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NOVEMBER

1944

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VOLUME 81, NUMBER 5

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FORUM OF EVENTS

Stockholm Museum receives the first European exhibition of contemporary American architecture.



GAY POSTERS HERALD SHOWING

The Stockholm opening of the architectural exhibition, "America Builds" was not only important for a newly established cultural interchange between two countries, it also marked architecture's initial appearance at the Swedish National Museum.

Prepared by the OWI with the cooperation of the Museum of Modern Art and presented by the Swedish-American Foundation of Stockholm, the exhibit was met with a popular interest unknown in this country for so specialized a subject. While all types of American industrial and residential work were represented, none aroused such interest as the TVA. Stockholm newspapers gave the opening smash write-ups literally crowding out the war news. Leading department stores gave it full window displays.

Ceremonial speeches by the Museum Director, the U. S. Minister and other dignitaries stressed the strengthening of international ties by cultural interchange. The exhibition's greatest significance, however, is that for the first time America has been officially recognized in Europe as leading in a particular field of art.

Currently on display at Göteborg, the exhibition is destined to be shown in still-to-be-liberated Denmark. (Continued on page 6)



PRINCESS LOUISE, PRINCE GUSTAF, ARCHITECT TENGBOM OPEN EXHIBIT



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FORMICA

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It is typical of the kind of tough, surface-destroying applications which have been selected of late years for Formica by leading architects. And Formica stands the service and remains as good looking after years as it was when installed.

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HORMIC

FORUM OF EVENTS



WORK OF AMERICAN PIONEERS IN ARCHITECTURE, REGIONAL PLANNING AND PUBLIC HOUSING WERE REPRESENTED

Louis Rosenberg's on-the-spot drawings mirror the work of American engineers in the Middle East.

America's over-all record for war construction is today looked upon as a supernatural feat, but perhaps the most dramatic single job was that of our engineers who transformed the Middle East from an arid, disease-ridden wasteland to a great operational zone and reservoir for war materials. Originally planned and undertaken by the War Department as part of our prewar policy of aid to Great Britain, it has since turned out to be a project of vital importance to all the Allies. Included are tremendous engineering feats in Palestine, Arabia, Sudan, Egypt and neighboring countries. Today Allied bombers take off from airports that have sprung almost instantaneously from the desert. Great pools of manpower and battle equipment are quatered there and some of the most modern supply highways of the war have replaced winding mountain trails.

By relative standards the accomplishment is no less amazing than was the construction of the Great Pyramid for, despite our modern equipment and engineering skill, this transformation could never have taken place without the courage, will and fortitude of thousands of troops and civilians. As a tribute to their performance, Johnson, Drake & Piper, contractors for the War Department, have published privately an impressive volume entitled, "Middle East War Projects," including a collection of drawings by Louis C. Rosenberg (right), which deserve a place of honor among the graphic annals of this war.

(Continued on page 202)



New warehouses at Naval Base-Massawa



Medical warehouses-Tel Aviv

What

does an Architect do

who has himself

for a client?



This one used



It is always stimulating to see what kind of a home an architect builds for himself... and this architect's home in Omaha takes on added interest because it concentrates under one roof the answers to several frequently-asked questions on Radiant Heating.

The house is located on an elevation, exposed to the north and east. Although the wall of the basement (which extends under two-thirds of the structure) gives it a two-story appearance, it is actually only one, with big living room, dining room, hall, kitchen, two bedrooms, nursery and bath.

The large "picture-window," 12-feet wide and ceiling high, is visible in the illustration. The considerable amount of other glass area is also apparent.

Pipe coils were fabricated, with all-welded joints, from Byers Wrought Iron. Coils were laid on a sand and gravel bed in the unexcavated portion of the house, and on precast concrete joists in the other portion, then covered with a concrete slab. Insulation was placed between the joists to influence the heat flow. Hot water from the heating boiler is pump-circulated.

A variety of floors and floor coverings were used: full carpeting in the living room; inlaid linoleum in center hall; hardwood floors in bedrooms and kitchen.

The architect-owner has removed from Omaha, but the present occupants enthusiastically endorse his choice of a heating system. They state that it is the most comfortable they have ever encountered, and that even in the coldest weather (design temperature is -10°) floor temperatures were comfortable. The lag in heating from a very low thermostat setting to normal was only 30 to 40 minutes, with January weather outside.

No direct comparison of heating costs is available since the occupants came from another locality, but they say it is satisfactory, considering the comfort, convenience, and cleanliness. They also reported that visitors from the Middle West had been much taken with the system, and expressed a hope that they too could acquire a home with Radiant Heating.

In your post-war planning, you will undoubtedly have many places for Byers Radiant Heating. Any necessity for guess and gamble in either material selection or design is eliminated by the wealth of experience from hundreds of systems already installed and operating. Byers Wrought Iron pipe combines ease of fabrication, desirable thermal characteristics, and a high degree of corrosion resistance. Our bulletin, "Byers Wrought Iron for Radiant Heating Installations," condenses the complete story between two covers. A copy will be sent on request.

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Busy on war work, we are unable to make residential steel windows now. But the Fenestra postwar line has been determined—so you can make plans. This line is simplified, but complete. It provides an attractive, low-cost Fenestra Window for every room in the house. Write for information on types and sizes. Detroit Steel Products Company, Dept. AF-11,2252 East Grand Boulevard, Detroit 11.

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11

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> "Tops" in comfort is the modern, busy hotel's most potent merchandising appeal for postwar business.

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FOR CLEANLINESS

"UNSURPASSED

RESSES

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"U.S." Koylon

FOAM

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CANNOT PRAISE

THEM TOO HIGHLY"



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September 4. 1944

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PRODUCTS AND PRACTICE

BASEMENTLESS CONSTRUCTION, can be insulated and heated to eliminate cold floors and stratification.

The basementless house, prewar trial balloon of the building industry and mainstay of defense housing, will undoubtedly play an even more important role in postwar construction. Its obvious advantages—an initial saving of \$300 or more, elimination of areaways and improved appearance—appeal to the architect, builder, and home owner alike.

A definite trend to basementless construction was well established by 1940. At that time reports from FHA's field insuring offices revealed that over 30 per cent of U. S. houses were being built without cellars and 14 per cent more with only partial basements.

The survey also showed that most of the houses were one-story—54 per cent in northern cities and 94 per cent in the south. This trend has undoubtedly influenced the growing use of basementless construction, which solves a problem inherent in the conventional onestory house, i.e., its tendency to provide more basement space than necessary in proportion to the upper story.

PROS AND CONS

The basementless house is not only the logical result of the trend toward one-story houses. It also fits into the prefabrication picture since most demountable structures are basementless and one-story. Heating systems, too, have been influenced by the decrease in cellars. New, small units, working on a principle of forced circulation can be installed at room level in contrast to former large furnaces which require a great deal of cellar space.

In spite of the many advantages of the

basementless house, the builder must consider other factors which may make this type of construction impractical. In a certain community on Long Island, for example, it was found that customers do not want to build or buy a house without a cellar, and FHA estimates on such houses are therefore lower in this region. Another consideration is the site itself. When building on an irregular grade it is often just as cheap to put in a cellar. Since foundations must be built below the frostline, basementless houses are also impractical in climates where the ground freezes to any great depth.

Even more important are the questions in the public mind concerning livability of a basementless house. One problem is the inclusion of sufficient storage and utility space ordinarily provided by a cellar. As yet the building industry has not supplied this need, but equivalent space can easily be worked into the plans. A separate utility room for heating and laundry equipment and a space for storing garden tools, trunks and furniture would add convenience without great expense.

The most important problem in the basementless house, however, is the complaint that floors are cold and the houses damp. This was never a question in conventional construction which automatically benefited from the heating plant in the cellar. It is, however, a prevalent condition in most basementless houses as now built, although experience has shown that they can be livable if doors and windows are weather-tight. This, of course is merely a stopgap solution. Recent research proves that all these drawbacks can be reduced to a minimum or completely overcome by the use of proper insulation and well-planned heating systems. The cost will be slightly higher, but will still be substantially lower than a house with a basement.

Two types of foundation construction are used in the basementless house and each presents different problems in regard to heat control. The most common is frame construction raised off the ground over a crawl space; a more recent development widely used in war housing is slab construction, placed directly on a bed of crushed gravel. Contrary to popular expectations, recent studies have shown that better results are obtained with slab construction than with frame.

RAISED FRAME CONSTRUCTION

When floors are raised off the ground, the basic bugaboo is ventilation of the crawl space. Although there is no visible moisture condensation, joists are subject to dry rot if the space is completely enclosed. On the other hand, ventilation cools the air almost to outside temperature, with the inevitable result of cold floors. Studies of ventilated construction made by the TVA at Norris, Tenn. indicate that though a house is heated, the air in the crawl space may be even colder than outside air during the day, probably because the earth under the house gets no heat from the sun.

Cold floors are the direct cause of another problem—stratification of heated air in the upper portion of the room. This condition causes acute discomfort. With extremes of cold at floor level, an



FLOOR HEATING provides warmth by convection and by radiation to the ceiling. A constant supply of heat obviously eliminates cold floors and reduces stratification to a minimum.



HEATED CEILING radiates warmth to the floor, which in turn provides warmed air by convection. A ceiling temperature of 74° keeps the floor constant at 70°, furniture temperature at 75.5°.



SUB-FLOOR HEATING in raised construction reduces stratification to 1.15° as compared with the ordinary 10° to 20° spread.



RAISED CONSTRUCTION without floor insulation or special heating is subject to stratification with high temperatures near the ceiling and cold conditions over the entire floor surface. Horizontal temperatures at 1 in. level (see plan) reveal center warmth near the furnace and extreme cold near doors.



SLAB CONSTRUCTION has less severe stratification and floors are warm except at the edges where heat escapes to the outside. Horizontal temperatures at the 1 in. level (see plan) reveal a much wider comfort range, although corner temperatures are lower. (Data from the Pierce Foundation studies.)

individual must adjust to a spread of 10° to 15° from foot to head while standing. When seated most of his body is exposed to low temperatures. The only really effective ways to combat stratification are to keep the floor, or the air near it, warm—either by special provisions in the heating system or by reducing heat loss through the floor by insulation.

Various heating systems have been tried in an effort to beat this problem. One method is the use of equipment which forces warm air down along the floor. It is a satisfactory solution except for the excessive air movement and the fact that the supply of heat is usually not constant. During periods when the heating system is thermostatically shut off, stratification occurs.

Other remedies which can be used to supplement conventional heating systems should, therefore, be considered.

Insulating walls and ceilings is practical in guarding against heat loss and avoiding cold floors, since the insulation results in warmer surfaces throughout the room, which in turn radiate heat to the floor. A more obvious step is to insulate the floor itself, thus preventing heat escape into the cold air beneath the house. TVA tests in freezing weather revealed that floor, wall and ceiling insulation reduced stratification to 9° between floor and ceiling, as compared to 17° in an uninsulated house. One difficulty with ordinary sub-floor insulation, however, is that dampness and condensation may cause deterioration of the insulation over a period of time. This problem can be solved by using a double-faced layer of aluminum foil or other forms of insulation not subject to rot.

In addition to sub-floor treatment, tests conducted by the John B. Pierce Foundation indicate the value of rugs as insulators. In their plywood experimental house, heavy rugs were found to make a difference of 5° to 6° in the temperature of the floor surface. These results from both the TVA and Pierce studies clearly indicate the importance of insulation in materially reducing stratification as well as saving fuel.

SEALING THE CRAWL SPACE

An even more effective way of combating heat loss is the closing of foundation vents to the crawl space. When this





experiment was tried in the TVA houses, a saving of nearly 21 per cent of the heat loss was established. This constitutes an important factor in heating economy. The method can be used safely during cold months because condensation and consequent rotting of the frame construction does not occur in freezing weather. However, the vents must be opened immediately when the outside temperature goes above freezing, or floors are apt to buckle and wood deteriorate. Since occupants cannot be trusted to open the vents at the proper time, this excellent method cannot be recommended in the absence of a system of automatic controls. If reinforced concrete joists or other structural materials not subject to rot or mildew are used, the space can be permanently sealed off with no harmful effects and heat loss through the floor cut down 50 per cent. However, this method has the drawback of costing almost as much as conventional construction with a full basement.

Sub-floor heating offers still another method of treating the crawl space to obtain comfort in the upper part of the house. Tests of this principle were con-

PRODUCTS AND PRACTICE

ducted in a TVA house by boxing off a test area under one room and insulating around it to maintain nearly constant temperatures. Two room-type portable heaters were mounted horizontally in the boxed area with their grille faces toward the sub-floor. Reflecting pans of boards covered with aluminum foil were placed under the heaters to direct the heat up. With sub-floor temperatures maintained at averages of 69.5° and 85.9° in two different tests the temperature gradients in the rooms above were almost eliminated. Floor surface temperatures were just slightly less than the temperature of the inside air, which remained close to 70°. Wood construction was unharmed by the direct heat.

Sub-floor heating similar to that used in this experiment is probably within the reach of occupants of small homes and it does make a definite contribution to comfort. The heaters were used only as an auxiliary heat source in the test but there has been some discussion of heating a whole house in this way. It could be accomplished with a regular heating system by carrying ducts under the house, if foundation construction were sufficiently tight.

There remains but one other variant in the discussion of the raised frame house, and this construction is actually a hybrid. It is the partial cellar. Here most of the problems of basementless construction solve themselves. If the crawl space in the basementless portion is opened into the cellar instead of vented to the outside, heat from the furnace will warm the air under the floors. There is sufficient ventilation from the cellar to eliminate condensation and consequent deterioration of the wood construction. Although not so cheap as the completely basementless house, the partial basement may be the best solution in many cases.

SLAB ON GROUND CONSTRUCTION

Most people assume that the problems involved in building a basementless house off the ground will be multiplied in concrete slab construction directly on the ground. Until recently there has been no definite data on this, but now it has been discovered that concrete slab is probably better. It is an inherently economical type of building and, unlike raised construction, has little or no problem of vertical stratification. This is partly due to the fact that there is no ventilated air space beneath the floor and the temperature of the earth, while colder than that of the house, is likely to remain well above outdoor levels.

However, the concrete slab is such an excellent conductor that heat tends to escape outward to its edges and the cold outer air. This creates a situation quite different from that of the raised frame house. Horizontal temperature gradients occur—the room is colder at the sides and warmer in the center. Recent studies conducted by the Bureau of Standards have indicated that insulating the edges of the concrete slab greatly reduces this type of gradation.



EDGE INSULATION of concrete slab reduces the horizontal temperature gradient, a common problem in such construction.

Three types of construction - raised frame, uninsulated slab and edge insualted slab - were tested. Temperature readings taken at spaced intervals on the floor of raised frame construction revealed no pronounced difference between the center of the room and its outside edges. However, temperature stratification varied between 62° and 70° in freezing weather, and the heat loss was high-41/2 to 71/2 BTU's per sq. ft. of floor space. In uninsulated concrete slab, temperatures ranged from 55° at the floor's edges to 65° in the warmer middle portion. Stratification, on the other hand, showed a spread of only 5° and heat loss never rose above 6 BTU's. With edge insulation on slab construction, temperatures on the outer floor went only slightly below 60°, and reached 67° in the center of the room. Vertical stratification amounted to only 4°, and but 4 to 41/2 BTU's were lost. It may be concluded, therefore, that edge insulation on slab construction provides the most comfortable situation both horizontally and vertically.

