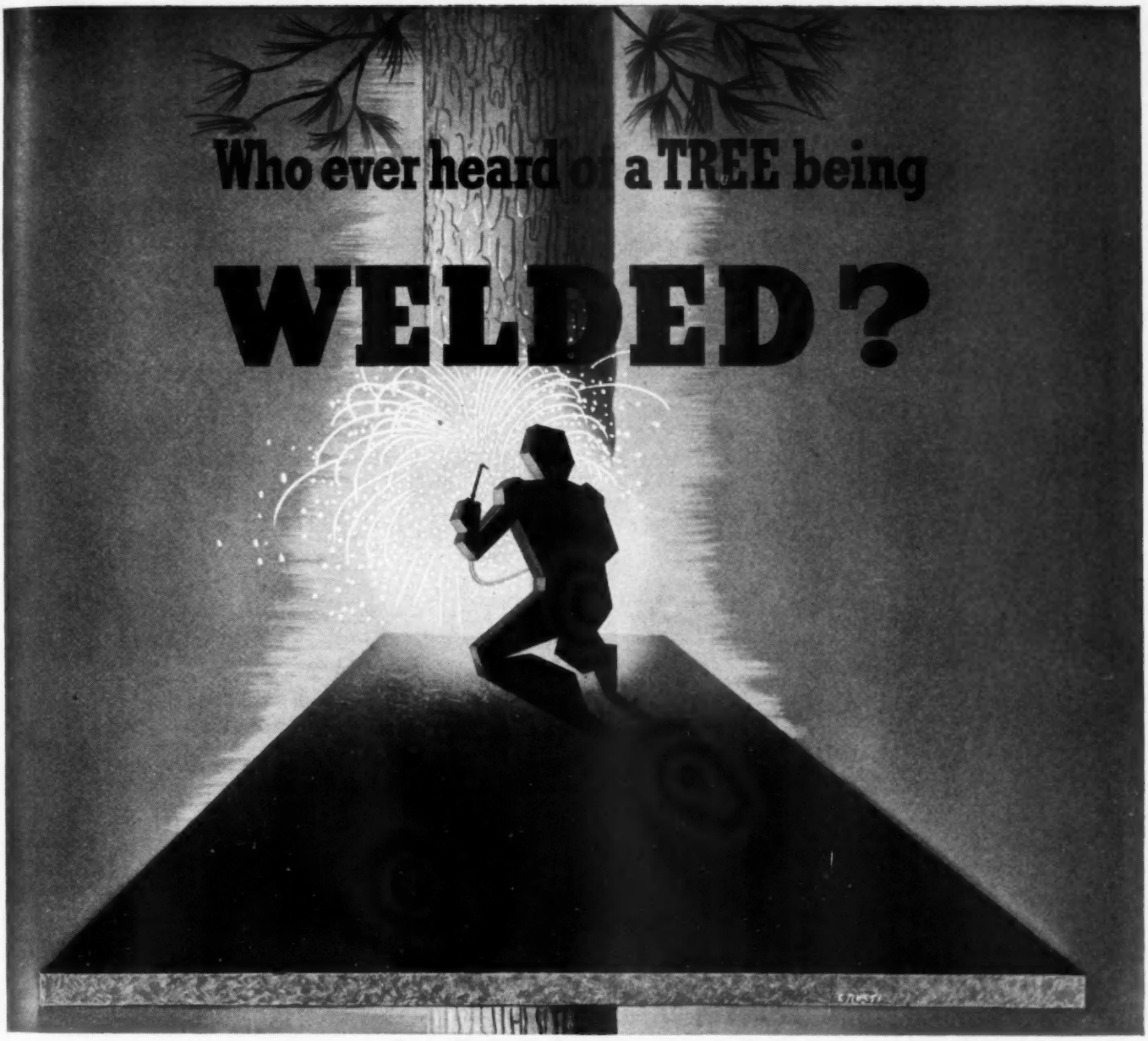
BATTLE OF WASHINGTON. To the uninitiated, Washington—with its maze of bureaus, its intellectuals with high-sounding titles, its complex procedures, its multiplicity of forms, and its reams on reams of directives, seems a bit baffling at first. With time, however, all these things become quite clear, and you come to know that

A SPECIALIST is a man who concentrates more and more on less and less;

AN ECONOMIST is a person who makes a simple subject complex, and a complex subject simple;

A SUPERVISOR is one who keeps

(Continued to page 72)



Welding is the very latest thing in building ships and airplanes . . . but it is an age-old story to Nature. A tree's great mechanical strength, for instance, comes from the welding together of its mass of cellulose fiber by a mysterious and elusive substance called lignin.

Almost 19 years ago the late scientist, W. H. Mason, long an associate of Thomas Edison, discovered a way to duplicate—and, in fact, improve upon — Nature's own "welding process."

The result was one of the world's most remarkable materials, Masonite* Presdwood,* the ligno-cellulose hardboard which, weight for weight, has steel-like strength . . . is glass-like in smoothness . . . provides unusual workability and almost limitless versatility.

The Masonite Process starts by "exploding" wood, without either damaging the cellulose or removing the lignin. The cellulose fiber, of varying degrees of plasticity, is then welded together again under different heats and pressures, producing ligno-cellulose hardboards suitable for many special purposes.

Today, in America's War Program, Presdwoods have more than 500 uses — saving steel, aluminum, rubber and other critical materials — and are not generally available for civilian use. When peace is won they will again be ready to provide the homes you build with sturdy exteriors, beautiful walls and ceilings, built-in furniture, kitchen cabinets and counter tops, and many other attractive features. Masonite Corporation, 111 West Washington Street, Chicago, Illinois.

**Trade-mark Reg. U. S. Pat. Off. "Masonite" identifies all products marketed by Masonite Corporation.*

MASONITE PRESDWOODS

It's Right MASONITE

ARMY E NAVY

THE LIGNO-CELLULOSE HARDBOARDS

(Continued from page 70)
two or more clerks busy enough to look as if they are working;

RESEARCH is the art of using work done by others to prove something you've known all along;

STATISTICS are an impressive array of figures used to prove anything—usually proving nothing—but sufficiently baffling to confuse everyone;

A DIRECTIVE is an official epistle sent out to correct a directive which was issued to correct an order which was issued to correct a practice that by this time no longer needs correcting; and finally that

SUCCESS is attained by knowing the ropes so that you can pull the strings.

City Loan Bill

(Continued from page 25)

to indicate definite local improvements in traffic, public transportation, public utilities and recreational facilities, improved neighborhood structure, including detailed plans for the redevelopment of specific areas. Improved patterns of land use, of building requirements, and a plan for the relocation of persons living in areas that are designated for clearance and redevelopment.

When land was acquired by a city and sold or leased to private interests the contract terms would obligate the purchasers or lessees to begin building their improvements within a reasonable length of time.

The plan embodied in the proposed neighborhood development act follows the proposal for rebuilding deteriorated areas developed by the Urban Land Institute, a private organization in the field of land development and city planning policy.

The immediate purpose of the bill is to assist cities and towns in acquiring land in deteriorated areas to be sold and leased for the building of dwellings and for other construction now being planned for the post-war period, so that work on various types of construction and land improvement can be co-ordinated and made ready for execution in the post-war period.

Certify by Telegraph

The certification "in a writing" required under Limitation Order L-192 before a purchaser can obtain construction machinery repair parts to meet an actual or impending breakdown may be made in the form of a telegraphic certification, M. B. Garber, Acting Director of WPB's Construction Machinery Division, has stated, "providing it contains the information that the order requires to be set forth in such certification."

Farm Lumber

(Continued from page 25)

been given a quota, and who require higher ratings than provided by Order M-208, may make application on Form SL-200 for assistance to purchase required lumber. The county War Boards then approve the applications and issue preference rating certificate, Form GA-201, to the applicant.

The farmer must then surrender his certificate within 10 days after date of issuance to the dealer from whom he purchases or intends to purchase the lumber. Certificates not surrendered within 10 days are void.

Although only farmers living in counties having a quota can obtain AA-2 Rated lumber, the farmers can purchase the lumber on certificates from their usual supplier even though the dealer is located in another county or State.

The lumber secured under this special rating cannot be used for dwellings. It must be used only for on-farm construction of (1) maintenance and repair of agricultural buildings or equipment, (2) new construction essential to the food production program, and (3) the reconstruction of essential agricultural buildings destroyed by fire.

In areas where major tornado or flood losses occur, special emergency rations are usually available through Red Cross channels and this lumber should be used for these replacement purposes.

Dealers receiving AA-2 Preference Rating Certificates can extend these ratings for the purpose of securing supplies or replacing inventories.

In order to make this proposed distribution of supplemental lumber oper-

ate successfully it is necessary to have the co-operation of local lumber dealers. Dealers should pool their respective certificates and place orders with the mill co-operatively to avoid undesirable delays caused by dealers waiting until accumulating enough certificates to order a carload independently.

If possible, dealers should continue to secure AA-3 and AA-4 farm lumber in order to build up and maintain a small working inventory and in this way fill GA-201 certificate orders immediately, and subsequently extend the AA-2 Rating for inventory replacement.

It is advisable that farmers contact their county War Boards as soon as possible to obtain their AA-2 Rating Certificates. For whether the State quotas are exhausted or not, AA-2 Ratings cannot be issued after September 30 under present arrangements.

Construction, Mill Stocks Decline; Lumber Production Up

While total construction in the United States during April ran to $746,000,000, representing a 2 per cent drop from March and over one-fourth less than the same month a year ago, lumber stocks at mills continued to sag.

Lumber stocks at mills at the close of the first quarter of 1943 totaled 4,011,457,000 board feet as compared with 4,930,915,000 board feet on hand December 31, 1942. This was a decrease of 19 per cent.

Lumber production in the United States for the first quarter of 1943 is estimated at 7,141,109,000 board feet and is not far from the estimated first quarter goal needed to meet military and essential civilian requirements placed at 32,000,000,000 board feet for 1943. Monthly production has increased steadily, February showing a 4.9 per cent increase over January, March showing 14.2 per cent over February,and April showing a small seasonal increase over March of 7.1 per cent.