In another respect, however, concrete slabs have a major drawback. Waterproofing under the slab is an absolute necessity unless a finish such as asphalt tile is applied to the upper floor surface. Without waterproofing precautions, a wood floor finish over a slab will buckle and rot. A simple and effective treatment is a layer of asphalt saturated paper or similar material used over the bed of crushed stone, cinder or gravel. Such a layer between the floor and the mass of earth may help the floor temperature to follow the changes in temperature of the air above it. This would lessen the probability of condensation on the floor surface in summer. If the floor can be quickly warmed as air temperature rises in warm weather, condensation on the floor will not occur because the temperature will be above the dewpoint at all times. When not warmed rapidly enough, a small amount of condensation will occur even with the use of waterproofing.

PANEL HEATING

There is one solution to almost all the problems inherent in slab construction. It is the obvious answer to cold floorsradiant heating. Although heating the floor itself is such a simple idea, its development is rather recent. To date, the most common method and also the cheapest is to set coils on a gravel fill and pour concrete over the top. Either hot water or steam can be used. With this system stratification is almost eliminated. There is, however, some question of heat escape into the ground. The crushed rock, gravel or cinders used beneath the slab, act as a fairly satisfactory insulator. Even better might be the use of hollow masonry blocks beneath the concrete, with heating coils placed above, embedded in the slab. The dead air space thus formed would effectively reduce heat loss.

Paradoxically, radiant heating installed in the ceiling is an equally good solution to the cold floor problem. Heated ceiling panels produce a warm floor by radiation and can be used with either slab or raised construction. A recent installation in a small, two-room basementless house at Utica, N. Y., formerly heated ineffectively with a space heater, proved most successful. Even without weatherstripping or insulation, the temperatures at an outdoor reading of -10° remained at 70° on the floor and 74° just below the ceiling, a temperature differential of only 4°.

Thus, three variations of basementless construction have been found quite satisfactory. First is the raised foundation provided with adequate insulation and perhaps sub-floor heating. Stratification, found in most houses of this type as now built, is greatly reduced with either of these precautions. Second, is the partial basement with crawl space opened toward the cellar. Here condensation and cold floor problems are automatically eliminated. Third, is the concrete slab construction insulated at the edges to reduce horizontal temperature gradients. In addition to these specific cures, radiant heating may be applied to all types of basementless houses and is outstanding as a solution to cold floors and stratification.



Retail Merchants need your help as never before!



RETAIL merchants are realizing more and more the importance of proper design and the big difference it makes in sales results. The store-front field today is one of major importance to many leading architects and builders.

In promoting Kawneer Store-Fronts as "Machines For Selling", a major emphasis is placed on functional design and the value of your services. National and local advertising to hundreds of thousands of merchants stresses this theme.

A great opportunity exists for you in the storefront field! Write The Kawneer Company, 211 Front Street, Niles, Michigan, for additional information.



MACHINES FOR SELLING!

BUILDING REPORTER

A new water heater for the armed forces . . . A new method of applying Polythene plastic . . .



IMMERSION-TYPE WATER HEATER has been selected by the Quartermaster Corps for its simplicity of operation in heating water and will replace the former style issued with the M-37 field range. Used by the army in field operations, it works on any type of fuelgasoline, light fuel oil or kerosene-and requires fewer replacements of parts than former models. Through application of the immersion principle (operation under water) the heating efficiency is increased and a 24 gal. can of water can be brought to a boil in about 1/2 hr. The heater, weighing slightly more than 50 lbs., consists of a burner, a watertight combustion chamber 8 ft. 4 in. tall, and a fuel tank with a valve which allows the fuel to drip into the burner. It hooks onto and sets down inside the water container. The usual water receptacle with which it is used in the field is the 24 gallon army can, about 24 in. deep. When placed in this container, the combustion chamber rests on the bottom, the fuel tank stands just above the edge



BATTLE ZONE BATHING is made less primitive by a new immersion-type water heater which heats a fresh tub of water every few minutes. Weighing slightly more than 50 lbs., it can be lifted in and out of the makeshift tub used during field operations.

of the can and the valve is set over a cup connected to the burner by a pipe. The burner is in a doughnut-shaped hollow combustion chamber, which consists of two concentric cylinders. The inner cylinder acts as an obstruction which causes the flame to pass around it, thus insuring a large heating surface. Draft is produced by a tall stack connected with the combustion chamber. The heater is lighted with a torch consisting of an asbestos rope-end fastened onto the end of an iron wire, and is extinguished by turning off the fuel valve. The rate of heat is readily controlled.

COATING BY FLAME SPRAYING, previously used to apply coatings of metals, has been adapted by the E. I. duPont de Nemours Co. to the application of Polythene plastic. Films of Polythene applied over metal provide tough surfaces which are highly impermeable to brines, chemicals and other corrosive agents. In coating by flame spraying, particles of the finely ground material pass through a flame where they are either softened on the surface, or completely melted, before coming in contact with the article to be coated. Successive particles impinge on those previously deposited before the particles solidify. Thus continuous coatings are obtained. The use of a Tesla coil shows that films and coatings applied in this manner are entirely non-porous. Deposits can be made not only on metals, but on wood, glass, plastics, and even paper. Test specimen coatings of Polythene applied

to steel have shown excellent adhesion, and substantially no corrosion of the underlying metals after nine months immersion in brine. The resistance of Polythene to water, and to attack by chemicals, marks it as outstanding for waterproofing, corrosion-proofing, chemical plant gasketing, container-coating and sheeting for packaging. The flame spraying method of application increases the potential uses of Polythene which could formerly be applied only as a solution, an emulsion or by the melt method.

NEW PRODUCTS

SLIDE RULE DEVICE calculates material needed in plywood concrete form construction.

Name: Keely Plyform Calculator.

Features: The Keely Plyform Calculator speeds up estimation of the amount and size of plywood, studs and wales needed for any given plywood concrete form. Estimates are based on the rate of pour, whether vibrated or unvibrated concrete, the height, length and thickness of the wall. With this information any lumber estimator, architect, contractor, engineer or construction supervisor can with one setting of the slide rule arrive at an accurate estimate of the material needed to construct the forms. Much time is saved in looking up formulas and in figuring.

Manufacturer: National Plywood Distributors Assn., Inc., 111 West Washington St., Chicago 2, Ill.

(Continued on page 230)

Will your postwar home be made of plastics? What about your new car—your vacuum cleaner—your combs, brushes and clothing accessories? Are all these products entering the "Age of Plastics"?

five minute " forum on plastics

Some people think so. The prospects for plastics are so great—so intriguing are these materials to industrial designers—that it is quite understandable to write and speak of the plastic age.

Yet only today, with the war entering its final phase, is it possible to evaluate the place of plastics in the postwar world. That place, without question, will be big. But plastics, of course, will not revolutionize our lives. Like other materials they will be used wherever their distinctive properties serve best.

Let's look at the home of tomorrow. On your windows —rustproof insect screening made of Saran, a Dow Plastic. Look again and you'll discover this same material woven into beautiful, stainless, dirt-proof fabrics for draperies and long wearing upholstery.

In the kitchen, your new refrigerator reveals its store of food through Styron inner and outer walls. This material combines brilliant transparency with high insulating qualities. On the walls of every room are lustrous electric fixtures. These, too, are Styron. Even Mother's

IS THIS REALLY THE AGE OF PLASTICS?

combs, brushes and costume jewelry owe new beauty and longer life to this widely used plastic.

Out in the garage, the family car presents tasteful plastic trim with new-found functional value. Ethocel, another Dow war-tested material, is the answer. It even makes the steering wheel stronger, more attractive and warm to the touch.

All this is but a momentary glimpse of the plastic picture. We know you'll find plastics in many places and soon. But remember—they will serve you best when rightly used.

Dow Plastics include Styron, Saran, Saran Film, Ethocel and Ethocel Sheeting

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis Houston • San Francisco • Los Angeles • Seattle



Flexibility is a Must





Acoustical Ceilings. Ceilings of the J-M Unit Office System are sound-absorbing acoustical units which permit hung ceiling construction, concealing air-conditioning ducts, overhead conduit, etc. Since the units are demountable, service equipment is readily

accessible. Easy to clean, to maintain. High light-reflection co-efficient. Exclusive J-M method of construction allows use of flushtype fluorescent lighting with J-M Acoustical Ceilings.



Movable Walls. J-M Transite Walls are strong, sturdy, durable. They provide a complete system of dry-wall construction, which can be taken down and relocated almost overnight with 100% salvage. Available for any heighteven for low railings and count-

ers. Made of asbestos and cement, they have a smooth, hard surface. Fireproof. Last indefinitely. May be left in original gray finish, painted or decorated.



Tomorrou's C

Johns-Manville Unit Office Construction-Floors, Walls and Ceilings—assures a new degree of efficiency and flexibility

I^{T'S} NOT ENOUGH for the post-war office merely to attain new heights of attractiveness. It must go further than that.

It must also provide new highs in quiet, in comfort, in all-round efficiency. And, because of the ever-changing nature of business, it must be flexible—capable of quick and easy rearrangement without spoiling its attractiveness or efficiency.

All these objectives can be achieved (and at modest cost, too) with the use of Johns-Manville's new System of Unit Office Construction. For this J-M plan involves the use of ...

- ... Acoustical ceilings of demountable units, permitting the use of modern, flush-type fluorescent lighting.
- ... Movable, salvageable walls-easily erected and relocated.
- ... Resilient floors composed of units which permit easy office alterations.

Despite the high degree of flexibility which these three rugged J-M Building Materials provide, they have all the advantages of solid, permanent construction. Also, they may be cleaned simply by washing down—good news for the maintenance department. Yet another advantage: You write only one specification, thus gaining one manufacturer's responsibility.

A new brochure, showing the many possibilities of applying J-M Unit Office System to all types of offices, and showing the many colors and decorative effects possible, is now available to architects and engineers upon request. Write Johns-Manville, 22 E. 40th St., New York 16, N.Y.

Walls, ceiling and floor of this office are all Johns-Manville materials. Transite wall panels are easily relocated. Note their adaptability to bank screen construction. Note, too, how the Asphalt Tile floor harmonizes with the walls and office furnishings.

Colorful, Resilient Tile Floors. J-M Asphalt Tile Flooring completes the J-M Unit Office System. Quiet and comfortable to walk on, they are easy to clean, easy to maintain. Made of asbestos and asphalt, they

will withstand hard wear and give years of service. Manufactured in small units in a wide variety of plain and marbleized colors, permitting a great many designs and patterns. The individual units make it simple to extend or patch the floor.

Johns-Manville Unit Office Construction

THE BEAUTY OF LUXURIOUS TILE plus ... true quietness and resilience of linoleum



Patterned in 9-inch CROSS-DIRECTIONAL MARBLED SQUARES

Now plan almost limitless decorative effects in floors... with "off-the-roll" economy

No two Marbled Squares alike. Each 9-inch Square has its own rich graining and exquisite marbleizing, with real depth of color. Set *cross-directional* to enhance beauty of floor and artfully hide all seams!

Designed in One Tone, Two Tones and Contrasting Tones.

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Pabco Linoleum is *Soil-Sealed* to resist dirt, stains and scuff-marks; and *Super-Waxed* to make easy—and less frequent—cleaning! Built-in quietness and comfort underfoot.



YOURS!

"Architectural Trends In Linoleum" 24-page brochure in full color, packed

with new floor suggestions and complete data about Marbled Squares patterns. Sent upon

your request to Dept. 44, nearest Pabco office below.



THE PARAFFINE COMPANIES INC. NEW YORK 16 · CHICAGO 54 · SAN FRANCISCO 19 Makers, also, of Pabco Mastipave, Grip-Dek and Sani-Grip Floor Coverings

EASY TO REPAIR or make Partition - Changes

Any area or single 9-inch Marbled Square can be replaced, if damaged or heavily worn, without appearance of "patching." Likewise, partitions can be changed without marring the floor's beauty.







TODAY—The Army and Navy use KIMPREG for bomber floors and doors, packing cases, luggage, hutments, parachute folding tables.

TOMORROW—KIMPREG will be used in construction of prefabricated houses, refrigerator car linings, table tops, piano and radio cases, etc.

Among the users of KIMPREG are: Buffelen Lumber & Manufacturing Company; Olympic Plywood Company; Washington Veneer Company; all of whom are currently producing a Donglas Fir Plywood surfaced with KIMPREG. This product is sold under the trade name of Inderon.



Makes Better-Than-Ever Plywood for War Today...for Better Living Tomorrow

Out of a wartime test tube comes the new and greatly needed KIMPREG!* Not a plywood – not a conventional plastic laminate – KIMPREG is a remarkable surfacing material for bonding to the base plywood in conventional plywood hot presses. When applied to plywood, the finished product is more durable – has a higher flexural strength than ordinary plywood – offers resistance to vapor permeability, abrasion, decay. Application of KIMPREG assures moisture-resistance, easy washability. This new plastic surfacing material will make your product scuff-proof – it won't stain – the finish will wear better than paint.

In the post-war world KIMPREG will open new fields for the use of plywood. It may offer new opportunities for your product. It may well represent important savings of money and material to you. So be ready to take advantage of the tested KIMPREG plastic surfacing for plywoods when conversion to a peacetime economy comes. Write for FREE booklet today.

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Plan Modern Ventilation for Modern Kitchens



Turned on after sundown, home cooler fans expel hot air trapped in attics and living rooms; draw cooler outside air into and through the entire house...Direct-drive, 12 to 30 inch. Belt-drive, 24 to 48 inch. Capacities up to 20,000 CFM. PLANS for the modern kitchen should include Emerson-Electric Kitchen Ventilators.

They do more than whisk out offensive kitchen and cooking odors. By effectively clearing the air, they prevent the spread of grease vapors and protect home equipment, furnishings, wall decorations, woodwork and curtains...advantages quickly recognized by prospective home-owners.

Send for Catalogs X4559 and X4566, showing types of Emerson-Electric Kitchen Ventilators and Home Cooler Fans, practical conveniences every postwar home-owner will desire.

THE EMERSON ELECTRIC MANUFACTURING CO. ST. LOUIS 3, MO. Branches: New York • Chicago • Detroit • Los Angeles • Davenport



Specify EMERSON-ELECTRIC Kitchen Ventilators

Q. Who made it possible to "broil" a roast while you bake a cake?

A. Estate. In 1938—remember? The famous Estate Bar-B-Kewer introduced an appetite-whooping new way to cook meats...made it possible to actually broil whole hams, chickens, rib roasts to "outdoor-grilled" deliciousness. (Leaving the oven free for baking cakes, pies, biscuits!)

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Q. Who gave ranges that modern, "built-in" look?

6360

Who did it...

By Betty Blackmarr

FIRST ?

A. Right again. Estate was first to bring you a range (in 1937) that really backed up against the wall like the modern cabinets in smart prewar (and postwar) kitchens.

ME

Q. Who took the hurry-skurry out of getting dinner?

A. Estate did it back in 1931. That's when Estate introduced the very first sleek, modern table-top range that combined work table, cupboard, range, all in one. Since then, this Estate innovation has saved millions of miles of mealtime walking, added modern beauty to countless kitchens.



A. The range that has a habit of being "first with the finest"—the Estate. (Remember, Estate Heatrola Ranges save "fuelish" arguments, too. Available for city or bottled gas and electricity.)





at one time, yes... but not today!

Westinghouse addresses this ad to architects in the belief that they share with us the responsibility for providing superior circuit protection for American Industry.

The progressive building professional recognizes that the protection of electrical circuits is one of the major problems in industrial plants... department stores ... schools ... theatres. His specifications for circuit protective equipment are continuously calling for a higher degree of quality and efficiency ... a *modernness* that is in keeping with the rest of the equipment being selected for today's and tomorrow's buildings and factories.

The answer to this demand is the "De-ion" (fuseless) Circuit Breaker for 115, 220, 440 and 550-volt circuits. It helps to eliminate production delays ... distinguishes between harmless overloads and dangerous shortcircuits ... assures the best protection at the lowest lifetime cost of any protective device.

Reasons why are given on the opposite page.