WPB Aided Relief Agencies During Recent Floods

Prompt action by the War Production Board and its field offices, supplementing the activities of organized relief agencies, formed an important part in alleviating the vast damage done recently by the floods in eight midwestern states.

The WPB machinery for granting priorities for critical materials required to rehabilitate industrial establishments and municipal services was quickly thrown into high gear, and emergency authority was given to local offices in order to eliminate all possible delay.

The kind of materials WPB was called upon to help obtain varied greatly, because of the extent of the

(Continued to page 74)

(Continued from page 73)
damage. Items ranging from nails to pumps, from wiring to bridge timbers were needed—and needed quickly. Pumps were needed to remove water from cellars and basements, temporary lighting systems had to be strung up; submerged houses had to be fenced off; emergency plumbing and heating equipment, small hardware, roofing, and many other materials had to be directed into the flooded region.

Small Retailers Removed from Restrictions of Order L-63

Several thousand small wholesale, and retail supplies have been eliminated from restriction of Order L-63 (Supplier's Inventory Limitation) with amendment of the order by the War Production Board, effective June 10.

Henceforth, all suppliers whose total inventory at cost is less than $35,000 are exempt from provisions of the order.

The amended order also eliminates the previous choice of methods for determining permissible inventory. For supplies located in specified states in the western part of the country, inventories are limited to a total dollar value at cost equal to the sales of the same type of supplies during the four preceding calendar months. Previously, the sales period had been three months.

For suppliers located in all other states and in the District of Columbia, inventories are limited in total dollar value to the value of sales during the three preceding calendar months, compared to two months previously for distributors in this area.

Types of Construction Processed by WPB Regional Offices Enlarged

The types of construction for which applications are processed in Regional Offices were enlarged in an amendment to field administrative order 708-20, the War Production Board announced today. This order delegates authority to Regional Directors to permit construction under Order L-41 and to issue preference rating orders provided the estimated cost is less than $10,000.

Among the types of construction now processed in the field are those which increase by less than 20 percent the capacity of productive facilities and off-farm storage facilities for agricultural products, including drainage and irrigation facilities serving more than one farm, creameries, warehouses, and grain elevators.

Not covered by the amendment is any construction or remodeling of these off-farm facilities to produce a different type of product or to increase capacity by more than 20 percent; nor does it cover off-farm industrial type food-processing facilities such as canneries, packing houses, oil-seed plants, or commercial hatcheries.

Controlled Materials on CMP Allotment Only After July 1

Builders holding preference rating orders for privately financed war housing can secure a CMP allotment by filing Form CMP-H-1 with the local field office of the Federal Housing Administration, one of the operating units of the National Housing Agency. This form represents the builder's application for an allotment of controlled materials in accordance with the approved quantities shown on the bill of materials which is made a part of his preference rating order.

WPB regulations provide that on or after July 1, controlled materials can be acquired only by means of a CMP allotment rather than through a preference rating order as heretofore. Controlled materials used in war housing construction include concrete reinforcing bars, steel pipe, steel wire and wire products including nails, and copper wire and cable.

Execution of Form CMP-H-1 by the FHA office will also authorize the builder's construction schedule and will include an assignment of an AA-3 preference rating for obtaining lumber and metal products other than controlled materials.

A new voice for the building industry

Home-builders have a powerful new selling voice—reaching a tremendous and consistent market of home-minded buyers.

Department stores, selling everything going into the home, are now preparing to sell the house itself. More than 50 leading department and furniture stores throughout the nation are currently exhibiting models of Homasote Precision-Built Homes.

Buyer response in potential post-Victory sales is very large—and mounting steadily. Approximately 70% of the people visiting the exhibits in the first four stores have expressed a desire to join Homasote's Own-Your-Own Home Club, starting *now* to save their down payments.

Engineered housing

For seven years and at a research outlay to date of more than $300,000, Homasote Company has been applying sound engineering principles to the problem of building a home. Homasote's purpose: to help the builders who use Homasote Building and Insulating Board (and the dealers who distribute it) sell more and better houses, with *assured* profits.

Result of this thorough study is Homasote Precision-Built Construction—a system which:

(1) enables the local builder to achieve *for himself* all the engineering economies of prefabrication;

(2) produces a machine-perfect house at lower initial and operating costs; (one benefit of decentralized prefabrication is lower transportation expense);

(3) is based on the use of Homasote Board—oldest and strongest building and insulating board on the market—and other *standard* materials readily available in the local area;

(4) eliminates guesswork and the profit hazards of inexact estimating;

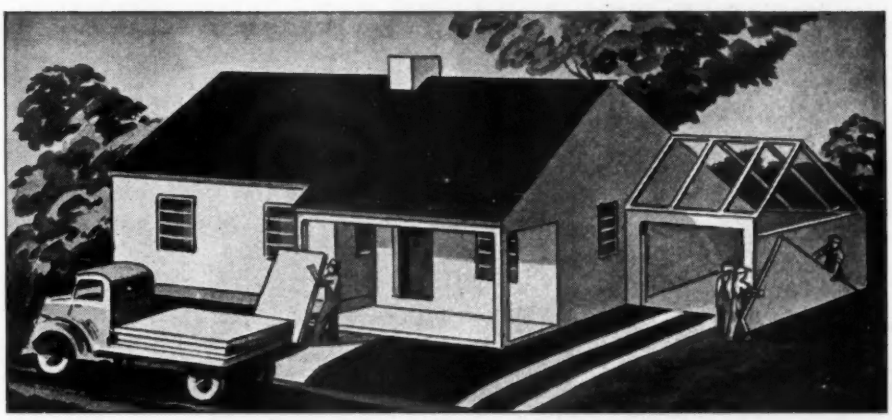
(5) is adaptable to any style, any size of house.

$36,000,000 experience

The soundness of Homasote Precision-Built Construction has been proved in $6,000,000 worth of pre-war, private homes erected by independent builders all over the country—and in $30,000,000 worth of government war housing.

To the foresighted independent builder, Homasote Precision-Built Construction is the key to new post-emergency markets: low-cost housing projects constructed at a profit, large realty developments, machine-perfect homes in all price classes.

For more details, write HOMASOTE COMPANY, Trenton, New Jersey



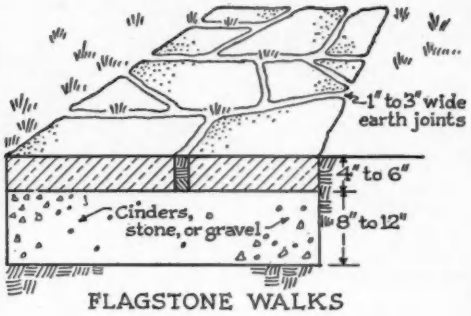
HOMASOTE *Precision-Built* **HOMES**

Tens of thousands of these plywood Victory huts are being used by the Army.

American Builder HANDY-BOOK

HOW TO LAY FLAGSTONE WALKS

AMERICAN BUILDER FOR JULY 1943



FLAGSTONE WALKS

The paving of walks and terraces with flagstones provides a desirable transition from the man-made geometrical formality of the building to the freedom and naturalness of the lawn and garden. Bluestone, sawn limestone, stratified natural stone from the vicinity, cast stone, and slate are commonly used materials. Many patterns may be made from the different types, either alone, in combination with each other, or in combination with brick.

The underbed should be wetted thoroughly and tamped to a firm surface. If the underbed is not carefully put down the danger of heaving from frost in the winter is more likely.

It is sometimes recommended that a 2" layer of earth be interposed between the underbed and the bottoms of the stones so that grass planted in the flagstone joints will grow more readily. However, this is a mistake, since the earth holds moisture and freezing weather will heave the stones. It is much safer to use stones 4" to 6" thick with fairly wide earth joints, so that the joints themselves will provide adequate room and moisture-holding capacity for a healthy growth of grass.

The underbed should be of well-graded material from fine to coarse, so that it will compact firmly. If cinders are used they should be washed, since any sulfur remaining in them will discourage growth of grass in the joints.

For terraces, it is important that the stones have level surfaces so that outdoor furniture will set level.

Short Cuts & Time Savers

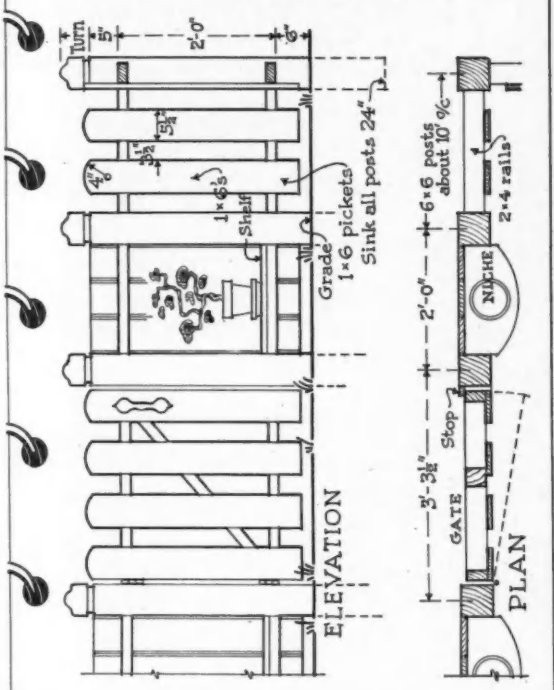
***American Builder's* Job Helps appear each month as part of an editorial series begun in the January issue. The purpose of this series of articles is to provide builders with practical "how-to-do-it" data for office or on the job.**

Some subjects covered in the series thus far are: ***How to Find Volume of a Pile, How to Estimate Roofing, How to Finish a Damp Cellar, How to Estimate Roll Siding, How to Find Slope of Valleys, How to Estimate Painting, How to Plan a Closet, How to Make a Batten Door, How to Make a Safety Roadway Curb, How to Correct Faulty Hinges, How to Expose Wood Shingles, How to Mix Oil-Saving Lead-Oil Paint, How to Measure Rafter Cuts, How to Plan Minimum Bathrooms, How to Invent Color Schemes, How to Plan Animal Shelters.***

OF JOB HELPS

HOW TO BUILD A PICKET FENCE

AMERICAN BUILDER FOR JULY 1943



On either side of the gate of this picket fence, a niche is shown. A potted plant in each of these spaces provide an accent of color and interest which focuses attention at the spot where it is wanted. The fence should be painted white, or stained if durable woods are used. If the gate is to swing away (instead of "to") be sure to watch the bevel.