J-60565-A



there's only **ONE** adequate type of circuit protection for modern plant equipment....



"DE-ION" (fuseless) CIRCUIT BREAKERS

here's why...

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Keeps machines on the job. No unnecessary time out—"De-ion" Breakers do not interrupt production on harmless momentary overloads. When breaker does operate, service can be restored simply by closing the breaker. Nothing to replace or repair—no idle time lost waiting for special maintenance attention.

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"DE-ION" (fuseless) CIRCUIT BREAKERS

on industrial doors that help speed the flow of material IN and product OUT!

An industrial door has first of all to be an efficient functional unit in a plant's operation. It has to be easy-acting and dependable in operation to expedite movement of materials and products. It has to be durable to withstand constant use and the onslaught of weather. It has to be tight to conserve heat and exclude wind, rain and snow. It has to be good looking to conform to advanced industrial architecture.

Crawford Industrial Doors are engineered to meet industrial application needs. Quality materials, careful workmanship, skillful design based on experience combine to make each Crawford Door an efficient functional unit. Standard Crawford Doors in widths from 4 to 20 feet and in heights from 6 to 16 feet will meet the majority of needs. Crawford engineers will gladly cooperate to work out any need for special doors. Your inquiry will be given prompt attention.

Crawford Door Company, 401 St. Jean, Detroit 14, Mich.

Standard Crawford high-clearance Industrial Door, seven sections high with three sections glazed, shown applied to enclosed loading dock. Simplified mechanical equipment involves few operating parts. Easy to install, easy to operate—insures good service and long life.





together perfectly, in design, in construction, in finish. They are truly made for each other, and together form a completely harmonious ensemble.

Stoutly reinforced bars, heavy-gauged metals, provide strength to preserve the original beauty of the mouldings; the wide, supple, uniform grip assures dependable glass safety. Over 30 years of experience safeguard your Brasco specification. A COMPLETE LINE FOR EVERY DESIGN!

BRASCO MANUFACTURING CO. HARVEY (Chicago Suburb) - ILLINOIS National Distribution Assures Effective Installation

TWO FLOORS AND BASEMENT of this modern pre-war Montgomery Ward & Company store at Kalamazoo, Michigan (at left) are provided with rapid air change for customer comfort with ILG Ventilating Apparatus. Note in sketch below how rapidity of air change has been engineered to meet requirements of store layout.

ILG POWER ROOF VENTILATORS (ILG Self-Cooled Motor Propeller Fans in Penthouses with Automatic Shutters) as shown below are mounted on roof to provide rapid air change on first and second floors.

CUSTOMERS LINGER LONGER DUE TO RAPID AIR CHANGE!

Swift removal of excessive heat, smoke and odors ... replacement with fresh, vitalized air for greatly improved shopping and working conditions is accomplished in this attractive store at comparatively low cost, with a minimum of repair and maintenance trouble and expense. One ILG B-60 Direct-Connected Blower for the basement and four ILG Power Roof Ventilators (two 42"; two 48") on the roof provide 8 to 17 air changes per hour throughout the store, except for storage space on third floor. Employees are more alert, evidence less fatigue... customers enjoy the fresh, inviting atmosphere. If you are now faced with ventilating or heating problems in planning for post-war buildings, phone nearby ILG Branch Office (consult classified directory) or send us details today!

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Offices in 38 Principal Cities

WANTED: GRADUATE ENGINEERS

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for expansion of ILG Branch Offices, also Research and Engineering Depts. Exceptional opportunities now and post-war for graduates of accredited technical schools and colleges. Write giving full details of educational background, business experience, health, age, marital status, etc. NO EXHAUST NO EXHAUST 14 AIR CHANGES PER HOUR 14 AIR CHANGES PER HOUR 17 AIR CHANGES PER HOUR 18 AIR CHANGES PER HOUR

KEEP YOUR EYE ON ILG

VITALIZED VENTILATION

AND AIR CONDITIONING



Sanitary ARMCO Stainless restaurant equipment invites customers, and can be cleaned in a jiffy.

They'll want more Stainless after the war



Doctors appreciate the advantages of this ARMCO Stainless operating chair.



ARMCO Stainless utensils are ideal for hospitals and other institutions.

Help finish the fight - with War Bonds

• The stainless steel equipment that some of your clients have had during the war has whetted their desire for more.

• Hotels, hospitals, clubs and other institutions have learned how easily ARMCO Stainless can be cleaned and kept sterile. They've found out also that this strong, rustless metal is highly resistant to denting, scratching and corrosion. And since it is solid metal throughout, it never needs replating or refinishing. All of which sharply reduces maintenance costs.

• These advantages of ARMCO Stainless give it added value for your post-war institutional work kitchen and food-serving equipment, surgical and operating room equipment, and anything else that must be easy to keep clean, sterile, and new-looking.

• Do you have the ARMCO "Sheet Metal Specification Guide," which contains a whole section on

flat-rolled stainless steel? Write for a free copyon your firm letterhead, please. The American Rolling Mill Company, 3321 Curtis St., Middletown, O.



BOOKS

Patrick Geddes, Maker of the Future ... The Technique of the Terrain ... Insulation and Your Home.



"P. G. Unlimited"

PATRICK GEDDES, Maker of the Future. By Philip Boardman. The University of North Carolina Press. 480 pp. Illustrated. 6 x 9. \$5.

If the theories and accomplishments of Patrick Geddes were previously known to more than a handful of American scientists, scholars and planners, it was undoubtedly due to the energetic eulogizing of this Scotchman's disciple and impressario, Lewis Mumford. Tireless though Mumford has been in his efforts to secure recognition for this most important figure of early town planning in the British Empire and the Near East, Mr. Boardman in his biographical study attains the same goal and with greatly reduced hardship for the reader. His unpretentious narrative of an all-toohuman-being brings into focus many of the obscure references and mystic allusions to Patrick Geddes' work so familiar and puzzling to students of sociology and planning. From a purely objective viewpoint, the author proves himself a meticulous and sensitive biographer. A maze of technical probings in no way detracts from his vivid character portrayal.

That Geddes was a leader, brilliant, sincere and perceptive, is undeniable. In Mr. Boardman's book however, he does not turn out to be omniscient. Instead, there appear certain facets in his character which distinguish him as eccentric and a digressionist with a Shavian capacity for cloaking a monumental ego in the veil of intellectual arrogance and blustering dissension.

Many of Geddes' admirers refer rev-

erently to his rigid self-denial which consisted mostly of a traditionally unkempt appearance and an inadequate income for his wife and children. In the deeper sense he was profoundly selfish and self-indulgent. Hard worker though he was, he lacked the will and tenacity which might well have made him a great benefactor of mankind. Time and again vast and inspired undertakings came to meaningless ends because he lacked the mental discipline necessary to carry his original ideas through. The very diversity of his occupations bears witness to this fact. At one time or another he was a biologist, educator, economist, art critic, author, publisher, architect, city planner and originator of a five-point plan for world peace. Nothing less than Geddes' immovable belief in the absolutism of synthesis, his unending search for a cosmic common denominator for mind and matter could justify his authority in such an assortment of fields.

Popularly credited with inventing "regionalism," Geddes' work in this field displays only an elementary understanding of planning as it is known today. The roots of his idea can be found in his "Outlook Tower" (his one-man museum embracing science, art, history and philosophy, its stem in his belief that biology and sociology are in reality one science. Here, clearly, is the beginning of the present day school of thought on the cellular or organic growth of cities so well outlined in Eliel Saarinen's recent book, *The City*.

"Outlook Tower," one of Geddes' early contributions to the cause of liberal education, is probably the most indicative undertaking of his life for, as he sought to synthesize the universe, it correlates his many attempts to do so. According to him it was to serve as an "index-museum of the world." Mr. Boardman describes it as "a vantage point from which to survey a natural region between mountains and sea, a focal point from which to unify all the specific outlooks from its tower, an index-museum in which to show and interpret all that its region contains, an institute of active social planning, and an educational force par excellence. . . . It also represented his (Geddes'), life-long attempt to escape from the limitations of prose and express ideas by means of diagrams and graphics, for the whole method of the tower is organic, objective and realistic, rather than subjective or book-centered. On the one hand it sought to condense, to represent in miniature what is found in the outside world;

on the other to diffuse new outlooks, fresh ideas and examples of effective action among the inhabitants of city, region and nation. . . It contained, at least in rough form, the complete circle into which were ultimately to be placed all the seemingly dispersive arcs and tangents of his day-by-day deeds and thoughts. In short, the Tower was P. G.'s answer to those who refused him academic recognition or scoffed at him as an intellectual dilettante . . ."

Geddes' "answer," the museum exhibits, consisted of a large number of highly personalized symbols and graphs representing practically every known field of science and art. The historical chart, for instance, displayed widening and narrowing bands corresponding to the ebbing and flowing of power from the fourth to the nineteenth century. "This great chart," said Geddes himself, "embodies one of the main ideas . . . namely, that by means of such graphic representation of facts and ideas we can achieve clearer thought than comes from reading volume after volume of textbook prose, and emancipate ourselves from the tyranny of detail which is such a deadening influence, in history especially." Such sweeping generalization is characteristic, and of vital importance in the evaluation of Geddes' influence as well as that of his shortcomings, for it was this disdain for fact and detail which fostered both the broad, original concept of regional planning and the inconsequential outcome of many of his other ideas.



Early Regionalism-Outlook Tower

Whimsically enough, Geddes' Tower included a Philosopher's Stone whose mystic inscriptions are sound proof that he was influenced to no small degree by the abstract theorizing so fashionable among his literary contemporaries. Of necessity, his explanation of its value in coordinating arts and sciences was based on metaphor. He referred to the butterfly, representing psychology, obtaining its sustenance from the flower, the art of education; to the Tree that has "its roots amid the fire of life and is perpetually renewed from them. But the spirals of smoke which curl among its branches blind the thinkers and workers of each successive age to the thought and work (Continued on page 28)



"OBJECTIVE ATTAINED"

• The Edwards campaign to stimulate business for the architect has produced concrete results! Over 60,000 home-planners have written for the booklet "How To Plan Your New Home"—a telling argument for the architects' place in bringing their projects to a successful conclusion. Many times this number have read these advertisements, in national magazines, on the advan-



tages of an architect-planned home.

This campaign—the largest ever undertaken in behalf of the architectural profession—has been sponsored by Edwards & Co. because good building is the foundation of our business...and the keystone of good building is the architect.

EDWARDS and COMPANY NORWALK, CONN. In Canada: Edwards and Company, Ltd.

1000

BOOKS

(Continued from page 26)

of their precursors. Two sphinxes guard the tree and gaze upward in eternal questioning, their lion-bodies recalling man's origin in the animal world, their human faces the ascent of man. The branches symbolize the past and passing developments of society, while the bud at the tree-top suggests the hope of the opening future. Issuing from the smoke wreaths at the top you can see the phoenix of man's ever-renewed body and the butterfly or Psyche of the deathless soul of humanity."

Geddes' oratorical style remains unchallenged, and while he lived it won him vast numbers of enthralled followers. It also explains why, today, his few remaining disciples bewail the fact that with his passing much of his power and influence was lost. Truly lost was his fiery enthusiasm and flamboyant phraseology. The underlying ideas, scanned and set down in cold black and white are for the most part unimportant because they ignore reality and the many, powerful forces at work during Geddes' lifetime and today.

Admittedly the Tower represents a youthful undertaking but by the time he made the plans for the University of Jerusalem in 1919, Geddes' thinking appeared to be little more mature. Here the actual work of the "originator of regional planning" shows a pleasant regard for light, air and landscape; none for the function and operation of a university. Questioned on the practicability of the institution's tiny, isolated administration building, Geddes retorted, "Universities do not exist to be 'administered.' The administration exists only to serve universities. Though records are indispensable and regulations may be useful, even necessary; the true regulation of the University comes from the mind, conscience and character of those who make it up. Hence I have segregated the administrators where they may be good servants, for when they usurp the central position of a university . . . they become the very worst masters."

Again and again the vision of such a full-blown Utopia is conjured up like a dream bubble floating above the chaos of civilization. It is artfully colored and elaborately described. Only one element is lacking. Neither Mr. Geddes nor any of his followers have ever bothered to explain how the bubble might be brought to earth.

Certainly Geddes is to be given full credit for important early thinking in regional and city planning; for his foresight in recognizing the interrelation between sciences, two major contributions which are daily gaining recognition. On

(Continued on page 222)

IN THE FORUM

To Sgt. Ed Tauch, somewhere in the South Pacific, the hazards of war are as nothing compared to peacetime risks. On a simple inspection tour of his guest house for Mrs. Cole Porter (p. 102) he crashed through the second story and managed to break a leg. After such a gruelling experience enemy bombs, tanks and paratroopers should hold no terrors. We can picture Tauch in his fox-hole, calmly reading THE FORUM and humming "Begin the Beguine."



Ruth Hornbostel, who made the small-scale replicas of the Storagewall



(p. 83), is one of those mythical females we have heard about, but never quite believed existed. Free-lance model-maker extraordinaire, she also holds down a full-time job with Hans Knoll, works with her architect husband, and takes flying trips to visit her 11-yr. old son in boarding school. As if that weren't enough, she has another unique and specialized talent—managing to look like a Wellesley undergraduate on ten hours of sleep in five nights. Boy, bring me my Bromo-seltzer.

The Eberhardt brothers who remodeled the apartment block on York Ave. below Sutton Pl. (p. 120), are living proof that the mountain sometimes comes to Mohamet. These dead-end kids have become one of the most successful remodeling teams in town merely by staying put. "We were born three blocks from here, and haven't gotten very far yet," grins Frank, as he contemplates his favorite East River. The brothers did tear themselves away from the East side long enough to collect engineering degrees, but Walter just took the cross-town bus and subway to Columbia. The old wanderlust claimed Frank, however. He braved Stevens Institute of Technology, ferrying each morning to the far reaches of Hoboken.





The almighty pushbutton rules supreme in the Glenview residence remodeled by G. McStay Jackson (p. 129). It is the gadget behind the circular bed behind the circular window. This revolving sleep machine is undoubtedly a cushy commodity for those brave enough to lie down on it. But as a person who has merely to look at an electric iron to make it blow a fuse, we have an innate distrust of all mechanical contrivances. If the circular bed belonged to us, the result would be inevitable. From dreaming that we were cake batter

in an electric mixer, we would be horribly awakened to find the bed revolving faster . . . and faster . . . and faster . . .

The Case of the Remodeled Farmhouses (p. 96) is what develops when a Home Economist starts tracking down projects for her household arts class. Not only did Cornell's Grace Morin plow up five vexatious housing problems, she took on the entire redesigning job herself. Results, accomplished with a shoe string budget and large amounts of student elbow grease, show the striking improvements remodeling makes possible for low-income farm families.





Reputation

THAT GOES (AND GROWS) FROM DOOR TO DOOR!

When you specify Corbin builders hardware for that projected post-war home, industrial building, school, hospital or any other project...chances are you are selecting a *line* and a *name* already *pre-sold* to your client. For Corbin has long been synonymous with the very finest in builders hardware — wherever doors swing freely and windows let in light.

Authentic design, widest range of products, dependability of craftsmanship, helpful detailing and counsel are all integral parts of the Corbin reputation.

A Corbin specialist will be happy to furnish pertinent details on builders hardware in connection with projects you are planning.



THE AMERICAN HARDWARE CORPORATION, SUCCESSOR NEW BRITAIN, CONNECTICUT • SINCE 1849

then he thought to himself

"WHY WAIT 'TIL YOU'RE CORNERED?"

A^T his recent reception in Washington, General DeGaulle and General Pershing were deploring the havoc of the war and hoping some good might result. DeGaulle remarked that perhaps Mahomet had something when he ventured the statement:

"Without war, the world would be in a condition of stagnation."