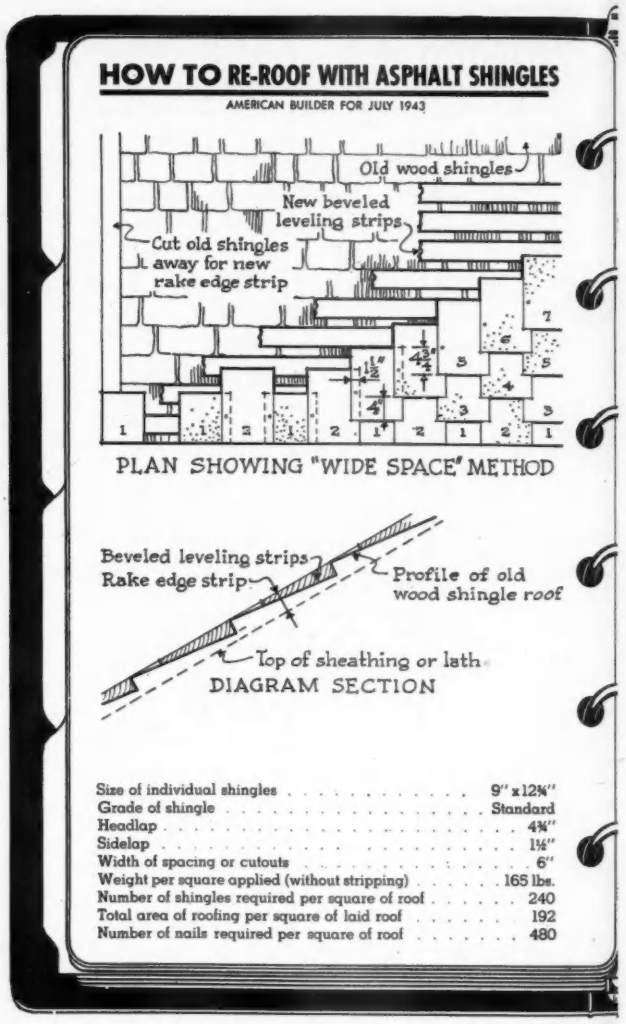
A Continuing Editorial Service

"Job Helps" is a continuing editorial service feature appearing in serial page form monthly. The information is arranged in convenient 3 x 5 notebook page size so that it may be filed or used on the job. The sheets are not for sale or available from any other source than the editorial pages of *American Builder*.

Additional Job Help sheets appear on the following pages.

Among numerous letters commenting on this "Job Helps" department have been reqcests from builders for notebooks in which to file the sheets. *American Builder* does not have notebooks for sale.

American Builder HANDY-BOOK



Offers Window Engineering Service to Manufacturers

THE development of a competent engineering service to streamline the installation of window sash hardware and window assemblies is the latest contribution to the nation's war and post-war housing program by the Grand Rapids Hardware Co., Grand Rapids, Mich., manufacturers of the Grand Rapids Invisible Sash Balance. This service is of particular interest to prefabrication manufacturers as well as those manufacturers who contemplate converting their plants for present or post-war prefabrication housing needs, because the word "service" in this instance is not just a term denoting something that exists on paper or an "advisory department" which conducts a question and answer correspondence course. It is, in fact, a service rendered by men who have been especially trained to cope with line production methods and who have been taught to recognize and solve problems that usually arise even in the best regulated plants. It is their duty, it is stated, to anticipate and correct time wasting, material wasting and money wasting practices.

OF JOB HELPS

HOW TO ESTIMATE QUANTITIES OF NAILS

AMERICAN BUILDER FOR JULY 1943

Length in In.	Approx. No. to Lb.	Nail-ings	Sizes and kinds of material	Trade Names	Board Measure on Center as follows: Pounds per 1000 ft. 12"	16"	20"	36"	48"
2½	106	2	1 x 4	8d common	60	48	37	23	20
2½	106	2	1 x 6	8d common	40	32	25	16	13
2½	106	2	1 x 8	8d common	31	27	20	12	10
2½	106	2	1 x 10	8d common	25	20	16	10	8
2½	106	3	1 x 12	8d common	31	24	20	12	10
2½	106	3	When used as sq. edge,	8d common	105	80	65	60	33
4	31	2	2 x 4 as platforms, floors,	20d common	70	54	43	27	22
4	31	2	2 x 6 sheathing; or shiplap.	20d common	53	40	53	21	17
4	31	2	2 x 8	20d common	53	40	53	21	17
4	31	3	2 x 10 When used as D. & M.,	20d common	60	50	40	25	20
4	31	3	2 x 12 blind nailed, only ½	20d common	52	41	33	21	17
4	31	3	3 x 4 quantity named required.	60d common	197	150	122	76	61
6	11	2	3 x 6	60d common	131	97	82	52	42
6	11	2	3 x 8	60d common	100	76	61	38	34
6	11	2	3 x 10	60d common	178	137	110	70	55
6	11	3	3 x 12	60d common	145	115	92	58	46
2½	189	2	Base, per 100 ft. lin.	8d finish		1			
2½	189	1	Ceiling, ¾ x 4	8d finish	18	14			
2	309	1	Ceiling, ½ & ¾	6d finish	11	8			

How to Build a Farm Smokehouse

(Continued from page 58)

8-½" x 12" anchor bolts 1 pair 6" "T" hinges
1-latch for door 2 pair 2" x 2" hinges (vents)
2-fasteners (vents) 1 ½ gal. paint.
10-lbs. 16d nails 30-lbs. 8d nails 6-lbs. shingle nails
4-lengths 6" T.C. sewer pipe; 3-6" 90° bends; T. C. Bends or 1-6" T.C. "T" and 2-6" 90° bends if desired.

FIRE BOX

CONCRETE MIX 1:2:3

10 bags cement 0.6 cu. yds. sand
1 cu. yd. broken terra cotta or hard brick. Gravel or stone could be used, but are not as fire resistant.

MISCELLANEOUS

18-lin. ft. No. 9 gauge hog wire 3'-6" wide (reenforcing)
3-¼" reenforcing rods 3'-6" long
Grate bars (pipes, rods, old stove grates, etc.).
2-doors (sheet metal or from an old stove).

Higher Priced Homes for Post-War Forecast by F. W. Dodge Analyst

PRINCIPAL expansion factors which should bring greater prosperity to this country than it has ever had have been listed by Thomas S. Holden of F. W. Dodge Corp. as: Revival of the automotive industry; aviation; light metals and synthetic materials; new construction materials and methods; housing; urban redevelopment; and public works reserve. On the subjects of materials, methods and housing, Mr. Holden has this to say:

"New materials and new construction methods, producing greater values per building dollar, will inevitably increase demand for low-cost buildings of every classification, particularly houses. War construction requirements, with the paramount needs of speed and economy in use of scarce materials, are daily modifying traditional design ideas and construction procedures.

Quantity Orders for Houses

"Among other things, the makers of prefabricated houses have for the first time found in the war housing program quantity orders for houses, creating an opportunity for practical development of techniques and demonstrations of potentialities that did not hitherto exist. Undoubtedly, such developments will have some lasting effects upon construction methods and procedures, though the importance of the prefabricated house itself as a factor in the future housing market is still problematical, probably depending more upon future possibilities of quantity orders for houses in reasonable continuity than upon technical developments.

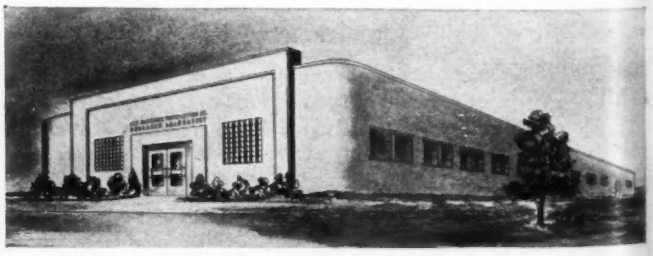
"The housing revival of the late 1930's, interrupted during the period of war restrictions except for buildings in the war housing classification, will doubtless be resumed. In part, the housing program will make up deficiencies of the last depression period. Its continuation will depend upon the degree of general prosperity (high national income and full employment) the country will enjoy. If national income averages over 100 billion annually in the 1940 decade, as seems highly probable, housing demands will be very great and will continue for an extended period. There will be a much greater demand, proportionally, for houses to cost over $6,000 than in the 1930 decade; not only because there will be some surpluses of lower-priced houses directly after V day, but also because higher national incomes mean more families moving into higher income brackets and demanding better houses than they lived in before. The expanded housing market will be largely a market for private building and investors. The possible extent of any government housing program is purely conjectural at this time."

* * *

New Research Laboratory for Ilg

THE Ilg Electric Ventilating Co., Chicago, is to have a new research laboratory, constructed west of the present plant; of one-story, modern construction, it is being specially built to be shake-proof and to a considerable extent sound-proof.

Equipment for the new building will include the latest scientific instruments for measuring air, electricity, sound, light and vibration.



DRAWING of Ilg's new research laboratory now under construction.

CATALOGS AND HOW-

56—KITCHEN PLANNING BOOK—An interesting new book entitled, "You, Too, Can Plan Your Kitchen the Curtis Way," has recently been published by Curtis Companies. It is 8⅜ x 11" in size, and is well illustrated with attractive views of modern kitchens, which are of various basic types. What steps to take to acquire a kitchen of modern beauty and utility are explained. The book is intended primarily as a "duration book," to aid dealers in selling Curtis wood kitchen cabinets for home modernization and replacement, and also to help them develop their post-war market.—Curtis Companies Service Bureau, Clinton, Iowa.

57—HOW TO CARE FOR AND MAINTAIN ELECTRIC FARM PUMPS AND WATER SYSTEMS—In order to aid dealers in their wartime job of keeping every electric farm water system in good running order, the Electric Water Systems Council has published an owner's manual entitled "Timely Tips on Wartime Care and Maintenance of Electric Farm Pumps and Water Systems." This little 16-page booklet gives pointers on how to take care of motors, belts, pressure tanks, etc., and how to extend the usefulness of electric farm water systems. Dealers may obtain a sample copy of this booklet and other literature on water systems for farm and home from The Electric Water Systems Council, 228 W. Ontario St., Chicago.

58—COLOR STRATEGY FOR WARTIME AMERICA—This 32-page book was prepared as a contribution to the war effort by color scientists of Time-Tested Paint Laboratories, and its principal purpose is to promote health and morale in the wartime home through wise selection of colors for home decorating. The opening chapters tell how color is helping to beat the Axis and is increasing production in American war plants, followed by information on the strategic use of colors in the wartime home. Such subjects are discussed as color-reaction tests, the elements of color harmony, colors and your personality, stimulating and soothing colors, how to reduce eye fatigue by the proper use of color, how to select wall colors to fit your present furnishings, where to use warm and cool colors, light reflection of colors, and how to use camouflage in the home.—Decorating Studios, Time-Tested Paint Laboratories, Cleveland, Ohio.

59—UNIT LAMINATED ARCHES AND BEAMS—A 12-page technical catalog on glue welded arches and beams—a construction which has come into prominence during wartime scarcity of steel. The book illustrates the successful use of glued laminated construction over an 8-year period, in buildings covering an area of more than five million square feet. Practically every conceivable shape and type of arch and beam, and practically every basic type of installation is shown, with photographs, drawings and suggestions for their practical application. —Unit Structures, Inc., Peshtigo, Wis.

60—HOW TO BUILD A BACK-YARD "VERTICAL" BARBECUE—A four-page illustrated folder talks alluringly of barbecue parties for wartime stay-at-home vacationers. Stock plans are available showing how to construct a Selby "Vertical" Barbecue with a fireplace, fuel bin and warming oven. Non-critical materials are used throughout, except for certain iron parts which easily may be obtained from junk yards. Plans include 51 detail drawings showing every step of construction and how to make all parts, including patented spit, side arms and sliding skewer. Literature is written for home owners and may be used by contractors or dealers to promote building of outdoor fireplaces and yard improvements.—Allen Selby Associates, 1836 Chase Ave., Chicago, Ill.

TO-DO-IT INFORMATION

61—FIREPEL FIRE RETARDANT MATERIALS—An elaborate brochure entitled, "The New Weapon Against Fire," gives general information on Firepel, a chemical treatment of unfinished wood, affording a practical method of successful fire retardation. Six questions about this product are answered—what it is, where to use it, how it is applied, what it does, special properties, and cost. The manufacturer has also issued a series of bulletins on Firepel and Firepel "S" offering general data, detailed instructions for application, cleaning and renewal of surface, special uses, and methods of treatment.—Albi Firepel Corp., 9 Park Place, New York, N.Y.

62—GLAZING MATERIAL FOR WOOD WINDOWS AND STORM SASH—The Armstrong Co. of Detroit has issued a set of bulletins of particular interest to those in the wood sash industry. "How to Increase Your Storm Sash Sales" is the title of one of the 4-page folders, offering promotional pointers; the other two folders describe Armstrong's Arm-Glaze, an elastic glazing material used by the millwork industry to recondition sash due to putty failure.—The Armstrong Co., 241 S. Post St., Detroit, Mich.

63—HOW TO FABRICATE FITTINGS FOR WELDED PIPING INSTALLATIONS—A new 12-page booklet entitled "Pipe Templates for Welded Fittings" shows how to draw up and use paper templates for flame-cutting pipe to assure accurate, close-fitting connections. The templates and procedures described are intended primarily for use where special fittings are required or where stock welding fittings may not be available when needed. Occasions sometimes arise where it is more advantageous for a user to fabricate his own fittings, instead of using standard welding fittings; in such cases, methods outlined in this booklet will save guesswork and will help assure efficient fabrication.—Air Reduction, 60 E. 42nd St., New York, N.Y.

64—POWER TOOL INFORMATION—A new catalog has just been issued by Delta, showing the company's 1943 line of production machine tools and woodworking production tools and accessories. This catalog has 52 pages of illustrations and detailed information on power tools—with the best uses for many interesting and unusual accessories described and illustrated.—The Delta Mfg. Co., Milwaukee, Wis.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department, (July, 1943)
American Builder,
105 W. Adams St., Chicago, Ill.

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

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

OCCUPATION* .....

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

ASSOCIATIONS LOOK AHEAD

Producers' Council Meeting on Post-War

AT THE twentieth annual meeting of the Producers' Council, held in Cincinnati recently, keynote speakers pointed out that at the end of the war, industry must be prepared to get down to brass tacks and provide an economy in which every man and woman in the nation may continue to find lucrative employment.

A forecast of some of the probable conditions after the war was made by Stuart M. Crocker, New York, vice president of the General Electric Co., and chairman of the Advisory Board of the Council, as follows: There will be a tremendous backlog of demand for consumer goods. Taxes will be at high levels. There may be some unemployment during reconversion. Capital financing will probably be reasonably easy. There will be from two to two and one-half times as many persons to be re-employed as were out of work at the worst point in the depressions. There will be an insistent public demand to tackle the problems of blight, municipal impoverishment, housing and other urban problems.

New officers elected were: Douglas Whitlock, Washington, president; first vice president, Russell T. Tree, New York; second vice president, Gordon Hay, Chicago; secretary, C. W. Stuart, Bridgeport, Conn.; treasurer, Irving Clark, Mansfield, Ohio. Directors, two-year terms, Northeast Region, G. M. Fletcher, New Britain, Conn.; West Region, C. W. Kraft, Niles, Calif.; West Central Region, E. J. Gossett, Morton Grove, Ill.; at large, L. C. Hart, New York, and W. V. Peters, Youngstown, O.; one year, to fill unexpired terms, at large, J. J. Marsh, Dover, O.; and F. A. Sansom, New York; Southern Region, North Wright, Toledo. Other Board members are George J. Haas, Detroit, and J. L. Kretzmer, New York.

Plywood Post-War Promotion Discussed; Association Officers Named

MANUFACTURERS of Douglas fir plywood, whose 29 factories long have been at top production for war needs, concerned themselves primarily with future peacetime markets when they held their annual industry convention at Tacoma, Wash., on May 25. "The plywood operators must prepare now to get back in the consumer market coincident with the cessation of military orders," W. E. Difford, managing director of the Douglas Fir Plywood Association, told the manufacturers. He followed with a preview of the program already prepared by the trade association for expanded plywood promotion to become effective with victory.

At the meeting N. O. Cruver, vice president of Wheeler Osgood Sales Corp., was named president of the trade association for a second term. Other officers re-elected include: Frost Snyder, president of Vancouver Plywood & Veneer Co., as association vice president; J. P. Simpson, vice president of Buffelen Lbr. & Mfg. Co., association treasurer; H. E. Tenzler, president of Northwest Door Co., association secretary.

Trustees of the all-industry board are: T. B. Malarkey, vice president of M & M Wood Working Co. of Portland, Ore.; Clay Brown, manager of the plywood division of Smith Wood-Products, Inc., of Portland; J. R. Robinson, president of Robinson Manufacturing Co. of Everett, Wash., and E. W. Daniels, president of Harbor Plywood Corporation of Hoquiam, Washington.

N. O. CRUVER, re-elected president of Douglas Fir Plywood Assn., gets a report of association activities from W. E. Difford, managing director.

Produces Better Concrete Construction

SANTORIZED Trimix Liquid, made by L. Sonneborn Sons, Inc., New York, N. Y., improves the dispersion of cement particles in a portland cement mix and automatically permits reduction of water ratio and improves the compressive strength characteristics of concrete. This is due to the application of the principle of greater wetting by means of additives having great surface activity. Moreover, these results are achieved without in any way interfering with the normal hydration cycle of portland cement.

Moncrief Acquired by C. A. Olsen

THE C. A. Olsen Manufacturing Company of Elyria, Ohio, has acquired title to the complete manufacturing plant of The Henry Furnace and Foundry Co., Medina, Ohio, and on May 27 took over its operation.

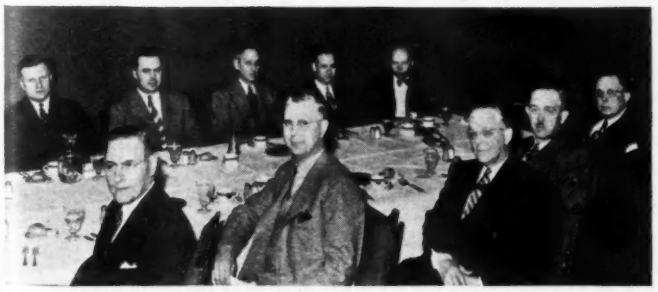
General offices of the new company will be located at the Medina manufacturing plant, while purchasing, sales, accounting and other activities will be carried on at the place of manufacture.

C. A. OLSEN, president, the Henry Furnace Co., Medina, Ohio.

Indoor Climate Institute Organized

SPEAKING before the National Warm Air Heating and Air Conditioning Association in Chicago recently, Paul B. Zimmerman, vice president, Airtemp Division, Chrysler Corp., disclosed plans for the formation of an industry-wide cooperative educational program known as the "Indoor Climate Institute" which will acquaint the American public with the best equipment and methods for producing indoor comfort in the post-war homes of tomorrow. The Institute program, which has been under consideration by a steering committee representing all divisions of the heating industry for several months, will be presented to other leading trade associations at the earliest meetings of these groups. It will be educational and promotional in nature, and will not supercede any of the operating functions of the various trade associations in the heating and air conditioning industry.