It is a sad commentary on human inertia that men must wait until the gun is jabbed in their ribs before they will stir themselves to great effort.

But it seems a fact that men usually wait for a crisis before they get bold and take hurried recourse to the best means for liberation.

Even today, some business men are waiting for the pointed guns of competition before taking action. And others . . .

()
'WHY WAIT 'TIL YOU'RE CORNERED?" he says

LOOK, GENERAL, how some are beating the gun of competition through recourse to Arc Welding:



GUN BEATER: LOWER COST. Simplified detailing, fabrication and erection, and reduction in tonnage with welding usually cuts building costs. Total estimated saving on this 14-story building was \$20,000.



GUN BEATER: BETTER APPEARANCE. Designs can be streamlined . . . made modern-looking . . . such as in the case of this rigid frame factory building. Elimination of trusses also affords better lighting and reduces maintenance costs.



GUN BEATER: GREATER FREEDOM. Direct connection of steel members enables the designer to create and build more unique structures. Welded combination of I-beams and fabricated haunch sections here made possible a rigid free-standing church structure with 45-degree roof pitch.



GUN BEATER: NOISELESS ERECTION. Elimination of the rat-a-tat-tat of the beaten path method is a valuable contribution to civic progress. Quiet arc welding can be made a potent business-promotion tool for the architect and builder.

Consult the Lincoln-Engineer nearby for advice on how to beat the gun in the building of better structures at lower cost with Arc Welding. Structural Studies free on request.

THE LINCOLN ELECTRIC COMPANY . Cleveland 1, Ohio





BRIXMENT Assures More Economical Brickwork

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

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

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

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





LOUISVILLE CEMENT COMPANY, Incorporated General Offices: Louisville 2, Kentucky Cement Manufacturers Since 1830

Mix a batch of 1-3 Brixment mortar (above) and a batch of 50-50 cement-lime mortar made with the same proportion of sand (below). Get any competent bricklayer to test them on the board—to spread them on the wall—to lay up a few brick with each of the two mortars. Then askhim which has the best workability!



...here's how to avoid it!

LIVING ROOM SETTING FROM R. H. MACY & CO., INC.

★ The chimney of your post-war home can become a "problem child" that will literally *eat you out of house and home*—as well as shrink the re-sale value. That's what often happens when a chimney is too small to handle *all* fuels equally well.

The sensible thing to do is to plan on an *ade-quate* chimney ... a chimney that is *large enough* to handle gas, oil, or coal.

The extra cost of such a chimney is small—but its savings can be large. In fact, they can actually be large enough to pay a good part of your taxes or mortgage interest! A BIG CHIMNEY tells you a lot about any home you plan to buy or build. It tells you that home can be heated by any fuel, not just the expensive ones. Be sure your chimney is big enough to handle Bituminous Coal-the cheapest, most plentiful, most popular fuel available-and one that is "automatic" when used with a modern coal-stoker.

That's because an adequate chimney gives you freedom of choice to heat with *any* fuel, including Bituminous Coal. And, as you probably know, Bituminous Coal is far-and-away the *cheapest* home-heating fuel available. No wonder 4 out of every 7 homes in the United States depend on it for steady, reliable heat! And, when properly burned, Bituminous Coal is clean and odorless.

Discuss this with your architect or builder. Be sure your plans provide a chimney big enough to supply sufficient draft to burn Bituminous Coal. That's the way to insure minimum fuel bills!

BITUMINOUS COAL INSTITUTE, 60 EAST 42ND STREET, NEW YORK 17, N.Y.

(This is one of a series of advertisements now appearing in home-makers' magazines)

LETTERS

Two schools of thought on "Living Memorials" . . . Tempest over modern architecture.

MEMORIALS FOR REMEMBRANCE

THE FORUM'S purpose in publishing the MacLeish and Maginnis articles and other discussions of memorials which will follow, is to articulate an issue of importance. Unquestionably hundreds of U. S. communities will seek to memorialize their honored dead. It is unthinkable that we should repeat the banal atrocities which heretofore have studded our cities and towns with cast iron figures beside rearing horses. Through frank and full discussion of memorials, THE FORUM hopes to direct community action toward the most fitting expression of remembrance and of man's hope for a permanently peaceful world.—ED.

Forum:

... The article by MacLeish makes clear that any generalization fails and I sympathize with him as to the content of what he is saying. The summing up of his thought can come in his very words.

"I should say, for myself, that the purpose of a memorial is to make the minds of men remember. . . . In the ideal world—a world in which every town and village could find an artist of genius and, what's more, could recognize him when it found him—the commemorative purpose might be achieved without resort to utility.... It is this relation to the life of the town which counts."

MacLeish is saying something quite wonderful, as all great truths are wonderful. He is saying to me "Let's have a Gettysburg address as a memorial—be it in words, or deed, or structure."

WILLIAM W. WURSTER San Francisco, Calif.

Forum:

How shall we honor our war dead? ". . . We cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it far above our poor power to add or detract. . . . It is for us, the living . . . to be dedicated . . . to the unfinished work which they who fought ... have, thus far, so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us -that from these honored dead we take increased devotion to that cause for which they . . . gave the last full measure of devotion-that we . . . highly resolve that these dead shall not have died in vain-that this nation, under God, shall have a new birth of freedom -and that, government of the people,

by the people, and for the people, shall not perish from the earth."

CURTIS BESINGER Cermfask, Mich.

Forum:

... While we know nothing of Mr. Maginnis' imaginative qualities, it is our opinion that his conclusions stop with reality while the imaginative Mr. Mac-Leish goes a bit further. It might be quite difficult for us common folk, with limited imagination, to conjure some specific quality in the average community as being representative of the town; but nevertheless our Congressional Librarian opens up an interesting if somewhat mystifying avenue of thought when he conjures with words the idea of plebeian places becoming memorials.

Applying cold logic to that thought it might be further developed that memorials can actually exist in the minds of men without physical aid of any sort. ALEX PARKS, Secretary

Monument Builders of America, Inc. Chicago, Ill.

Forum:

... Certainly the daily use and abuse of a memorial building obscures its purpose: commemorating the sacrifice of lives and beseeching the people to be vigilant for peace far before there are visible signs of war — by emphasizing and reemphasizing to their elected representatives that because they cannot countenance another war, they demand courageous dealing with the deep, complex economic problems that are the roots of war...

FRANCES K. LEGAS

Chicago, Ill.

MEMORIALS FOR USE

Forum:

... There are as many ways to remember as there are vehicles to carry the message to the mind. The choice is definitely not a limited one. That the vehicle would have to be a symbol that is beautiful goes without saying.

Commemorative buildings that contribute to a social use have come in for a share of praise but have not escaped a considerable amount of criticism.

Parks and highways have been discussed but a preponderance of opinion seems to favor the monument that has no other purpose than commemoration. Why should use be an attribute to disqualify a building from being a memorial?

Would it be taking advantage of a monument to expect it to share its honors with a social or cultural pusuit?

After all is said the design that is art's is to reach the living through channels that contribute to its substance. A building people occupy may do that far better than merely an object of abstract form planned to excite the mind and emotion...

HYMAN N. WEINBERG New York, N. Y.

Forum:

In your September issue you set forth the theory that a monument built for use can never be as fitting a memorial as one which is a monument and nothing more. There is much truth in what you say and in auditoriums, stadiums, gymnasiums and such the commemorative idea is soon lost.

Since plans for a new library building are on foot in Minneapolis and since it has been suggested that it be a memorial we are interested in your arguments and are ready to take issue with some of them.

A library has several distinguishing characteristics which make it a far more suitable monument to men who have fought and died for their country than those mentioned above.

"Printing is the art of preservation of all the arts." A library is, in one sense, a memorial to the best that man has thought and done in that it preserves those thoughts and deeds.

The library is not given to dog shows and similar disturbing pastimes which your authors find discordant in the memorial theme.

Then not all heroes are dead heroes: it seems time to commemorate the men who return alive as well as those who will never return. They, too, have sacrificed—perhaps in returning to a life from which some of its brightest young years are gone, returning handicapped or mentally malajusted, they are paying a higher price than those who gave their lives in one brief burst of glory. They also could share in a monument which has as part of its purpose, the rehabilitation of service men.

The universality of its service makes a library especially fitting to be a mem-Continued on page 36

How an Architect Could Handle a Job Like This!



THE 1940 CENSUS revealed 18% of all dwelling units in need of major repairs. That figure is now estimated to be around 30%. Much of it is represented by long neglected cracked ceilings.

You may be called upon soon for recommendations to solve the cracked plaster problem. For homeowners, bothered with cracking plaster, want ceilings of enduring beauty and permanence.

Using Upson Ceiling Panels and Upson Shad-O-Line Mouldings made specifically for the purpose, a contractor under your direction can apply a ceiling which will remain forever crackproof – a



Beauty in keeping with the most pretentious homes—yet at a cost within reach of the small home owner. Upson Ceiling in the home of Fred Ludwig, President, Merritt Lumber Yards, Reading, Pa.

ceiling which will be more than a bare, uninteresting expanse. He can apply a ceiling which you have designed to become an integral part of the decorative scheme—adding modern character and charm to the interior.



A contractor can do the job right over old plaster—without the dirt and muss which goes with replastering. And he can do it in a few hours.

The use of Upson Panels affords wide opportunity for improved ceiling design, both conventional and modern. Because of their crackproof qualities, Upson ceilings provide a permanent solution to the problem of cracking plaster. Write for details. The Upson Co., Lockport, N. Y.



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

CRACKPROOF CEILINGS OF ENDURING BEAUTY

LETTERS

(Continued from page 34)

orial for men who have fought to preserve the democratic way of life. It serves all classes, ages, colors and creeds, demanding no requirements, no examinations, no credits, no degrees. It reaches to all parts of the community and takes no notice of right and wrong sides of the tracks. It is free but it is not charity.

One more argument lies in the fact that by educating people to their national and international responsibilities the library is playing an important role in preventing another war. By making available to the young people of today the best thoughts of the best minds on war, its causes and its cures, it is doing its part to assure the heroes of World War II that their sons and daughters, their brothers and sisters will not face World War III.

To mollify Mr. Maginnis and Mr. MacLeish we could point out, that while utilitarian in purpose, a library can be architecture as well. There is no reason why its facade should not carry the names of the men from the city who have died serving their country; or, its entrance hall might serve as the heart of the monument with, perhaps, the perpetual flame or other symbolic features that they advocate. What form this would take the architect could decide.

CARL VITZ, Librarian Minneapolis Public Library Minneapolis, Minn.

COWSHED REVERBERATIONS

Forum:

In reference to the letter from Mr. Thomas D. Stafford (see ARCH FORUM Sept. '44) censuring your magazine for it's leaning toward "cowshed" architecture . . . You refer to Mr. Stafford as a layman. As a housing researcher who has devoted thousands of hours to practical study in the housing field, may I point out that it is just such laymen as Mr. Stafford who depend on publications such as yours for education along the lines of architecture and housing in an intelligent, practical and useable nature? Your answer intimates that Mr. Stafford's argument should be with the architectural profession. I do not agree-I think it is with you for the following reasons:

a. For years the architectural profession, poorly paid for its efforts in the housing field neglected this field to the extent that insofar as developing efficient, liveable, economical and architecturally attractive homes is concerned did little toward that end. . . .

b. When the small home trend de-(Continued on page 166)

A LETTER FROM THE PUBLISHER

Dear Reader:

Every man who has ever laid a brick treasures a not-too-secret yearning to someday write editorials. Naturally, his typewriter - tapping ideal has an even stronger passion to see his ideas translated into three dimensions. This frustration is commonly released in bars and restaurants. When you next see a small man with heavy horn-rimmed glasses trying to balance three beer bottles crowned by a salt shaker, you can safely walk over, tap him on the shoulder (gently—remember the bottles) and greet him as "Mr. Editor."

Imagine, then, what joy suffused the FORUM'S office when a diffident delegation of LIFE'S editors, say about thirty-eight of them, passed through our portals with an invitation to join them not only in designing something but in actually building it.

Following a terrifying succession of meetings when various ideas about what to do and who should do it were settled, the designers got busy. Then, more meetings. Then models and mock-ups. Then—but we are ahead of our story.



Wright and Nelson

The first idea to be approved sprang full-panoplied from the head of our Zeus-a double-header by the name of George Nelson and Henry Wright - and was christened the Storagewall. Everyone who has struggled with the problem of trying to put a pair of wet arctics in with the gramophone records without damaging Aunt Minnie's Easter bonnet will understand why this little number left us swooning. The Storagewall, which is exactly what its name implies, may be examined on pages 83 through 92. No one will ever know-or even care about-the anguish which accompanied the matriculation of this Athena-like object. Once it had been captured on paper the Messrs. Nelson and Wright repaired to a near-by bistro, confident that the deft fingers of model-makersupreme Ruth Hornbostel would do them justice.

Project number 2 turns out to be the Convertible Bedroom. This all started when the Pierce Foundation researched the pet preves of over a



Duncan

hundred families. A lot of their complaints ended in the bedroom, which should surprise no one. Throw a couple of extra children at Architect Malcolm Duncan and he considers it a challenge, if not a personal affront. So just to prove that a two-bedroom Cape Cod cottage can withstand the savages of family expansion, we now present Duncan's Convertible—right this way to the Liliputian Bazaar (page 103).

Third, but not least, is the "In-Line Bath." At first we wondered why no one ever thought of it before. Then we realized that Architect George Kosmak had never put his



Kosmak, Gerth, and Associates

mind to it. Once he did he came up with an answer which grows in importance if one believes that divorces are made before breakfast. Mrs. Kosmak (Ruth Gerth, a mighty fine designer in her own right and name) contends the "In-Line Bath" is as necessary to gracious living as a good cup of strong coffee. We believe almost everything told us by a coffee addict and anything told us by Mrs. Kosmak. Turn to page 123 and you, too, will become an "In-Line" addict. H. M.

Since January 1, 1943, TIME, LIFE, FORTUNE and THE ARCHITECTURAL FORUM have been cooperating with the War Production Board on conservation of paper. During the year 1944, these four publications will use 73,000,000 lb. (1,450 freight carloads) less paper than in 1942. In view of the resulting shortage of copies, please share your copy of the FORUM with friends.

PLYWOOD rides the rails!

Another Application proving the Durability of Douglas Fir Plywood

When a material proves itself strong enough and durable enough for railroad freight car construction—then that ma-'erial must have what it takes!

dere again, Douglas fir plywood has been put to the test—and passed with flying colors. The Great Northern Railway specified plywood for all outside and inside sheathing on 1,000 new freight cars—cars which are now in service, demonstrating their ability to withstand rugged, rigorous, day-in-and-day-out service.

Other railroad car manufacturers, too, have used Douglas fir plywood extensively—as have the builders of PT boats, minesweepers, patrol boats, busses, and countless other items where strength and durability really count.

Architects and builders, of course, have utilized Douglas fir plywood for years not only because of its rugged quality, but because it enables them to build more attractive structures of every kind.

There is a type and grade of Douglas fir plywood for all construction jobs—every type and grade meeting the rigid Douglas Fir Plywood Association tests and the strict requirements of U. S. Commercial Standard CS 45-42.

This modern "miracle wood" is an unusually versatile material—serving an everwidening field. It's worth your most serious consideration.

Because of its many advantages, Douglas fir plywood today serves the war effort exclusively. It will be ready for general use again the moment these essential needs lessen.



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

Learn more about the

modern "miracle wood". Write the

Douglas Fir Plywood

Association, Tacoma 2,

Washington for detailed

literature and techni-

cal plywood date.

For the year-round comfor



.. put Servel *all-Yeat* Gas Air Conditioning in the plans for your post-war homes

ONE OF THE reasons why it will pay to plan your post-war homes for Servel All-Year Gas Air Conditioning is revealed by recent consumer polls. These surveys agree that 72% of the people who plan to build or buy homes after the war want all-year air conditioning.