The Institute, which will be supported by subscriptions from manufacturers of heating units and auxiliary equipment in the heating and air conditioning industry, will be governed by a group made up of individuals representing trade associations in the fields of boilers, controls, war air heating, oil burning units, gas equipment, stokers, steel boilers and auxiliary equipment. Additional representatives at large will serve on the Board.



STEERING Committee of Indoor Climate Institute consists of: (front row, left to right) P. B. Zimmerman, Airtemp, Chairman; C. T. Burg, Iron Fireman; W. J. Grover, Surface Combustion; J. M. McClintock, Illinois Iron and Bolt; A. T. Atwell, Quaker Mfg.; (back row left to right) C. E. Lewis, Delco Appliance; L. N. Hunter, National Radiator; C. D. Lyford, Minneapolis-Honeywell; J. R. Scott, Mueller Furnace; and W. H. Knowlton, secretary.

Wire Post-War Homes for Service

(Continued from page 45)

was approximately 1.15 per cent to the house owner, but in considering the saving of electricity by the adequately wired system, it was found that the electrical performance savings to the owner during the FHA payment period of 25 years was equivalent to a saving of 6.3 per cent of the total cost of the house. Here is a sales point worth considering.

In an estimate based on 1939-1940 average wiring costs, and adjusted to anticipated post-war conditions in the areas of Western Pennsylvania, it was concluded that, assuming the cost of a house to be $5,000, the inadequate wiring installation represented about 2 per cent of the total cost, while the adequate wiring installation represented 3.7 per cent of the total cost. This means that the increased cost to the home owner is only 1.7 per cent of the total cost of the house, while the increased cost of electricity flowing through an inadequate and overloaded circuit will be many times that of the cost of an adequate three-wire, 60-ampere service.

There is, of course, no use in putting in outlets for heavy service units that may not be used; the point is to provide the power or amount of current necessary if the house owner does want to use heavier electrical loads.

Adequate wiring in this way is a great help to resale of a house because home owners move their ranges and refrigerators when they leave, as a general rule.

To provide power for a range, or an attic fan, or numerous other electrical appliances, the three-wire, 60-ampere service needs to be brought only to the main distribution panel, and in this instance labor and material costs have been estimated to be only about $10 extra. Almost universally, a three-wire, 60-ampere service is required by utilities and it is recommended in the national electric code. In many areas the three-wire service costs no more than two-wire service due to competition and usage.

In talking about adequate wiring, the cost of equipment such as an exhaust fan or bath heater is sometimes wrongly reflected as a part of the added cost of adequate wiring. Equipment is a separate charge. The wiring merely makes it possible for an owner to use his house as he sees fit.

The changes in standard building practice, such as the greater use of hardwood floors and the use of insulation, have made the installation of wiring much more difficult after the home is completed. It sometimes costs $75 to $125 extra to include adequate wiring after a house has been built. If the house had been adequately wired in the first place the additional cost would have been negligible. The really tough items to include after a house is built are things like three-way switch control and outlets on outside walls and wiring on the second floor generally.

While it is commonly thought that builders, contractors and architects are the ones who design houses, the fact of the case is that it is the mortgage people who really design the houses, for they are the ones who make it possible for people to buy the houses to a large extent. In the future, an inadequately wired house will not be considered as good on a long range risk by mortgage companies as an adequately wired house.

Today electric appliances are an important part of modern living and the ability of a contractor or builder to provide not only the outlets but the appliances themselves for the prospective home owner is an added sales appeal as well as the means of attaining an added profit. With electrical appliance manufacturers advertising war bonds, urging consumers to buy bonds and earmark them for the future purchase of electric appliances, the American people are being made appliance conscious. Contractors and builders who do not see the potentialities of this pent-up market may find that they are losing a lucrative bet.

The following check list of standard residential branch circuits may be of assistance in considering post-war wiring!

For lighting and small appliances use one 15-ampere circuit for each 500 square feet of finished floor area of the house, No. 14 wire or larger;

Kitchen and table cookery appliances require one 20 ampere circuit to convenience outlets in kitchen, dining room and pantry, No. 12 wire or larger;

For laundry appliances, one 20-ampere circuit to con-

venience outlets in laundry, No. 12 wire or larger is needed;

For wired-in appliances, dish washer sink, built-in ventilating fan, automatic washing machine and similarly fixed appliances which cannot be connected to the appliance circuits serving convenience outlets in kitchen and laundry, use one or more separate circuits of at least No. 12 wire;

The range requires either three No. 6 wires to heavy duty polarized receptacle and range location, or two No. 8's and a No. 10 wire instead of the three No. 6's;

Water heater requires at least two No. 10 wires for 110-120 volt operation, or at least two No. 12 wires for 220-240 volt operations;

Oil burners or stokers require separate circuits of No. 12 wire to furnace location;

A water pump requires separate circuit of No. 12 wire to pump location;

A built-in room heater requires individual circuits of No. 10 wire for 110-120 volt operation to each location, or a No. 12 wire for 220-240 volt operation.

* * *

Uncle Sam Will Help You Sell Insulation

(Continued from page 40)

The Federal Reserve Regulation "W" has been relaxed to allow longer credit terms on all work done to help conserve fuel; loans up to $2,500 are available through FHA, Title I; and home owners are being urged to insulate now and pay first payment after November 15th.

The campaign tools needed for a summer insulation program are first to secure lists from fuel oil dealers of home owner prospects. Fuel oil dealers will be glad to work with you.

Don't neglect house to house solicitation.

Sell insulation at an installed price, giving the customer a figure just as though he were buying a range or furniture.

Whenever possible tie in and sell storm sash (when it is available), roofing, flooring, louvers, weatherstripping whenever an insulation job is sold.

It is often possible to get the financing organization salesmen to work with you if you are really going after the business. They can sometimes smooth the way to a sale.

Arrange to finance the insulation job, either through the ABC Service, your dealer, or some other financing organization. In your advertising stress time payments, "$5 down a few dollars per month."

Advertise the insulation campaign in the daily newspaper or tie in with your lumber dealer's campaign. Offer some inducement for a limited time such as 10 per cent discount during the week or weeks of the campaign. (As many as 35 jobs have been sold in one week.)

Support newspaper advertising with direct mail campaign to a select list of prospects. Check old estimate files covering house jobs where insulation was left out. Use return cards with manufacturers' literature.

Set up insulation window displays in downtown store windows, in the local bank, in your own display window. Supplement this with window streamers, counter displays, insulation displays which can be made available either through the manufacturer or your lumber dealer.

Use government copy on the shortage of fuel and necessity of insulation in your letters, advertising and conversation. Use the telephone to call customers' or prospects' attention to the campaign.

During the campaign see that you and your salesmen contact everyone possible during and after work hours.

If your local dealer has not already taken an active part in this campaign, get to him and urge him to do so. Work with him. For here is an opportunity for carpenters, contractors, builders and lumber dealers to perform an essential service that not only is patriotic, but one that will pay well.

Department Stores Promote Homes

(Continued from page 48)

The plan operates on three different bases. First, customers can bring their bonds in and save them for a home; second, the people can join and save money in a manner similar to Christmas Club Savings plans; third, and the plan most stressed, customers are urged to buy a government bond (not a Series E bond) in an amount equal to the down payment. On these bonds they borrow the money from the bank to finance the bond, and then pay off the bond on time.

The promoters plan to furnish a four-room house with two bedrooms, plenty of closets and no basement for as little as $1800 up to a house costing $40,000. For example, a six-room, three-bedroom house would run about $4600.

In working out the price of this house the sponsors state that building material manufacturers are now designing materials to a price rather than for a price, and these prefabricated houses, they claim, may save 10 per cent and sometimes as much as 32 per cent. The fabrication operation will be decentralized as it costs about 50 cents a mile to transport to site.

The sponsors also state that 27,000 houses have already been built on this system; that there has not been a strike on the job; that labor will be given an annual wage and will be enabled to build all year 'round.

When signing up for the club savings plan customers agree on the amount they want to spend for a house, which roughly limits the size of the house, but there is no guarantee of the sponsor to deliver a specific house at a specific price.

It has often been mentioned that the weakness of the conventional method of building houses lies in merchandising. Every year since 1932 less of the American dollar has gone into building because products manufactured on a production line basis have been merchandised better and therefore have claimed the American dollar.

The reason the department store is being used for the distribution of homes is because it is the heaviest trafficked retail store, using ten times as much linage as the largest national advertiser, and it is the best merchandising medium in the country. The sponsors state that it is possible to sell a house on Saturday and move in on the following Saturday.

When 2,511 people register in a single week and indicate their interest in further information on home owning and when the prefabricated house to be sold is not confined to stock models, but can be prefabricated from any architect's plan; and when American bankers are figuring on means whereby they can write mortgages on demountable houses, it is apparent that enough large business interests are behind the sale of prefab homes through department stores, to make it essential for builders and contractors to reconsider what they are going to offer the public and to particularly lay emphasis upon their merchandising programs.

* * *

How to Make A-1 Prospects

(Continued from page 35)

he has a large number of future home buyers paying from $25 to $40 a month on their lots. He has opened seventy-one budget accounts in the past year and a half, which should keep him busy building homes for some time after the war.

"Lots of people are talking about the post-war prospects, but few are doing much about it," Ninneman told *American Builder*. "We could sell 200 lots if we could promise an exact delivery date on the houses. As it is, we will come out of the war with enough prospects to keep us busy for quite a time because our budget plan buyers will not only have their lots paid for but will have acquired a habit of regular saving."

In his advertising Ninneman has tied in with the Government's bond buying campaign. Certain types of government bonds may be purchased and assigned towards the payment of a lot. This is not true of the Series E savings bonds, but is of several others. The price of home sites in Highland Park ranges from $599 to $799. Ninneman has built and sold more than 160 houses in his Highland Park community and at the present time has some 18 under construction, using up the last of his priority quota. He owns a large area suitable for post-war home building development and a considerable number of sites with all improvements in.

Following is the text of the land contract and terms of sale as set forth on pages 4 to 9 of the budget book every buyer receives.

PRICE AND TERMS

The purchaser hereby agrees to purchase said real estate upon the terms and conditions herein contained, and to pay therefor the sum of ..... Dollars, payable within three years from date hereof as follows: ..... Dollars, on making this agreement, thereafter installments of not less than..... .....per month for each lot, on the tenth day of each month, first payment to be made on the tenth day of the month following thirty days from the date hereof, and on the tenth day of each month thereafter, until, with the amount first hereon paid, said purchase price is fully paid; however, the entire purchase price shall be paid in full on or before three years from date hereof. All payments are to be made to the seller at.....

It is agreed that all payments hereon made until one-half of said purchase price shall have been paid, shall be deemed paid in consideration of the continuation of this agreement as an option from month to month to purchase said real estate; and until such one-half part of the purchase price shall have been paid, time shall be deemed of the essence of this agreemnt, and no equity of redemption shall vest in the purchaser. After such one-half part of said purchase price shall have been paid, this instrument shall be deemed a land contract binding upon both parties, and the purchaser shall thereupon be entitled to the possession of said land.

INTEREST

First: From and after this date, said purchaser shall pay interest on the tenth day of each and every month, at the rate of five (5) per cent per annum on the unpaid balance of said purchase price.

TAXES

Second: The purchaser shall pay the taxes assessed upon said premises for the year 1940, and all subsequent general and special taxes. In case the said purchaser shall fail to pay any tax or assessment upon said premises, so required to be paid by said purchaser, whenever and as soon as the same shall become due and payable on the aforesaid, the seller may pay the same, and the amount of such payment and interest thereon at the rate of ten per cent per annum from the date of such payment until paid, shall thereupon be added to and be deemed a part of the unpaid purchase price for the said premises.

DISCOUNT

Third: Any part of the unpaid balance of the purchase price may be paid at any time before it becomes due, and in such a case a discount shall be allowed as follows: A discount of five (5%) on the full purchase price; a special discount will be allowed of 2% on the balance of the deferred payment if.....per cent or more is paid at the time of purchase and if .....of the purchase price is paid at time of purchase a discount of 3% will be allowed on the balance of the deferred payment, if the full purchase price is paid on or before thirty days from the date hereof, whether or not the seller shall furnish deed on or before said date. In no case shall such discount be allowed to purchaser, unless the full purchase price shall have been paid on or before said date, and failure on the part of the seller to furnish a deed, shall not operate as an extension of time for the purpose of entitling purchaser to such discount and non-payment shall operate as a forfeiture of the right to such discount.

DEFAULT

Fourth: In case of default in any of the payments above mentioned, either of purchase money, interest or taxes, be made and continue for thirty days or longer, the seller of the real estate herein described or assigns may, at its option, at the expiration of such thirty days or at any time thereafter, either declare the entire unpaid balance of said purchase money due and payable forthwith, or they may rescind this contract, in which event all payments made by the purchaser shall be retained by such seller in full satisfaction and liquidation of all damages sustained for the breach of this contract on the part of the purchaser, and such seller or assigns shall thereupon have the right to re-enter and take possession of all of said premises. Failure or delay of the seller to exercise any right or privilege accruing by reason of any default on the part of the purchaer, shall not be deemed to be, or to operate as, a waiver of the rights to exercise such right or privilege accruing upon any subsequent default.

POWER OF ATTORNEY

Fifth: And in case of such default for thirty days or more, the purchaser hereby constitutes, appoints, authorizes, and empowers Leo I. Crist, Trustee, as his, her or their attorney in fact, with full power of substitution, for him, her, or them, and in his, her, or their place and stead to execute, acknowledge and deliver to the seller, his successors or assigns, a proper assignment, release or quitclaim deed of all interest of the purchaser in the real estate above described, hereby ratifying and confirming all that said attorney or such substitute may do by virtue of this power of attorney, to convey to the seller, all right, title, and interest of the purchaser in and to said real estate; and the purchaser further agrees that the records and accounts kept by such seller or its agent as to payments made for said real estate by the purchaser, shall be conclusive for the purpose of the exercise of this power of attorney.

NOTICE OF OPTION

Sixth: A letter addressed to purchaser at..... and mailed shall be sufficient notice of the exercise of any option or options reserved by the seller.

DEEDS

Seventh: The seller covenants and agrees to convey the said real estate to the purchaser, his, her, or their heirs or assigns, by good and sufficient warranty deed free and clear of all legal incumbrances, except such as may have been created by the purchaser or those claiming under the purchaser, and except the taxes herein agreed to be paid by the purchaser, and re-

(Continued to page 90)

(Continued from page 89)

strictions of record upon payment of the full amount of said purchase price and interest as herein agreed to be paid by the purchaser.

REMOVAL OF SIGNS, ETC.

Eighth: The seller retains ownership of and reserves the right to remove from said premises, "For Sale," advertising and other signs and temporary buildings now on said premises; further, for a period of three years from and after the date of the signing of this contract no billboards shall be placed upon any part of said premises except upon written consent of N. P. Ninneman, his successors or assigns.

ASSIGNMENT OR TRANSFER

Ninth: The purchaser may sell or transfer this contract, before the purchase price is fully paid, with the written consent of the seller endorsed hereon, but any attempted sale or transfer of this contract without such consent shall be void. In the event of a sale or transfer of this contract with such consent, the last assignee or grantee shall succeed to all the rights and liabilities for the purchaser hereunder. A transfer fee of $2.00 shall be paid for each transfer. All the agreements herein contained and the rights and obligations hereby conferred or imposed, shall extend to, inure to the benefit of, and be binding upon the heirs, executors, administrators, successors, and assigns of the respected parties.

REPRESENTATION

Tenth: No representations are made as to the exact grade or elevation of said real estate or the nature and condition of the soil. No representations other than those expressed herein are part of the consideration.

BUILDING AND OTHER RESTRICTIONS ADOPTED BY N. P. NINNEMAN, AS OWNER, AND APPLYING TO THE UNIT OF HIGHLAND PARK SUBDIVISION, REPRESENTED BY THE PLAN TO WHICH THESE RESTRICTIONS ARE ATTACHED, LOCATED AT SOUTH 18TH STREET AND CARLISLE ROADS, LOWER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA.

Said building and other restrictions herein set forth, as adopted by said Owner, shall constitute the covenants by and between said Owner, and each and every lot-purchaser of any lot upon said Plan, and said covenants may be enforced by bill in equity or other appropriate successors, executors, administrators or assigns; and said Plan and attached Building and Other Restrictions are to be recorded in the appropriate Map Plan Book in the Office of the Recorder of Deeds and Mortgages at Carlisle, Cumberland County, Pennsylvania.

(a) All lots set forth on said Plan are residential lots and no structure shall be erected on any such residential building lot other than one detached single-family dwelling not to exceed two stories in height and a one or two car private garage.

(b) No building shall be erected on any residential building lot nearer than twenty-five (25) feet to, nor farther than fifty (50) feet from the front lot line, nor nearer than seven (7) feet to any side lot line. The aforesaid side lot line restriction shall not apply to garages located on the rear quarter of a lot, but on corner lots the restrictions applicable to the side streets, as indicated on the Plot Plan, shall prevail, twenty-five (25) feet or fifteen (15) feet as the case may be.

(c) No residential structure shall be erected or placed on any building lot which lot has an area of less than fifty-five hundred (5500) square feet, or a width of less than fifty (50) feet at the front building setback line.

(d) No noxious or offensive trade shall be carried on upon any lot nor shall anything be done thereon which may be or become an annoyance or nuisance to the neighborhood.

(e) No persons of any race other than the Caucasian race shall use or occupy any building or any lot on said Plan, except that this restriction shall not prevent occupancy by domestic servants of a different race domiciled with an owner or tenant.

(f) No trailer, basement, tent or shack, garage, barn or other outbuilding, erected on the tract shall at any time be used as a residence, either temporarily or permanently, nor shall any structure on the property of a temporary character be used as a residence.

(g) No structure shall be moved onto any lot unless it meets with the approval of the Owner of the Development or the Committee referred to in Paragraph (h) hereof, or if there is no Committee, it shall conform to and be in harmony with existing structures on the subdivision.

(h) No building shall be erected on any lot of this subdivision until the design and location thereof have been approved in writing by the Owner or Committee elected by a majority of the Owners of the lots in said subdivision. However, in the event that such Committee is not in existence or fails to approve or disapprove such design or location within thirty (30) days of application thereto, then in either of these events such approval will not be required provided the design and location of the lot conform to and are in harmony with existing structures on the subdivision. In any case, either with or without the approval of the Committee, no dwelling costing less than Three Thousand Five Hundred ($3500) Dollars, shall be permitted on any lot on the subdivision and the ground floor square feet area thereof shall not be less than eight hundred fifty (850) square feet in the case of a one story structure, nor less than seven hundred (700) square feet in the case of a one and one-half or two story structure.

(i) A perpetual easement is reserved over the rear five (5) feet of each lot for utility installation and maintenance.

(j) These covenants and restrictions are to run with the land and shall be binding on all the parties and all persons claiming under them until January 1, 1963, at which time said restrictions shall be automatically extended for successive periods of ten (10) years, unless by a vote of the majority of the then owners of the lots, it is agreed to change the restrictions in whole or in part.

(k) If the parties hereto or any of them, or their heirs or assigns, shall violate or attempt to violate any of the covenants or restrictions herein during the period that the same are in force, it shall be lawful

for any other person or persons owning any other lots in said development or subdivision to prosecute by any proceeding at law or in equity against the person or persons violating or attempting to violate any such restriction and either to prevent him or them from so doing or to recover damages for such violation.