You can give these people exactly what they want—with the Servel All-Year Gas Air Conditioner. It keeps homes fresh and cool in the sultriest summer weather . . . warm, cozy, and healthfully humidified in winter . . . affords new cleanliness, safety, and privacy the whole year round. Every one of the more than 400 families who have enjoyed Servel All-Year Gas Air Conditioning during the past four years is enthusiastic about the amazing new comforts it offers.

What's more, designing your homes with Servel *All-Year* Gas Air Conditioning in mind makes possible many economies in framing, in the location of the unit and utility feed lines, etc., which keep down the cost and assure maximum operating efficiency. G

Your local Gas Company has trained air conditioning engineers who will be glad to discuss the design requirements of the Servel *All-Year*

Gas Air Conditioner. Get in touch with them now, or write direct to Servel, Inc., 2411 Morton Ave., Evansville 20, Indiana.

Servel all-year

SUMMER COOLING-WINTER HEATING-IN ONE SIMPLE UNI

your post-war clients demand



Gas Companies have available for consultation trained air conditioning engineers, who will be glad to discuss with you the details of coordinating Servel All-Year Gas Air Conditioning with over-all house design. For example, they can tell you not only the size and number of the ducts suitable to the type of houses you're designing, but also indicate how they can be located so as to fit harmoniously into the house design and still operate at full efficiency.

The importance of these considerations in home design is emphasized by the experience of an important financial underwriting agent in one of our large mid-Western states. He found that many privately designed and built homes, equipped with conventional heating units required expensive alteration after occupancy to provide adequate heating.

In addition, Servel *All-Year* Gas Air Conditioning has behind it the sales and promotion support of the Gas Companies. Most of them are already promoting Servel *All-Year* Gas Air Conditioning through their local newspapers, over the radio, with billboards, and by direct mail.

Gas Air Conditioner

TO THE ARCHITECTS who are now planning 879* COURT HOUSES and other public buildings

WINDOWS

DOORS





ARCHITECTURAL METALWORK



Let the Leaders IN BRONZE AND ALUMINUM FABRICATION help you with your Post-War Plans!

Appellate Division, Supreme Court, Brooklyn, N.Y. Slee and Bryson, Architects

Craftsmanship is a greatly over-used word. But it is the word architects usually associate with General Bronze.

Appreciation of fine craftsmanship motivated the selection of General Bronze windows, doors and architectural metalwork for the stately Supreme Court Building, Appellate Division, Brooklyn, N.Y .- and for many other prominent buildings.

With newly acquired techniques, General Bronze will be able to offer you and your clients newer and even finer windows, doors and architectural metalwork than ever before.

To those architects now planning for tomorrow we have a suggestion -allow us to help you with your detailing. Consult Sweet's or write today for information on General Bronze products and the name of our nearest representative.

*From "Statistical Summary of V-Day Projects" tabulated by F.W. Dodge Corporation

GENERAL BRONZE CORPORATION

34-19 TENTH STREET



LONG ISLAND CITY, N.Y.

FIVE CONSECUTIVE ARMY- W NAVY "E" AWARDS FOR PRODUCTION



Puts a New Zest In Beauty Salons

Women are irrepressible in their demands for new "luxuries" or creature comforts. And in the days to come, the beauty salon without air conditioning will suffer a marked decline in patronage, especially during the torrid months of summer.

Clean, properly dehumidified air and the absence of odors, add new refreshing comfort to beauty salons.

Throughout the Nation, Chrysler Airtemp "Packaged" Air Conditioners are proving ideal for beauty shops. The flexibility and ease of installation, the *adequacy* of single or multiple units, are causing architects to specify this self-contained, quiet, dependable type of temperature-humidity control.

Next time you are making estimates on air conditioning, heating or commercial refrigeration feel free to turn to Chrysler Airtemp for practical assistance. Airtemp Division of Chrysler Corporation, Dayton 1, Ohio • In Canada, Therm-O-Rite Products, Ltd., Toronto.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p. m., E. W. T.





IS THE WAY TO FINISH WOODWORK

PEN-CHROME Wood Finishes have the preservative qualities of the old stainand-varnish system, plus the advantage of modern blonde tints. Pen-chrome combines the water-proofing and sealing qualities of the best synthetic resins with the soft texture of wax. Pen-chrome eliminates costly maintenance and produces a handsome, mar-resistant surface that saves money for builders and clients alike.

O'Brien's Pen-chrome was perfected by an organization that has made fine finishes for 69 years. It has been used by leading architects-on hundreds of wood finishing jobs-with marked success. Write us for full information.

TEST PACKAGE: Know from experience what a distinct advance this product represents. Take the time to finish a panel yourself. Observation of Pen-chrome's unusual characteristics will suggest uses for these fine and inexpensive wood finishes in your postwar plans.

A test package of Pen-chrome-one-half pint of stain (specify color, listed below) and one-half pint of Clear Finish to seal the stain-will be sent postpaid for \$1.00. This is enough to cover 50 square feet.

O'BRIEN VARNISH COMPANY 410 N. Johnson Street, South Bend 21, Indiana





Above: Pen-chrome on white pine. War housing builders save money, assure owner satisfaction with this new wood finish.

The Product That Has Changed the Technique of Wood Finishing

colors:

It is available in modern BLONDE

SANDALWOOD .. DRIFTWOOD .. PLATINUM .. BLONDE .. MAPLE ..

BLEACHED MAHOGANY.

It subdues natural wild grain in fir It combines the light modern color of opaque finishes with the easy mainplywood. tenance of natural wood finishes. It costs less than opaque finishes.

• It wears longer, looks better. Cli-ents like its LASTING beauty.

• It minimizes scratching and mar-ring; the finish is IN the wood.

It provides the soft texture of wax

-but it is lastingly washable.

FINISHES SINCE

187

Full specifications on O'Brien products, cover-

ing a complete line of paints, varnishes and enamels, will be found in the 1945 edition of Sweet's Catalog.



"Such divine creations...and to think we might have walked right on past if we hadn't seen the Air Conditioning sign!"

After the shopping tour, they'll <u>still</u> want air conditioned comfort!

YES, their enjoyment of cool, fresh air in the places where they dine, shop, or relax, will definitely influence their attitude toward the places where they *live* and *work*.

So in this cartoon . . . reproduced from a G-E advertisement in leading retail and chain store publications . . . architects and building management will find a message that lasts longer than the laugh.

Among forward-looking management groups, and the far-sighted architects who work with them, the public's growing appreciation of the comforts of air conditioning is being carefully studied as a stimulus for postwar rentals. No doubt *your* plans in this direction are already under way. Now, you can take practical steps to speed their realization by discussing them with G-E engineers.

Postwar, G-E Air Conditioning will continue to offer users the advantages accruing from unified responsibility in the design of all important system components, and from widespread engineering, installation and servicing facilities through authorized dealers and contractors. And from G-E's wartime research will come *new* advantages . . . greater economy, compactness and flexibility.

General Electric Company, Air Conditioning and Commercial Refrigeration Divisions, Section 41311, Bloomfield, N. J.

T BUY ... and hold ... WAR BONDS



Hear the General Electric Radio Programs : The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 p.m., EWT, NBC ... "THE WORLD TODAY" News, Every Weekday, 6:45 p.m., EWT, CBS

Neighborhoods are living things

Revere has long been interested in post-war housing problems. During the past two years it has sponsored an advertising campaign in which has been presented the ideas of some leading architects and designers on this general subject.

One of the most important of these presentations appears in the Saturday Evening Post, October 14, 1944. It concerns neighborhood planning as seen through the eyes and experience of Oscar Stonorov and Louis Kahn.

"You and Your Neighborhood—A Primer" is concrete, exceptionally factual and completely practical. It is designed to help neighborhoods to solve their own problems of local rehabilitation. It is written in the full faith and conviction that, in the last analysis, the problem is the individual citizen's responsibility as well as a matter of community cooperation. Neighborhoods must be kept alive because, like all living things, "they must grow or perish".

Revere does not contend that this primer is the final answer to a complex and difficult problem. But it is very sure that it will stimulate the thinking and the action of thousands of people who want to improve the standard of living and appearance within their communities. In stressing copper and copper base alloys as indispensable in any plan of post-war neighborhood conversion—rebuilding, repairing or new construction—Revere is again convinced that their use makes any building better to live in, easier to rent or sell. It feels that the whole building industry must be benefited by such a book as "You and Your Neighborhood—A Primer".

If you would be interested in receiving a copy of the primer as described above, Revere will be glad, without obligation, to send one copy to any one who writes.

Please be prompt in your request since the edition is of necessity limited.

Address: Revere Copper and Brass Incorporated, Dept. AF, 230 Park Avenue, New York 17, N. Y.

A Prinner

hands to set in motion the forces needed tor us restapping. To help you, we have prepared a book that relia in signale language how yes and a few from the help your help know help the set of the set of the rechnical mediation of the set of the set of the volution need no rechnical set of the set of the instructions. Every other one of its names, we pages is an illustration, it diagram or a plan. Color makes

Let YOURS be these helping hands

Revere asked Messes. Stonorov and Xshino too Too and You Negahoonoo and Xshino too asked help, we had altered we recercive a kalow which help, we had altered we have see and a This advertisement appears in Saturday Evening Post, October 14, 1944

<text><text><text>



REVE COPPER AND BRASS

Don't wait for others - Do it yourself

COPPER AND BRASS INCORPORATED COPPER AND BRASS INCORPORATED Frankright Part Reverse in 100 Generative Generation 230 Week Arts, New York 17, Nr. Y.

Today is not too say to begin plan ting for yourself and your neghtbor hood. There is much to be done, and the say the same of the same of the task takes time. "Adding yourself, Protect your for the same of the same of the same bink law quick the whole do that the same of the same of the same time for one how get planning at plan for one how get planning to the same of the same to the same of the same of the same of the same of the same to the same of the same same of the same of the same of the same same of the same destroys the variable of the second of the s

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NEIGHBORHOOD PLANNING COUNCIL

eliminated OG course Revere is dedicated 1000-to as weld; There is a doctated 1000-able today for your use. But soon, but able today for your use. But soon, but ables, the term to paced to the today but come again; Revere would like to have down plan for thge day — and on that day to help you build. BUY MORE WAR BONDS TODAT



WILL BE A BETTER KITCHEN

IF EQUIPPED WITH

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Floods of daylight, an unobstructed view of outdoor beauties, and an extremely attractive exterior appearance... these are the advantages of using large areas of Pittsburgh Polished Plate Glass in residential design. This picture shows how one architect has applied the principle in a lovely Arizona home. Architect: Lewis Hall.

2 It's always interesting to see how an architect uses glass when he designs a

home for *himself*. Here, a picture window of Pittsburgh Polished Plate Glass, and generous supplementary areas of Pennvernon Window Glass, greatly enhance the brightness, charm and "livability" of an attractive room. Architect: Joseph Douglas Weiss, 101 Park Avenue, New York.

3 Unlimited possibilities for original and appealing bathroom design are open to the architect who employs Carrara Structural Glass. This polished, reflective glass comes in ten lovely shades, can be surface-etched, sand-blasted, laminated, fluted and bent. Architect: Paul Lewin.

4 The center of attraction in any living room can be a beautifully-mirrored fireplace like this. Pittsburgh Structural Mirrors, available in four colors of plate glass, with three colors of backing, are among the most versatile materials for striking design an architect can use. Architect: Maier & Walsh.



• We believe you will find much to interest you in our new, illustrated booklet of ideas concerning the use of Pittsburgh Glass in architectural design. Send the coupon below for your free copy.

"PITTSBURGH" stands for Quality Glass and Paint



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Pittsburgh Plate Glass Company 2307-4 Grant Building Pittsburgh 19, Pa. Please send me, without obligation, your new booklet entitled: "Ideas for the Use of Pittsburgh Glass in Building Design."

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CRANE bathrooms & kitchens FOR BETTER POSTWAR HOMES





SURVEYS show that Mr. and Mrs. America expect a better postwar home—one with the desired advantages of greater comfort, added convenience and improved appearance. You can contribute greatly to this looked-for quality by including Crane bathrooms and kitchens in the homes of tomorrow that you plan to build.

Crane plumbing fixtures—widely recognized as standing for the finest in quality, the most modern design—will increase the value and salability of the homes you build. Why not put this preference for Crane quality to work for you? In the Crane line of tomorrow you'll find plumbing fixtures to suit every budget. They promise new conceptions in style and beauty, plus the same sturdy dependability that in the past has characterized equipment bearing the name Crane.

For your immediate requirements Crane has developed a line of high-quality plumbing fixtures, made largely of non-critical materials, that are available without priority. For complete information call your plumbing contractor or Crane Branch.



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



is ready for the

postwar Craw-Fir-Dor



SELF-ENERGIZING-ONE PIECE-OVERHEAD TYPE GARAGE DOOR

17,00

THE Crawford Door Company, maker of Craw-Fir-Dor hardware, is now ready for production of an *improved* Craw-Fir-Dor unit — a unit that is better because of two factors:

1—Crawford has gained valuable experience through the manu-

> In your planning, remember: the new, better-than-ever Craw-Fir-Dor will be ready the moment the reconversion "go-ahead" is given!

facture of precision airplane parts.

2—Crawford has carried on an extensive research program to discover every possible improvement that would result in even easier installation, longer life, more trouble-free operation.

> For special residential or industrial installations, write: Crawford Door Co., Detroit, Mich., who make a complete line of sectional overhead-type doors.

Fir Door Institute, Tacoma 2, Washington

Whether it's a single home or an apartment building:

SEE FRIGIDAIRE HURSTV

Appliances

Take a leaf from the book of experience – the experience of millions of people who during the last 25 years have bought and used Frigidaire appliances. Hundreds of letters tell us of their complete satisfaction; of their conviction that if it's Frigidaire, it's dependable.

Likewise it's the experience of satisfying these millions of users which enables Frigidaire to assure the most dependable, the most usable and most complete electric appliances for the homes and apartment buildings that will be modernized-the new ones that will be built.

Frigidaire Refrigerators – will bring the most wanted features in food keeping – the greatest advances in economy, utility, beauty and convenience.

Frigidaire Electric Water Heaters – unmatched for value, performance, construction – automatic, economical, carefree – will provide plenty of clean, hot water always on tap.

Frigidaire Electric Ranges – of advanced, modern design – will provide the ultimate in cool, clean, carefree cookery.

Frigidaire Home Freezers—will enable both single home and apartment dwellers to enjoy fresh foods out of season, to "shop" right out of their freezer, to stock up on fruits, vegetables, meats and poultry when they're most plentiful and reasonably priced.

FREE Information on These Products

All these Frigidaire appliances will be made available as soon as war production permits. In the meantime, we will be glad to supply information on the products you're interested in. Just write Frigidaire Division, General



Motors Corporation, 239 Taylor Street, Dayton 1, Ohio. In Canada, address 68 Commercial Street, Leaside 12, Ont. ۲

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• Medical miracles, today, are taken for granted on the battle fronts of the world! But even the lightest casualty can become a crucial case when assaulted by the enemy forces of Nature. Danger lies everywhere in the air raids of disease-carrying insects.

LUMITE, the new plastic screen woven from Saran*, says, "No Admittance!" to these vicious marauders. Always on the job with our armed forces wherever disease carrying insects are a problem, LUMITE is impervious to heat, cold, rain, snow, rust and corrosion. That's why LUMITE *A product of the Dow Chemical Co. stands the test - in hell on earth!

Today's fighting men know the strong selling points of LUMITE from twenty-four-hours-a-day experience. Home again, they'll expect—and demand—LUMITE plastic window screening in their homes...offices...factories. For they'll have seen the durability and effectiveness of LUMITE proved under every adverse condition; tested in the laboratory of hard experience.

Here is an important postwar product being "pre-sold" today across the globe. A great postwar market developing now for tomorrow ... FOR YOU!



Chicopee Manufacturing Corp., Sales Office: 40 Worth St., New York 13, N.Y. World's Largest Maker of Plastic Screen Cloth



★ Will not rust or corrode... long-lasting

★ Non-staining...no streaking of sills or sidewalls

★ Strong, resilient . . . no dents or bulges

- ★ Unaffected by fumes or salt air
- ★ Translucent . . . admits more daylight
- * Non-inflammable

★ Will be competitively priced

Memoto Architects and Engineers: Include LUMITE New Plastic Window Screens in your postwar plans for homes, factories, offices, schools! Write *now* for detailed information.





Dan't be misled

There'll be no Reconversion Problem in the Lumber Industry

As soon as war demands are satisfied, you'll be able to obtain lumber of pre-war quality and with the usual prompt delivery. The situation is tremendously reassuring.

There will not be a moment lost in the change-over from war to peace production. We'll simply continue to manufacture as we are today. For war demands and civilian demands are very similar—they both call for standard sizes, grades, and items. Instead of our product being shipped for military use, its distribution will be re-channeled to RETAIL YARDS and industrial users.

You can count on lumber of pre-war quality again — and that was the best manufactured lumber that ever reached the American market. It was uniformly graded, carefully machined, and properly seasoned. You can expect that quality again from Weyerhaeuser.

Millions of feet per day of well seasoned lumber will be available as soon as distribution restrictions are removed. Modern kilns are drying lumber in great volume. They accomplish in a matter of days what formerly required months.

With the return of skilled workers, with the new techniques developed in forest and mill, and with new and more efficient equipment, quality lumber production will equal normal consumer needs.

WEYERHAEUSER SALES COMPANY

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WEYERHAEUSER 4-SQUARE LUMBER AND SERVICES

* Manufactured under the patents of F. L. Michaels by The Michaels Art Bronze Co., Inc., Covington, Ky.

SERT ONE COIN

AT

HANDLE TO STOPAFTER EACH

METERS **GIVE DEPENDABLE SERVICE** UNDER ALL CONDITIONS

Their dependability comes from correct design, unusually rugged construction, and fewer moving parts to get out of order. In scores of installations, MI-CO Meters are giving dependable year in, year out service in all kinds of weather and under the severest operating conditions. And the cost of maintenance is so low it's negligible. If you plan to install parking meters, it will certainly be to your advantage to investigate MI-CO Meters. Fully illustrated literature and case histories of installations in large and small cities will be sent on request. As soon as manufacturing restrictions are lifted, MI-CO Parking Meters will again be available.

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Here is a NEW Structural Product



A High-Strength Material, in Large Panel Form, With a Smooth, Hard, Infrangibly-United Plastic Surface!

INDERON was developed as a utility container material for the Army Air Forces, was later adapted to many other war uses where strength, durability and dense, hard surface qualities were essential.

INDERON is waterproof, highly resistant to abrasion, impact, vapor permeation and other destructive forces. INDERON, made by chemically and infrangibly uniting Douglas fir veneers, plastic glues and a fibrous plastic film, is a large-size structural product which needs no surface protection, no decorative treatment, no structural support.

INDERON is stable. It does not warp or twist. It combines beauty, strength, durability and the economical panel form of standard plywood.

What Are the Uses of Inderon?

INDERON has literally thousands of applications in such fields as: Marine, Aviation, Railroad, Bus and Truck, Home, Office, Apartment, Farm and General Industry. Available now only for Army-Navy use. INDERON will become one of the most useful of all structural products in the post-war era. Write NOW for full information!



INDERON is ideally suited to play a large part in post-war home building—and in industrial construction as well. Consider INDERON in its three post-war grades (Standard, Decorative and Industrial) for exterior walls, concrete forms, roofs ,kitchen cabinets and fixtures, floors, porch decking, etc. Its low cost will make it a "Jack-of-alltrades" among structural materials.



INDERON is successfully serving the Army Air Corps as the preferred material for packaging many vital parts, medical supplies and delicate instruments. INDERON has also been used for many other important war purposes and has proved its ability to resist tropical fungus, termites, weathering and water immersion.

- Manufacturers

Washington Veneer Co. Olympia, Washington

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For Information, write Chicago Sales Office 9 So. Clinton St., Chicago 6, III. XCLUSIVE FEATURES will comnand as much consumer attention fter the war as before. In fact, Mrs. Consumer will be more conscious han ever about new features of convenience and operating efficiency. Hence, the post-war kitchen vith an exclusive Monarch Electric loaster Range will have a defiitely added appeal. Write for amphlet showing generous asortment of "Tomorrow's Kitchens."

YOUR POST-WAR

EYEON

THESE



Large Capacity -holds 8 standard, 1-lb. loaves of bread.

operated interior light.

5-wall design with removable porcelain armor.

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All interior parts removable for easy cleaning.

DEEP WELL COOKER WITH SIDE HEAT

Side application of heat plus heavy insulation produces peak cooking efficiency in a "surface oven." Saves electricity.



BLOCK

Thick insulating block underneath unit prevents downward heatloss, stores heat, cuts electric bills.



Monarch created this built-in, cooking-toplevel roaster which also serves as a supplementary oven. Ideal for complete meals.



MALLEABLE IRON RANGE CO. Beaver Dam, Wisconsin 3614 Lake Street







Automatically





KEEP THE ENTIRE FAMILY IN HOT WATER

LOOK WHAT YOU CAN DO WITH A

All basic structural details are retained in the suggested modernization of this 1892 store. L-O-F. Glastone—lightweight, glass-faced masonry unit—is suggested for the entire structure. The use of glass for the exterior assures a clean, attractive appearance at all times.

.. from 1892 to 194X in a single jump!

TRUT

You achieve a startling improvement in appearance when you convert an old-style store to one with a modern VISUAL FRONT.

But there's more to it than that. The Visual Front is *designed* to attract more traffic, to display more goods, to create a favorable, sales-producing impression.

The modern front contains no unnecessary features or "doo-dads" to distract the eye. Instead, the eye is drawn immediately to displays of merchandise—and to the store interior.

The Visual Front-with its big areas of clear glass, puts the whole store on display. It capitalizes on passing traffic—invites it in. It permits the use of a uniform decorative treatment inside and out, further eliminating any visual barrier between merchandise and passing traffic.

Whether your clients have stores of the 1892 vintage, or the more recent "closed" front of the 1930's, they'll be interested in these sales-building features of the Visual Front.

The Visual Front gives you an opportunity to offer new ideas and new attractiveness along with sound merchandising principles. For information on the types of glass available to achieve these desired results, write to Libbey•Owens•Ford Glass Company, 9104 Nicholas Bldg., Toledo 3, Ohio.



WITH ANY KIND OF RADIATION FORCED HOT WATER DOES THE JOB BEST

The beauty of the B&G Forced Hot Water System is that it produces the same smoothly modulated, uniform beating, regardless of the kind of radiation. With either convectors, cast-iron radiators, unit heaters or panels, you get an accurate control of the heat supply which keeps room temperature at the desired degree.

You can install *different types of heating units* in the same build-ing, if the functions of various departments make it desirable. Observance of a few simple rules and proper zoning permit you to do so, with the assurance that you have solved the heating problem in a manner which will give the greatest satisfaction. Put B&G Forced Hot Water in a low-cost cottage or in a housing project covering acres-with the certainty that more comfort will be achieved on less fuel.

Simple equipment, greater fuel economy, adaptability to zoning, easy designing, and the superior control qualities of mechanically circulated water are the reasons why the B&G Forced Hot Water System is today's preferred heating method. How to design and install it are fully explained in the B&G Handbook. Send for your copy today.





terial opens up. Inefficient heating systems everywhere are in need of modernization with B&G Forced Hot Water Equipment



AND DON'T FORGET YEAR 'ROUND HOT WATER!

Forced circulation permits use of the heating boiler to heat domestic water alsonot only in winter but in summer as well. No separately fired heater required. This is the economy way to heat water for kitchen, laundry and bath-the convenient way to have an inexhaustible supply on hand 24 hours a day.



CAST-IRON RADIATORS



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UNIT HEATERS





PANEL HEATING - coils in floor PANEL HEATING - coils in ceiling





PLAN POSTWAR KITCHENS for the

"More than seven out of ten postwar homes will cost \$3000 or over," predicts the United States Chamber of Commerce. Homes in this price range can afford Hotpoint Electric Kitchens.

OVER 300,000 requests for Hotpoint's booklet, "Your Next Kitchen" indicate that Mrs. America not only will be able to afford an electric kitchen, but that she wants the convenience of modern "planned" kitchens. She dreams of the postwar day when she can do bothersome kitchen tasks quickly and efficiently the all-electric way.

Make the Most of the Building Boom

When victory comes it is estimated that American "pent-up" purchasing power will exceed \$100,000,000,000. Your future market is large...plan now to take advantage of it. Design homes with modern functional kitchens.

In this electrical age of wonders Mrs. America will no longer be satisfied with old-style kitchens. For her a home is only as modern as its kitchen where she seeks the utmost in efficiency, speed and labor saving devices . . . all attributes of Hotpoint electric kitchens.

Even More Will Remodel

Although estimates vary, surveys show that from three to five times as many as will buy or build new homes, plan to remodel after the war. Building or modernizing kitchens comes first with American women. In speculative building, modern electric kitchens will speed turn-over... will reduce financing costs for you.

Cash In on Hotpoint's Pre-Selling

During the war Hotpoint has been preselling prospects with a hard-hitting advertising campaign urging War Bond savings for postwar building . . . for all-electric kitchens. This advertising is continuing, accelerating the trend to Hotpoint.

Designed expressly for architects and builders is "Hotpoint Kitchen Planning Service." An expert staff of kitchen designers is ready to offer you suggestions on any kitchen planning or construction problem. Write for details today.

Edison General Electric Appliance Co., Inc. 5651 West Taylor Street, Chicago 44, Ill.

In most states, all Hotpoint Kitchen equipment can be included in F. H. A. loan.







New York CORPORATION Pittsburgh

it will still be your guide to better

Heating and Plumbing Specifications

when construction again becomes possible!

Coleman Makes It 3 In A Row!



After Revolutionizing Two Other Types of Heating, COLEMAN NOW PRESENTS A NEW CENTRAL HEAT PLANT!

Here comes another triumph for Coleman's 45 years of experience in better oil and gas combustion!

The first triumph came when Coleman entered the gas floor furnace field. Today, because of Coleman engineering, the floor furnace is many times the factor in heating importance it was before Coleman went to work.

Next, Coleman engineers went after the "bugs" in oil space heaters — and, with Coleman oil heaters, created a new standard of comfort.

As soon as the war is over, there will be another revolution, this time in the central heating market. Any normal size home, with or without a basement, can have true central-heat-plant convenience. It will incorporate the heat engineering developments that made Coleman famous -plus many new advancements. There will be compact, easy-to-install models for gas, oil and butane fuels! Gravity and forced-air types from 50,000 to 150,000 B. T. U. capacities. Complete automatic comfort, too, at a price that will help your budget.

This "revolution" can mean real benefits for you. Learn about these benefits now! Write today, to Coleman Lamp and Stove Co., Wichita 1, Kansas.



A Great Advance In WATER HEATERS

Here's another field Coleman is invading - with proved methods that brought leadership! Oil, gas, butane models; 20- to 60gallon sizes; improvements of the leadership-winning Coleman kind. Will meet your requirements; and quality features will help in selling and satisfying home owners.

HOUSE CLIMATE... POSTWAR PLANS AND PEACE PAINT!



Jo Life in pup tents and foxholes is going to make men more conscious of "indoor climate." At the first convention of the Indoor Climate Institute, President Paul B. Zimmerman, Vice President and General Sales Manager of Airtemp Division, Chrysler Corp. points out to Florence Paine, House Beautiful Editor, how this organization will promote the "fourth dimension in living."



3. It takes a heap of walking to cover a market, as everyone knows. As a result, retailers (and magazine editors) develop some pretty strong muscles and lasting friendships. Here is House Beautiful's Patricia Guinan at the last New York Gift Show, being shown the new items in the Kensington line by famous Designer Lurelle Guild and Kensington's Sales Manager W.W. Brossman.



Zo The man behind the counter, who hears what customers ask, ought to have all the answers. Here's Russell Rypsam, House Beautiful's Art Director, (left) doing a job of brain picking on Ralph Chipurnoi, Housewares Buyer (center), and Louis Stern, Assistant Buyer for Gimbels (New York). See results of this and other field research on paints in November issue of House Beautiful, pages 94-95.



You don't learn about markets sitting in an office. And sales records don't tell anything about the business you didn't get. There's Elizabeth Gordon, Editor of House Beautiful, at luncheon in Los Angeles with such people who-ought-to-know West Coast taste in markets as Earl Barker (Barker Bros.), Wallace Neff and Allen Siple (architects), William Haines and Jack Moss (decorators).

HOUSE BEAUTIFUL is the magazine that interprets your market for you! It's JIRST in the home field ... the must magazine for buyers who make it their business to know their business!





ENGINEERIN
ACROSS THE VOLTURNO

The Engineering skill, that produces the CECO STEEL WINDOW ... now makes possible the Bailey Bridge...spanning enemy streams on all fronts.



A "bridge of windows"? Yes, in a sense ... for into the Bailey Portable Panel Bridge have gone all the skill and "know how" we have acquired in manufacturing the Ceco precision-engineered Steel Window.

A remarkable engineering feat . . . this bridge that can be assembled like a giant erector set . . . by a surprisingly small group of men ... to reach gaps up to 200 feet in only a few hours. It is rolled out in 10 foot sections from one bank of a stream and because of the perfect (no tolerance) fit of the sections, will support terrific loads.

The Ceco Steel Window, like the Bailey Panel Bridge, is preci-sion built and durable. For Ceco engineers build "small" with the same precision they build "big". This skill and exactness gives the Ceco window important lasting advantages in installation and operation. They assure longer life and greater beauty. For commercial, school, factory, or hospital builder, Ceco construction products and Ceco Steel Windows do a better job through precision engineering.

Ceco Commercial projected window, a light maximum window of proven adaptability for all commercial and industrial buildings.



co's line of Steel Windows includes Light and Intermediate sements, Basement Windows, Architectural Projected, Comrcial Projected and Pivoted Windows, Continuous Windows, curity and Utility Windows, Mechanical Operators, etc.

OTHER CECO ENGINEERED PRODUCTS:

pes of Steel Doors, Metal Frame Screens, Metal Lath, Weatherstrips, Steel Joists, Steel Roof Deck, Meyer forms, Adjustable Shores and Clamps, Concrete Reing Bars and Welded Fabric.

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What the CECO engineered window means to Architect, Constructor and Factory Worker 1. Precision Engineering means an extra tight all weather seal—

- 2. Precision Engineering means easy opening, and closing—no
- sticking, warping, or swelling. Ceco Windows always fit. 3. Precision Engineering means a far greater light area, lets
 - 4. Precision Engineering means controlled ventilation—you'll
 - always catch stray breezes—control draughts. 5. Precision Engineering means permanence—Ceco Steel
 - Windows use more steel, last the lifetime of your factory. 6. Precision Engineering means Bonderizing, a special process
 - for sure protection against paint failure and rusting. 7. Precision Engineering means all these important
 - advantages at no premium cost!