(l) No cesspools shall be permitted on any lot on this subdivision, but the disposal of sewage shall be accomplished by the construction of a septic tank, to be in accordance with the requirements of the local and State health authorities. If and when public lines for the collection of sewage are available on the subdivision, all dwellings erected thereafter and abutting upon said line shall be connected thereto, and all dwellings erected prior to the installation of the public lines, subsequently whereon said lots abut, shall be connected to said public lines within a reasonable period of time following the installation thereof.

(m) These covenants are to run with the land and shall be binding on all the parties and all persons claiming thereunder, as set forth in Paragraph (j) hereto.

(n) Invalidation of any of these covenants by decree of judgment of any court of competent jurisdiction shall in no wise affect any of the other provisions, but the same shall remain in full force and effect.

* * *

Steel and Plywood Huts—

(Continued from page 49)

The floor is of plywood panels nailed to the light steel joists, and the two ends, or bulkheads, are of prefabricated plywood panels, five panel units to each end, all complete with door, ventilator and windows inserted.

The mass production of these insulated plywood bulkheads has been perfected by Carl A. Strand, of Birmingham, Mich., and Portland, Ore., for the Great Lakes Steel Corp., Stran-Steel Division, Detroit, which is the principal contractor for these Navy huts. He has set up production lines at several points in the Pacific Northwest, utilizing existing millwork plants by retooling them for this special work. Jigs, assembly tables and light power tools are used in much the same technique as for prefab plywood houses; in fact, the most interesting aspect of this piece of specialized war construction work is probably its contribution to the "science and art" of prefabricated houses, farm buildings and light commercial structures for post-war civilian use.

The photographs herewith, taken especially for *American Builder* at Mr. Strand's Pacific Coast subcontract plant, give a good general idea of the procedure. Each hut end, or bulkhead, consists of five double-faced, insulated panels of waterproof Douglas fir plywood. These panels are 2⅛ inches thick, faced with ¼-inch plywood each side. The plywood is glued and nailed to a light frame of 1⅝ inch stock. The center panel carries the door, and above it is a ventilating panel; the two intermediate panels each carry a large window, and the two side panels round out the assembly. All are accurately sized and interlocked to go together quickly to fill the end openings in the steel frame as supplied for the hut.

The ventilator and windows have a blackout panel of plywood hinged in place, also an insect screen; the window sash are glazed with plastic glass.

Roof windows (under another contract and shipped separately) are also part of Mr. Strand's responsibility for the millwork parts of these Navy huts. Roof windows conform to the curve of the roof, are of double-hung type for water tightness, and are equipped with blackout panels.

The end bulkheads are securely boxed, with the five units to make one complete end packed together in one case. Carloads of these hutment ends roll away from these assembly lines every day, routed to the embarkation ports where they meet up with the steel frames, roof materials, roof windows, and floor panels to complete these fighting structures and accompany our Navy boys for health and comfort into arctic cold or tropic heat, wherever they are sent.

"Build 'Em for Keeps—"

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built that a maximum utilization of space and a minimum use of critical materials could be effected. A typical 4½-room second floor apartment has a private entrance, stairway leading up to a large living room, with a coat closet at the head of the stairway. Directly off the living room is a cozy dinette with entrance into a compact victory kitchen whose utilities while both adequate and attractive use no more than the minimum of metals. The bath is set next to the kitchen and at a spot available to both rear cross-ventilated bedrooms.

Weiser's tenants are for the most part in-migrant war workers brought into this area by the expanding production in war plants. A quick examination of his signed leases would indicate such diverse and distant points of origin as Schenectady, Utica and Buffalo, New York; Baltimore, Md.; Scranton, Pa.; and several towns in Virginia.

Post-War Apartment Planning

In looking ahead to post-war apartment building Arthur Weiser says:

"The conception of planning living quarters, and the type of construction and use of material has undergone a material change since the last war and will undergo an even greater change in the method of costruction, use of materials as well as planning after the present war.

"Apartment planning prior to the last war gave no evidence of thoughtful planning. They just built 'rooms' without apparent thought to adequate living requirements. As a matter of fact, people inquiring after an apartment would ask for 'rooms'. The kitchen would be quite the most important room in the house. The 'parlor' would be generally used on occasions or for company.

"I have for many years stressed the importance of arranging living space which would serve the greatest efficiency and comfort, provide spaciousness with ample light and ventilation, and at the same time 'cut to cloth' to obtain the greatest economy of usable space. Thus a living room became the most important part of the apartment. Here you live, entertain and eat. It is in fact the room where you spend all of your hours awake. The kitchen should be only large enough for efficient use and properly studied as to arrangement of fixtures. You do not eat here, but rather in a separate lighted alcove or bay which is part of the living room. Generally speaking the theory of apartment planning should be as follows:

Three Important Considerations

1. Suitable and efficient space to spend the wakeful hours at home.

2. Suitable and efficient space for the preparation and storing of food, etc.

3. Sleeping quarters and the necessary facilities for clothing, dressing and bath.

All with as few partitions as possible and the elimination of hall corridors and the like.

"As for construction, here great changes are in the making. I believe that the old method of plaster walls will be replaced by a type of dry wall construction which will be sound resisting. Prefabrication of all plumbing parts, walls, partitions, etc., and yet maintain freedom of individual design.

"While people are slow to change habits formed over a period of many years, living habits will change as the architects change their conception of 'design for living.'"

800 Houses—3½ Months

(Continued from page 37)

blocks to which two layers of plaster were applied. Outside finish consisted of a heavy coat of waterproofed cement paint.

The task of handling the vast quantities of cinder blocks was a difficult one. More than a million were required for the 800-unit job and had to be shipped in from Roanoke, Va. A special siding was constructed close to the site and from there the blocks were moved by heavy trailer.

Interior walls are of 4-inch gypsum block, the roof of asphalt shingles. A lumber-saving, cost-saving truss system as detailed herewith was used in the roof construction. A 2-inch layer of mineral wool insulation was placed in the ceiling.

The Levitts carried their conservation of metal to the nth degree. They developed a wood dowel window lock (detailed herewith) to replace metal catches. Even the clothes hooks are of wood. Non-metallic shower stalls were used instead of bathtubs, so that actually the only place where metal was used was in the plumbing line, the coal-burning space heater, and a few nails required for the roof construction.

The standard Levitt floor plan is 21'-2" x 30', plus a projecting storage and coal room at the front. The open type plan features one large living room with dining space and kitchen. The master bedroom is 9 x 14 feet while the second bedroom is 9 x 11 feet. The fashion in which the bathroom and kitchen equipment is grouped has a large bearing on the conservation of critical materials. One soil stack services two bathrooms and two kitchens. Each unit has an adjustable grill in the ceiling leading to a vent built alongside the chimney.

* * *

Toward a Rational Program—Babcock

(Continued from page 34)

and ratings of the FHA are related solely to the granting of mortgage insurance to protect the lending institutions. The benefits to the buying public, great as these benefits are, are enjoyed only incidentally. The FHA does not make reports to anyone requesting them. The benefits are confined to those projects which FHA insures. Up to the time of the war this was less than half of the new houses built.

Would Separate Operations

Consequently the services of such an agency should be publicly available without any connection with the mortgage insurance operation. This will have the effect of vastly extending the benefits, especially in future periods when much money earmarked for mortgage investment will be available without resort to mortgage insurance. Thus it is contended that the proposed facility should be either an enterprise set up by business and financial interests or a government unit divorced from the FHA mortgage insurance system.

If the proposed facilities are established as a governmental enterprise, it would presumably be best to transfer the Underwriting, Technical, and Land Planning Divisions of the FHA to an independent status—within an over-all Federal housing agency and to use them as the nucleus of an organization to discharge the proposed broadened functions.

But why doesn't private industry and finance undertake to discipline itself? Would it not be feasible for private industry to set up substantially the same machinery? The pessimistic view holds that the construction industry is too fragmental, that it contains so many diverse interests that it is inconceivable that any fully representative and independent institution could be established, that the dilution of interest in the end product is so great that financing of the institution would be difficult, and that the research facilities would not be as great as in government. It is also contended that the certification of any private-industry institution would not carry as much weight as will the certification of the Federal Gov-

(Continued from page 93)

ernment. Some feel that while there is wide acceptance of the certification idea, there is little likelihood that private industry can be induced to provide the needed facilities.

Private Groups Might Do Job

A more optimistic point of view would suggest that if a large number of the major financial and construction interests, including possibly the life insurance companies, the savings banks, and other financial institutions, together with the manufacturing wing of the construction industry, were to sponsor the establishment of such an agency, then the enterprise might succeed fully and provide the basis for reasonable control over the end products of the industry and assure the public that its interests were being served.

It is possible that the scope of this proposed activity may not be fully appreciated. If the annual budget of the establishment equals the costs of operating the technical services of FHA, they will average close to $4,900,000 per year. In other words, to pay its own way the company would have to collect an average fee of $15.00 on about 325,000 family units each year.

The proposal to have a privately-owned, quasi-public company to render these services should intrigue our imaginations. Such a company would be a tremendous influence for the good and would be doubly effective because there would be no coercion to use its facilities. Its modus operandi would be based not on "Thou shalt not" but rather on "Thou darest not."

If our industry offers such a proposal to the public as its contribution to the postwar world we will deserve and receive grateful commendation from millions of American families.

Goal No. 3: Improvement of Cities. This portion of the program should concern a number of matters which relate to land utilization, including items intended to benefit real estate and construction and others designed to make it possible to create more efficient cities and better environments.

(1) We should make provision for the prompt disposition of all excess, undesirable, or temporary structures erected for war purposes, including war housing.

(2) Building codes should and will receive our attention.

Must Consider Rural Building

(3) The present is a particularly good time to restudy the possibility of securing good legislation to provide for excess condemnation of land taken for public purposes, especially that destined for lineal uses such as highways and transportation routes.