KES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS



PRATT & LAMBERT

PAINT AND VARNISH

PUTNEY MEMORIAL HOSPITAL, ALBANY, GEORGIA

Photos by McCollum's Photo Shop, Albany, Georgia





WM. J. J. CHASE, Architect, Atlanta; OFFICE OF DR. WM. H. WALSH, Consultants, Chicago; SOUTHEASTERN CONSTRUCTION CO., General Contractor, Charlotte, N. C.; D. C. KERR, Painting Contractor, Charlotte, N. C. PHOTOS: General exterior view. Below, new building, including old wing at right. At left, from top to bottom, the new Central Supply Room; Cafeteria Dining Room; Kitchen.

F brick and stone construction, and fireproof throughout, this recently completed 100 bed addition to the Putney Memorial Hospital was built under war-time restrictions. The project required ingenuity in design and selection of materials, in order to meet these restrictions and to keep the building modern in every respect. All corridors, workrooms, the kitchen, nursery, etc., are acoustically treated; the operating and obstetrical suites are air-conditioned. Cost, complete with equipment, was \$400,000. This included a Federal Works Agency grant of \$160,000, as a Defense Public

Works project. Outstanding among the Pratt & Lambert Paint and Varnish products used on and in the hospital, are P&L House Paint; Cellu-Tone, a sanitary, washable wall finish; and "61" Floor Varnish. May we tell you how fully P&L products serve decorative and practical ends in all types of structures?



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GET RID OF BLURMITES* When You're Remodeling Homes..

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Ultra-modern Marlite assures faithful reproduction of your planned designs for interior walls and ceilings. In addition, Marlite gives your clients interior surfaces that retain original, lustrous beauty over the years; that give full reign to decorative ingenuity and trends.

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Marlite's *pioneer high-heat-bake finish* completely seals the surface against the penetrating action of dirt and moisture (Blurmites). It's the feature that's responsible for Marlite's long life, modern beauty, easy cleaning and simple maintenance.

IDEAL FOR HOME INTERIORS

Manufactured in large wall-size panels, Marlite is easily and quickly installed for home, apartment or hotel remodeling and new construction. Marlite's attractive, sanitary surface makes it especially suitable for kitchen and bathroom installations. And there's an ideal Marlite pattern for living rooms, dining room, bedrooms and rumpus rooms, too.

Narlite Wall Panels!

SAMPLES - FREE!

Marlite plain-colors, tile-patterns, horizontaline, genuine wood-veneers and marble-patterns plus harmonizing moldings in plastic, wood, presdwood and metal offer everything architects and designers need to create out-ofthe-ordinary interiors. Marlite is moderate in cost. Write today for free samples and complete information! Marsh Engineers will gladly collaborate on plans !

EQUALLY ADAPTABLE FOR COMMERCIAL AND INDUSTRIAL BUILDINGS

"For all types of rooms, in all types of buildings"—that's a short definition of Marlite's many uses. There are many helpful Marlite booklets that will greatly aid in planning interiors. They're free—send for them today!



IT'S HARD TO BELIEVE

... that the kitchen on the right ever looked like that picture at the left. That's the difference Marlite can assure in home interiors. The new walls here are Marlite Powder Blue, with White ceiling; trim is Marsh Stainless Steel molding. These easy-to-clean wall and ceiling surfaces are a joy to homemakers. Provide them by specifying Marlite.



*Blurmites—destructive agents, barmful to the finish of many interior wall, ceiling and counter surfaces.

111 MAIN ST., DOVER, OHIO

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CREATING BEAUT

PRODUCTS, Inc.



NEW YORK'S LARGEST HOSPITAL designed for modular clay masonry!

STRUCTUDAL

The new Chronic Disease Hospital which is to be erected on Welfare Island, N. Y., has been designed for modular masonry units.

This hospital was planned under the supervision of the Bureau of Architecture of the City of New York: A. Gordon Lorimer, Chief, Bureau of Architecture; Isadore Rosenfield, Chief Architect, Hospitals.

Rosentiera, Cittar variation of this type, proln designing a hospital of this type, provision had to be made not only for beds and medical facilities, but also for ample workshops and recreation spaces. Modular design is ideally suited for either type of construction—the repetitious nature of

the words or the varied elements of shops, auditoriums, etc. Use of modular units will mean greater accuracy in building and

lowered costs. This large project is one of several major buildings already planned, or now being planned for dimensional co-ordination.

If you are one of the progressive architects who plan to design in module, we as an industry are ready to serve you now as we have in the past. Write for our new booklet, "The ABC of Modular Masonry." Structural Clay Products Institute, 1756 K Street, N.W., Washington 6, D. C.

After the war..it will be built of modular designed BRICK AND TILE

INSTITUTE

... practical, modern, beautiful,

STEEL SAS

but ... WILL IT RUST?

Certainly steel is the practical, modern, economical material for sashes. Its great advantage lies in its permanency—an advantage it has only when properly protected against rust.

Hot Dip Galvanizing provides the perfect and inseparable fusion of the heaviest possible zinc coating to iron and steel products, and protects by sacrificial action. Laboratory and field tests both prove that this method is the best and more economical rust preventive. If you want to be sure of the permanent beauty or usefulness of the iron or steel articles you buy, be sure to specify "Hot Dip Galvanizing." If you make articles of iron or steel, be sure of getting a genuine and expert job of Hot Dip Galvanizing by sending your materials to one of the members listed at the right. American Hot Dip Galvanizers Association, Inc., First National Bank Bldg., Pittsburgh 22, Pa.

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NOVEMBER 1944

Not just Galvaniz,



NOVEMBER

Published in the Interests of Better Sight and Sound

Fluorescent Tubing Studied as Means of Commercial Lighting

Since the comparatively recent development of fluorescent tubing-a type of fluorescent which employs higher voltage than do fluorescent lamps-new methods of lighting and new decorative schemes are being investigated by architectural designers of post-war buildings.

To the architect, the major advantage offered by the fluorescent tubing is that it can be curved and shaped to conform with the basic design of the unit. A notable tripurpose application was recently reported in which exposed tubing was employed in the ceiling and soffit surfaces of a department store stairway to illuminate the stairs, to direct customers to other selling floors, and to add a decorative note.

Another interesting feature of fluorescent tubing is that it can be mounted in series to form long, continuous curved ribbons of cool glareless light that can be directed from room to room. Pillars and other obstructions are easily by-passed when specially curved sections are employed.



Fluorescent tubing installation at Clark's Coffee Tavern, Seattle, Engineered by Electrical Products Consolidated.

Cool Light Dovetails With Summer Cooling In Post-war Modernization Low-heat Fluorescent Lamps Reduce Load on Air Conditioning Systems

In future building, air conditioning and Sylvania Fluorescent Lighting will operate in conjunction to provide cool clean air and cool glareless light. Even in the remodeled home and commercial building, the combination of perfect air and perfect light will be employed to pay dividends in better

8-WAY MOUNTING WITH ONE FIXTURE

Further simplification in fluorescent lighting is offered through a new Sylvania allpurpose commercial fixture. By interchanging small parts, one basic fixture offers eight different adaptations. For example, mounting may be surface or pendant, shielded or unshielded, individual or in continous rows. Consequently, whatever the lighting job to be done, the new Sylvania all purpose fixture will do it . . . with standard fluorescent lamps.

Additional advantages offered by the new fixture are: speedy installation, low-cost maintenance, sound design and long life.

DID YOU KNOW ... That Sylvania Germicidal Lamps kill air-

borne bacteria by bombarding them with ultra-violet rays?... they can be used to irradiate glasses and dishes stored in the open.

That Sylvania makes the Recorder Lamp that enables an architect in California to transmit clear copies of his renderings and plans to an east coast client by radio?

That because the Sylvania Blacklight Tube

excites fluorescent pigments and materials, many new safety and functional applications employing it may be discovered by the architect? ... that it is most advantageously used where small areas of light are required?

health and greater comfort.

At present, the Bell Bomber plant offers an excellent example of the "air-light" principle in actual operation. Close tolerances there require accurate air conditioning. To be certain variation in radiant heat output of lamps will not alter air temperature, cool fluorescent lighting is used exclusively.

But the dovetailing of the fluorescent lighting and the air conditioning systems is important as a thrift consideration too. For fluorescent lamps radiate half as much heat as ordinary lamps at equal levels of illumination. Obviously, as fluorescent lighting lessens the load of the air conditioning system, it automatically lowers the cost of operation.

It isn't unusual then to find that public opinion is leaning more and more toward the realization that to consider air conditioning without likewise planning for fluorescent lighting would be not only costly, but wasteful as well.



"But, officer, it was a gift. Don't you see it says, 'In appreciation for recommend-ing Sylvania Fluorescent tubing, from the Eve-to-the-Future Corporation"

VANIA FELECTR PRODUCTS INC. Salem, Massachusetts

MAKERS OF FLUORESCENT LAMPS, FIXTURES, ACCESSORIES, INCANDESCENT LAMPS, RADIO TUBES, CATHODE RAY TUBES, ELECTRONIC DEVICES

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Provides the link missing in modern human habitation hygiene

ROUTS INDOOR SMELLS and their Consorts BY ELECTRO - CHEMICAL ACTION

Self-contained, electro-chemical, rotary de-odorizer — 110 v. a/c Use as necessary — turns on and off like an electric fan Negligible current consumption No maintenance required Lucite construction Portable — Luminous — Decorative

Various models, varying in capacity; Domestic Model C shown in cut Direct current (d/c) models in development, including one for automobiles

The Trizoner will be available with prospective early modification of civilian manufacturing restrictions.

Literature, estimates, etc., on request. Correspondence invited.

OXYGEN PRODUCTS CORPORATION OF DELAWARE

103 Park Avenue

New York, 17, N.Y.



JANUS WAS A PIKER!

THIS old Roman God who was able to look only two ways at once was a piker compared to the modern architect! *He* has to look at least a dozen ways at once to keep up with all the new products and methods that clamor for his attention.

Fortunately there are 150 products the archi-



The Gold Bond Floating Wall System was invented by National Gypsum to increase the resistance of plaster walls to strains set up by houses settling and to decrease the transmission of room-to-room noise. The System involves suspending Gold Bond Gypsum Lath to wall studs and ceiling joists by driving Gold Bond Floating Wall Nails *between* the panels of the Gold Bond Gypsum Lath. This exclusive Gold Bond System provides greater strength and more lasting beauty in walls and ceilings. tect does *not* have to worry about—those are the complete line of building materials manufactured under the Gold Bond name by National Gypsum Company. Here are two examples of how Gold Bond Research has developed products that enable you to "Build Better With Gold Bond!"



Fireproof Gold Bond Gypsum Sheathing has been perfected so that it has even been used as exterior board with no further protection from the elements. It is the perfect sheathing for all the new homes that will be built after the war. It increases the fire protection. Tongue and groove joints stop wind and weather. It is inert to the effects of the atmosphere. It adds to the strength of construction. Another example of better building products through Gold Bond Research!

For complete information on all 150 Gold Bond Products see Sweet's or write National Gypsum Company, Buffalo 2, N.Y.



THE MONTH IN BUILDING ... NEWS

Building crosses postwar threshold (this page) . . . Lenders fear vets' loans will speed inflation (this page) . . . War housing: man proposes, NHA disposes (page 76) . . . New York may spend millions for urban rebuilding (page 77) . . . Prefabs store war surpluses (page 80) . . . NHA spots postwar rent levels (page 80).

HOUSEBUILDING STARTS

FURUM NOVEMBER 1944

K C H L'LE C L'U K A L

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Nonwar housing was underway. With most critical materials in good supply and the war job done, housebuilding had knocked at the reconversion door for months. Late in October the National Housing Agency and WPB reached agreement, opened the door.

Builders may now start houses that will meet normal prewar construction standards and, in areas specified by NHA, cost up to \$8,000. This means that the houses will qualify for FHA Title II insurance, which trimmed-down war houses could not. At last report, WPB was also ready to drop occupancy restrictions, which means that any customer who wants to buy or rent a house may do so.

The new plan was not the end of priorities. But it will be much easier to get priorities. Available equipment and materials can now flow freely into use. Nor was it the end of programming. NHA will continue to set the over-all number of houses that may be built. But, with occupancy restrictions dropped, war worker need will drop out as the determining factor in the size of the program. Programming decisions will be made, and priorities issued, chiefly on the basis of materials available. Except for lumber, housing materials supply is good and steadily getting better. NHA can now see its way clear to program nonwar houses at a rate of more than 12,000 a month.

These houses will meet prewar construction standards because WPB restrictions on the use of critical materials have been relaxed in these ways:

▶ Number of electrical outlets will not be limited; installations can now meet the minimum requirements of the National Electric Code.

▶ Kitchen and bathroom no longer must be placed back to back; there will be much more freedom of design.

Tight controls over heating system design will be eliminated. ▶ Hot water storage tanks may be used in any size, and electric water heaters may be freely installed.

Total floor area per dwelling unit will not be limited.

Restrictions on the use of lumber remain. The maximum board-foot allowance of dimension lumber per square foot of floor area is unchanged. A prohibition against the use of board lumber for sheathing partitions and ceilings, and for fences, has been added. Garage walls must be masonry construction.

All in all, the news was good enough to start building men rolling up their sleeves in earnest. And the news would get better. V-E day, most of Washington agreed, would mean the end of housebuilding priorities.

VETS' LOANS: DANGER AHEAD?

The Veterans' Administration, in three months of laborious study and conference, had done its best to smooth the road to home ownership for ex-G. I. Joe (see ARCH. FORUM, Aug., '44). But mortgage lenders and federal housing men alike, pondering the 10,000-word regulations issued by VA to cover government guaranty of veterans' home loans, could see plenty of bumps ahead. One dangerous one: the possibility of faulty or inflated appraisals.

Congress had decided to put the loan program in the hands of private lenders, and VA's regulations reflected a becoming reluctance to tie lenders' hands with an excessive amount of restrictive supervision. Like Federal Housing Administration insurance, the government's guaranty of loans to veterans was intended to accelerate private mortgage lending. Unlike FHA insurance, which pioneered a standardized risk-rating system, it was clearly designed to leave local lending and appraising practices untouched.

Biggest boon the government guaranty plan brings to the veteran: he will not have to have down payment money to become a home owner. He can get a private loan that will cover the full pur-

NEWS





CRAVENS: war housing disposal

chase price of the property, choosing either of these plans:

▶ He may apply for a single loan, of which the government will guarantee up to 50 per cent or not more than \$2,000. Since this loan will have the dual security of the usual mortgage contract, plus the government guaranty, it may, within discretion of the lender, amount to 100 per cent of purchase price. Interest on the whole loan must not be more than 4 per cent.

• He may apply for two loans. The primary loan will be secured by a mortgage contract and FHA-insurance. VA will guarantee a secondary loan amounting to 20 per cent of the purchase price or a maximum of \$2,000. Interest on the secondary loan must be not more than 4 per cent.

Whichever plan is used, the lender will call in a private appraiser to set the "reasonable normal value" of the property, and this appraisal will be submitted with the application for a VA guaranty. Here is one expected trouble spot. Some federal housers fear that a loose and non-standardized appraisal system may not only add up to a bad risk for the government, but also tie the veteran to an inflated mortgage. VA will issue an approved list of appraisers, define competency standards which appraisers must meet to get on the list. But appraisers will not act as agents of the government, must look to the lender, the builder or borrower for their fees.

Tighter federal control of appraisal procedure, many mortgage bankers agree, would be a safeguard against precariously high loan values. Pessimists expected that another Home Owners Loan Corp. would eventually be necessary to rescue all the veterans sure to get into distress under the present plan.

Whatever the long-range drawbacks, G. I. loans will have plenty of immediate customers. There are already one million World War II veterans, and more are leaving the services at the rate of 1.000 a day. Lenders were busy last month getting ready for brisk business. Federally chartered building and loans needed to make only a few charter amendments to participate in the program. In some cases, state-regulated lending institutions would have to seek new permissive legislation. Whether national banks could participate by regarding the home loans as "character" rather than "mortgage" loans was still being argued.