(4) Now would be a good period in which to make provision for a better system of real estate taxation, the combining of the multiplicity of local governing bodies, and a more equitable distribution of the tax burden.

(5) In line with these items are the recommendations for better laws and ordinances permitting the enforcement of sanitary codes, the padlocking and razing of substandard structures, and the issuance of occupancy permits as a control measure, as well as the recommended provisions to help correct the general unsightliness of urban communities, such as the regulation of billboards and signs, smoke and noise, and litter and rubbish.

(6) The greatest bulk of postwar construction may be expected to take place on land located in the outer portions of our cities and in border locations. We therefore must not neglect the problems of these areas. Our program should probably include the establishment of local agencies with the power to bring land use under more effective control, by modified and increased zoning regulation and otherwise, in metropolitan regions treated as natural entities.

The vital importance of this kind of activity is apt to be overlooked. The modern evolution of our city patterns to create regional cities now makes provision for spatial planning, land use control, and rational transportation linkages of the first importance.

(7) And finally there is the need for urban redevelopment and rehabilitation. The program will have to embrace consideration of the national and local legislation proposed for these purposes. The proposals recommend the

acquisition of large areas by public authority to provide for greenbelts, intown and outlying airports, and for the recapture of blighted close-in neighborhoods.

We may expect to see great pressures brought to bear to attack these problems exclusively from the point of view of slum clearance and the rebuilding of blighted areas. In most instances the formula will not be effective and the full significance of the recommended legislation will not be appreciated until the practical proposals embrace plans for entire regional cities and until the "rebuilding" objective has lost its appeal.

* * *

Vigorous Action on Post-War Front

(Continued from page 33)

Johnston, president of the U. S. Chamber of Commerce, called a meeting of the construction department, attended by leaders from many branches of the building industry and by government officials, in Washington. The purpose of this session was to study various means towards co-ordinating the post-war planning activities of the various branches of the industry. Thus the first and important step towards development of an over-all industry program was taken.

CED Active

A further important development of the month was the announcement that the Committee for Economic Development of which Paul Hoffman, president of the Studebaker Corporation, is chairman, had organized some 1,000 communities for the development of post-war planning. The Committee for Economic Development is a privately financed organization headed by leading business men who have the objective of preparing business to get ready to do its part after the war providing jobs and in achieving new levels of production through private enterprise.

In most of the towns and cities of the country the CED is organizing aggressive local groups to canvass every employer of more than 50 men and to determine what is necessary in each business and in each community to maintain a high level of employment in post-war.

Local building interests are urged to take part in the local post-war activities of the CED.

Urban Development Act

Important post-war building news was made during the past month when Senator Wagner of New York introduced bill S-1163 which is entitled the Neighborhood Development Act. Sponsored by the Urban Land Institute, this bill would do a great deal to enable local communities to embark immediately on post-war planning for a definite program. Funds would be available from the federal government for architectural and engineering assistance in the preparing of plans and blueprints.

Under the terms of S-1163, which Wagner describes as "primarily a private enterprise bill," federal credit would be extended to local communities for the purchase of land in deteriorated areas. Such land would be cleared of all structures and then turned over to private firms for the construction of housing and other structures.

Long term federal credit at low interest rates would enable the communities to purchase the land and clear it of old structures. The bill, if passed, will give considerable impetus to the rebuilding of cities by private enterprise, and would keep the control and ownership of such work in the hands of the local communities.

American Builder announced its "War to Peace" program for the building industry in its June issue. A broad outline of steps necessary for private enterprise to create its own program for post-war home building was outlined. The program suggested the need for building industry groups getting together at once, the need for revitalization of financing methods and a program for better design and construction of homes. Several developments that carry out the proposals of this plan are described in this issue, and others will be published monthly, culminating in a special issue devoted entirely to post-war planning for private enterprise, in the October issue.

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WILL HER *Dream House* COME OFF AN ASSEMBLY LINE?

Not hers! She is an individualist. Her ideas about the kind of home she and her man will build when he gets home from the war are *emphatically* individual.

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Post-war residential building promises to be immediate and immense. Millions in war bonds will be converted into millions of individual homes . . . which means you'll be back at your regular trade in a big way. Let us help you get ready for that brighter day . . . with construction details in your language, with stress tables for load calculations, with simplified specifications, with painting and finishing formulas and with 15 well planned small home designs by qualified architects. Also included are the how and why of soft-textured Arkansas Soft Pine framing lumber and Satin-like Interior Trim, which have served to build better homes for more than 40 years. Write for this useful information, enclosing 10 cents to cover postage.

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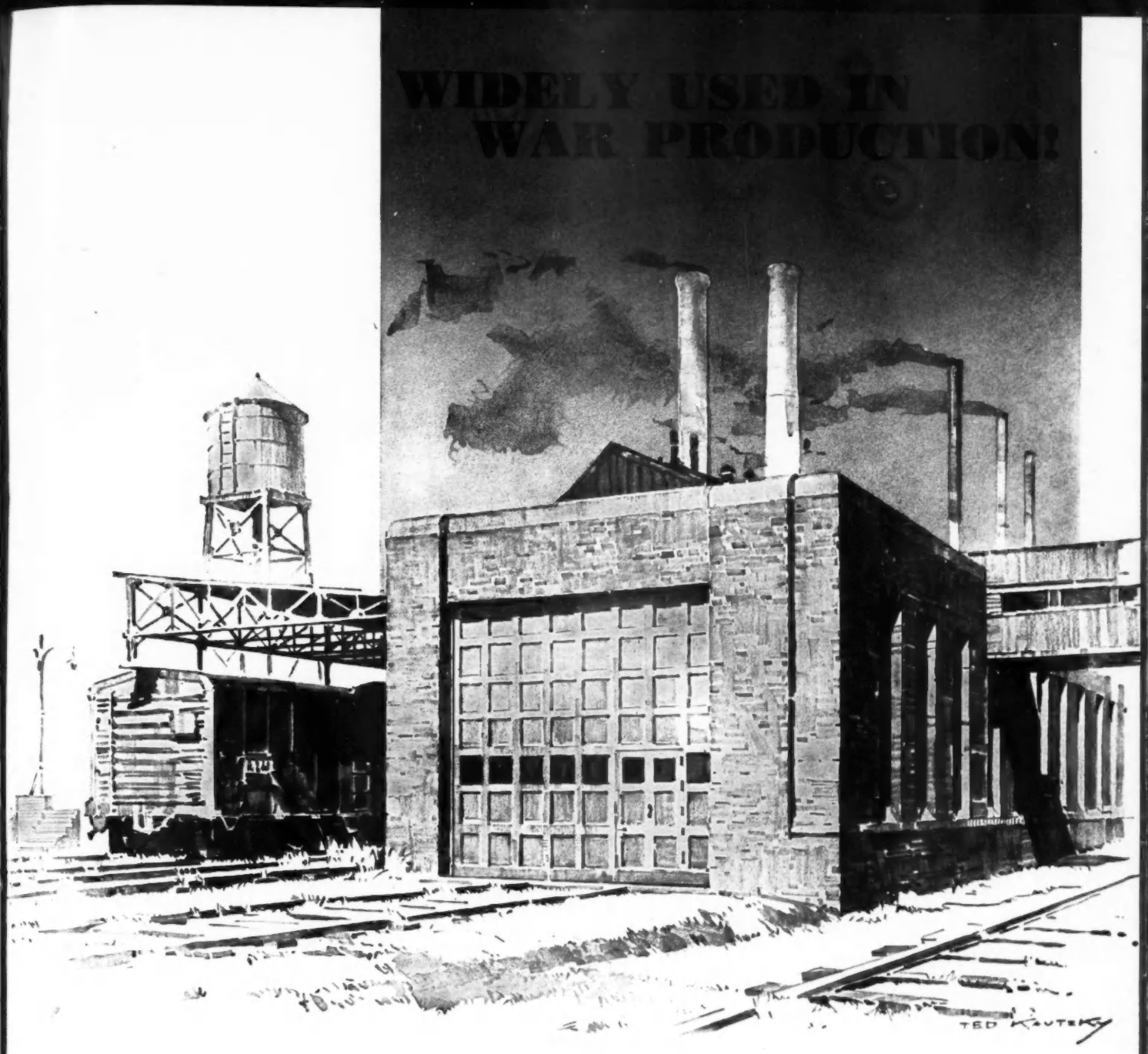

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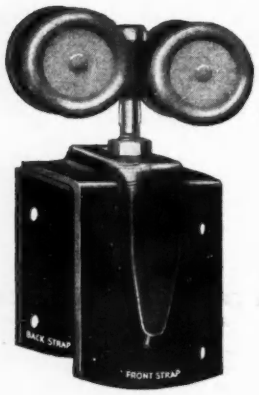

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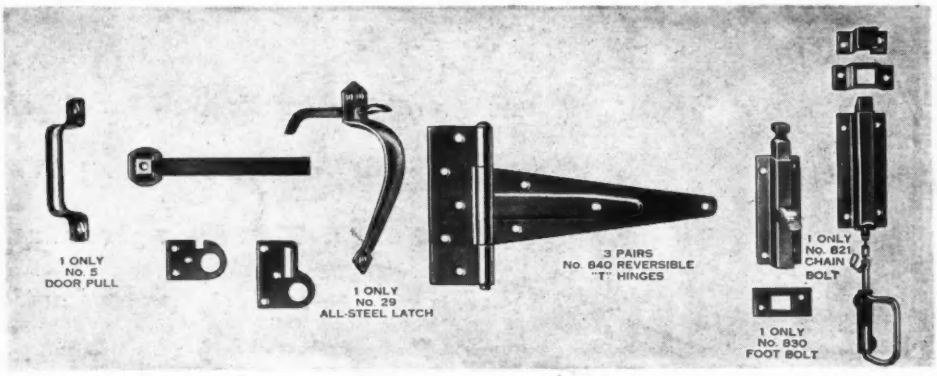

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