Anxious to make the plan as attractive as possible to lenders, VA has made it clear that payment of guaranty claims will not have to wait upon foreclosure proceedings. If, after foreclosure, the property is resold, the government will collect no part of its guaranty payment until the creditor has been fully repaid. Government guaranty responsibility will, however, decline proportionately as the loan is paid off.

On one point Congress, VA, and lenders were in firm agreement: the veterans' loan program must be no token gesture; it must be made to work. If the present regulations stall, there will be new ones. If private lending doesn't work Congressional sentiment may quickly shift to direct government loans.

UNLOADING WAR HOUSING

The month brought no answer to a question that a lot of people have been asking the National Housing Agency: What will happen to the near \$2 billion worth of war housing built by the government? NHA was under Congressional order to unload this housing within two years after war's end. But there were plenty of uncertainties.

NHA had long ago said firmly that all temporary dwellings would be removed. Would intention stand up against pressure of need? Already some were arguing that many of the half-million temporaries are better than the dwellings which one-third of the nation calls home. Local merchants, who fear population losses, lined up with this point of view.

Many kinds of eyes focused on the government's investment in permanent war housing. Real estate brokers hoped there would be fees somewhere in the NHA disposal process. Building money hoped for a few bargains. Public housers hoped the housing would be transferred to local governments for operation as low-rent projects. Not the least concerned were the tenants themselves. In San Diego's giant Linda Vista (3,000 permanent units), some 1,000 tenants had already organized a Prospective Home Owners Association. Purpose: to press for a federal disposal policy that would give tenants first chance to buy their war homes, with the privilege of applying all rent previously paid as a down payment. Most of the housing is multi-family and will call for cooperative ownership associations.

Said chairman James A. Cummings at a tenants' mass meeting: "Under no circumstances, should the houses be permitted to fall into the hands of private real estate interests for resale at a profit." Said the Federal Public Housing Authority's regional director, Langdon Post: "There is no machinery set up at the moment to permit us to sell those houses, but there is apparently nothing in the law which would be against selling to individual tenants." Rep. Ed. V. Izac (Dem., Calif.) said he had been told by the NHA Administrator that permanent units would be offered first to any other federal agency with use for them, second to local governments for low-rent housing, next to tenants. Only as a last resort would the housing be thrown open to public sale. The National Housing Agency said nothing.

At mid-month the whole ragbag of problems landed on the desk of FPHA's newly appointed assistant Commissioner for Disposition: C. Russell Cravens, formerly an HOLC regional manager. But Craven's job could not begin until NHA, Congress, and the Surplus War Property Board had come to an agreement on general policies.

HOME BUILDERS MEET IN WASHINGTON,



OPINION UNSETTLED

Not even in the most intimate corners of their Washington meeting rooms could housebuilders pick up much on which way government policy would jump on the housing program (H-2) set up by the National Housing Agency to tide them and their housing-poor customers over until L-41 was finally put on the shelf. Not even the government knew. Major relaxation of the construction limitation order had been promised, but WPB optimism, like the nation's, fluctuated in sharp response to the news from Europe.

Private opinion on a reconversion timetable was equally unsettled: There would be plenty of lumber after V-E day; lumber would be short for a year after V-E day. Some plumbing fixture manufacturers reported that close-to-normal production would be underway by the end of November, but brass trim was not yet in sight. A good many equipment men agreed that they would have not more than a 90-day reconversion problem, but others said it would take at least a year after controls are off to get a normal flow into distribution channels again.

But members of the National Association of Home Builders got, if small enlightenment about their immediate prospects, a large amount of comfort from reminding each other at their recent assembly in Washington (see cut) that good days were certainly not far ahead. President Robert Gerholz, Flint, Mich., offered advice that would work whatever the time-table: "Upon your return home you should secure options upon land, proceed with land planning and house designs, and take preliminary steps in the matter of financing. The progress of the war will establish the date of your resumed activity but it is quite safe to

say that the time has come to roll up your sleeves, plan soundly and well. Be prepared to tackle the most staggering home construction program in the history of this nation."

\$20,000,000 FOR URBAN REBUILDING

While most cities still stared vacantly at blighted downtown blocks, waited for a magic formula or a federal bonanza to start things going, New York was ready to talk about urban rebuilding in terms of a \$20,000,000 slice of the city's 1945 capital budget. To dollar-wise city controller Joseph D. McGoldrick, it seems "rash" to spend the \$50,000,000 which New York has already earmarked for highways and public buildings in downtown Brooklyn "without making every effort to initiate a regeneration of the whole area." Adjoining the blocks where the City Planning Commission has located Brooklyn's proposed new civic center, McGoldrick said, is "one of the most pathetic and utterly mongrel areas of the whole city . . . Unless these areas can be rebuilt with private capital and put on a self-sustaining tax-paying basis, it is difficult to see how we could afford the highways and public improvements."

It was not difficult for McGoldrick to see what had been so hard for others: how could the rebuilding be afforded? Sharing New York builder Alfred Rheinstein's conviction that run-down city neighborhoods can be replanned and rebuilt without subsidy (see ARCH. FORUM, May, '44), McGoldrick said he was sure the "city would recover the entire amount it would be required to advance for this land acquisition (at assessed values)."

The city's power and purse would immediately remove one obstacle to redevelopment: splintered ownership of tiny parcels of land. Street replanning for a super-block pattern, rezoning, the community benefits of new public buildings, parks and playgrounds will combine to bring the city a good price when the land is sold at auction for private development. At the auction, the city, its plan-

Life Photo



McGOLDRICK: time for boldness

ning job done and its money back, steps out of the picture. "It is an area perfectly capable of sustaining moderatepriced apartments without tax subsidy of any sort... The property should be sold free of deed restrictions... We can rely on the Multiple Dwelling Law and an intelligent zoning to insure adequate standards and preserve the public's interests."

It remained to be seen whether the Planning Commission, the Board of Estimates, and the Mayor would share Mc-Goldrick's opinion: "The time has come to take a bold forward step."

POLITICS AND REAL ESTATE

M. V. Casey, veteran real estate editor of the New York Herald-Tribune, aired a strange thesis: real estate problems are no concern of the public. Equally inter-

T TO LEFT) PRESIDENT GERHOLZ; HUGH POTTER, HOUSTON; NHA ADMINISTRATOR JOHN BLANDFORD; VICE-PRESIDENT JOSEPH MERRION



NEWS

esting was a blunt hint from property owners, as relayed by Casey: politicians making a stir about New York's rising commercial rents might wake up to find they had seriously jarred the city's financial underpinnings.

Dealers in municipal bonds were worried, Casey said, about the "sudden interest displayed by politicians in New York City's real estate problems, which have been with us for years . . . Most of the credit of the city is in the hands of thrifty people in other sections, a good part by Mid-Westerners. Their explicit faith in the value of real estate here is the basis of their investment. Anything that would raise the slightest suspicion that New York real estate, the security for their money, was too highly valued and rents were too high to be fundamentally sound . . . might seriously lower the amount of capital coming this way and which is used to operate the municipal machine."

But the sugges-

tion that politicians

had better stav in

their own back-

vard was late-com-

ing. Already Sen-

ator James Mead

(Dem., N. Y.) had

tossed this hot po-

litical potato to

Governor Thomas

E. Dewey, Senator

Mead is a member

Life Photo



SENATOR MEAD

of the Senate Small Business Committee, which has just finished its investigation of commercial rent gouging with the conclusion that the problem is too localized in nature to call for a federal rent ceiling. The Senator urged Governor Dewey to back state legislation that would enable New York City to put its own ceiling on business rents.

But Governor Dewey was busy with other matters. If he had a political interest in this real estate problem, he had by month's end given no sign of it.

BIGGEST BUILDING JOB

Figures were hard to come by, but correspondents reported that 6,000,000 Frenchmen had lost their homes. Onequarter of the 12,000,000 homes in England and Wales had been blitzed. In Middle Europe the devastation was uncountable. Emergency shelter bulked big in the big job ahead of the United Nations Relief and Rehabilitation Administration. But in this as in the other fields in which UNRRA must work to bring life back to Europe's flagging heart, it was clear that the agency's role would be a stimulative one. National governments would be the major operators.

To get quick shelter over workers' heads, most governments would need building equipment and materials from UNRRA's international commissary. But what they most wanted was to get their own building industry back on its feet. For this they would need, not bathtubs, but the machinery to make bathtubs. And they would seek, not international charity, but international credit. Technicians, able to inform on new production methods developed in countries unparalyzed by war would be more welcome than sales representatives. Europe's permanent rebuilding job would call for international teamwork beyond the scope of UNRRA's emergency operations, but the agency would start building wheels going where it could.

Last month UNRRA policy-makers carefully removed the gleam in many a U. S. prefaber's eye. Said they: this country will probably ship few demountable or prefabricated houses to fill Europe's emergency needs. Reason: lack of shipping space. Most of the need for temporary shelter will have to be met at a time when U. S. ships not busy transporting war material to the Pacific will be full of food supplies. Some UNRRA thinkers believe that site fabrication plants will be the best way to help Europe accomplish its emergency rehousing and repair. They are recommending that UNRRA acquire and make available portable site fabrication plants that can be shifted from one place to another as needs are meant.

OLDEST PREFABER SELLS

Henry Palmer, who sold his first prefab house in 1936 from his father's lumber yard at Langhorne, Pa., has since pushed his Allied Houses, Inc. close to the top of the list. Last month newcomer Palmer became the owner of the oldest of U. S. prefab firms—the E. F. Hodgson Co. of Boston.

In 1892 Ernest F. Hodgson, an ingenious New Englander who was handy with tools, got the notion that it would be easy to cut all the parts for a house in a factory and ship them to the site—and prefabrication was born. Hodgson soon had a factory and was busy shipping poultry and dog houses. But his first real business impetus came with the horseless carriage, which brought a big demand for "auto stables." Since then prefab pioneer Hodgson has sold thousands of homes, summer cottages, churches, hospitals, schools. His precut cedar houses have followed Grenfells to Labrador, other explorers to Troy. He has supplied a summer cottage for Evangeline Booth, a playhouse for Andrew Carnegie's grandchildren, houses for the Astor, Morgan, Rockefeller, Vanderbilt estates. Palmer buying the industry's best-known firm, said he would keep the famous old name unchanged.

SECURITY DEPOSIT SQUABBLE

Private builders were fighting on two fronts what was probably their last war housing battle. OPA had said that all builders renting war houses must immediately turn back any money collected from tenants as security against damage to the property. OPA's contention: Security deposits were being used as a device to evade rent ceilings. Some builders had collected large amounts, refused to refund when tenants moved.

Said the National Association of Home Builders: In only a few isolated cases were builders guilty of the malpractices charged by OPA. Required to rent to in-





migrant war workers, builders wanted reasonable protection against the added risk of renting to newcomers, whose credit rating and rental history were usually impossible to obtain. "Departure without adequate notice, leaving a

GEORGE MILLER

damaged house and unpaid rent is too often the case," NAHB complained.

NAHB had already poured its troubles into the attentive ear of Representative Howard Smith (Dem., Va.), who spends most of his time looking for bureaucratic weeds in the government's garden. With Representative Smith's weed - pulling committee promising to hold hearings on the matter in November, builders hoped that OPA could be persuaded to modify its regulations to permit a security deposit amounting to one month's rent.

On another front, builders sought to shake off OPA's restraining grip in the courts. In Detroit NAHB vice-president George Miller started suit. Miller rents 1,000 houses in Detroit, has collected \$40,000 in security deposits. No deposit amounts to more than one month's rent, all are carefully put in escrow. Miller's record was clear-cut, and builder's were hopeful of a favorable outcome for this first test case.

78

MATERIALS PROSPECT

The National Housing Agency, looking at prospects, set this hopeful reconversion time-table for building materials and equipment:

Lumber: Retail yards will be able to build up adequate inventories within six weeks to three months after V-E day.

Nails and other steel wire products: Even now production is close to 90 per cent of the industry's peak.

Plumbing and heating items: Normal production can be reached within three months after the reconversion signal.

General materials (clay products, steel pipes and fittings, reinforcing steel, sheet metal supplies, copper wire and cable): All these can easily catch up with demand within two months after labor and shipping facilities are available.

Consumer durables: Production will be ample within seven months.

Most producers of building materials and equipment are in a readily convertible position, NHA said. Exceptions: refrigerators, stokers, prewar plumbing trim and fixtures.

HOUSING KIPLINGER

On the premise that Building men are as enchanted by prophecy as any of the subscribers who have made Kiplinger's prognostications big business, two inventive young men are now supplying a biweekly guide to the housebuilding business. In establishing the Housing Institute, Inc., real estate analyst Fred Marx and factory-location specialist Leonard Yaseen have placed a sizeable bet, on the willingness of the builder, broker or lender not only to absorb an indefinite number of oracular capsules, but also to pay for them at the rate of \$15 a year. The Institute's first major prediction: housebuilding will be the biggest, juiciest slice of the construction industry in 194X.

Myron Ehrenberg



FORECASTERS Yaseen (left) and Marx

Chief sibyl in the Housing Institute's grove in the Empire State Building is earnest economist Sol Flink, who got an initial work-out in the prophetic business under maestro Leo Cherne at the

THE SHRINKING HOUSE

As construction costs climb, consumer housing dollars shrink. As the pictograph shows, \$6,000 can buy only three-fourths as much house in the present market as it bought in 1939. Roy Wenzlick & Co., which has been keeping a dexterous statistical finger on the cost of building a standard six-room house in 75 cities, finds sharp local variations and a median cost increase of 30.5 per cent since 1939. In St. Louis, the present cost, \$7,781, of building the standard house is 76 per cent above the 1932 low. Some of the percentage rises since 1939 follow:

City

	10
Albany, N. Y	43.2
Asheville, N. C	38.2
Atlanta, Ga	50.2
Baltimore, Md	55.7
Birmingham, Ala	37.4
Boston, Mass	30.2
Chicago, Ill	11.8
Cleveland, 0	39.0
Dallas, Tex	41.9
Denver, Colo	20.9
Des Moines, Ia	16.0
Detroit, Mich	42.3
Duluth, Minn	23.7
Houston, Tex	23.3
Indianapolis, Ind	23.6
Los Angeles, Calif	52.6
Louisville, Ky	37.4
Memphis, Tenn	35.8

Research Institute of America. Flink's sagacity is supplemented by the Institute's own reportorial formula, compound of eight housing-wise consultants, several distinguished guests, and a pleasantly expensive bi-monthly dinner at the Waldorf-Astoria. In the expansive mood that often follows the Waldorf's chicken supreme, genial hosts Marx and Yaseen introduce a controversial subject calculated to set guests and consultants sparring at each other, provide.good copy.

Part of the Institute's guidance is digest coverage of new developments in all sectors of the housebuilding business. This is also implemented by the consultant staff, which includes researcher Robert L. Davison: Raymond Parsons, who is now exploring product development for Curtiss-Wright; Robert Stuart of the George A. Fuller Co.; G. Harmon Gurney and Mendes Hershman, housing investment specialists at the New York Life Insurance Co.; architect Julian Whittlesey; valuation expert



City

0%

uny	70
Milwaukee, Wis	43.2
Nashville, Tenn	35.2
New Orleans, La	36.7
Oklahoma City, Okla	21.7
Omaha, Nebr	25.9
Philadelphia, Pa	44.7
Phoenix, Ariz	19.2
Portland, Me	28.1
Portland, Ore	43.3
Richmond, Va	26.8
St. Louis, Mo	27.1
Salt Lake City, Utah	19.9
San Francisco, Calif	18.6
Seattle, Wash	30.7
South Bend, Ind	45.6
Springfield, Ill	5.4
Washington, D. C	43.5
Wichita, Kans	25.1

Herbert Solomon; C. Earle Morrow of the New York Regional Plan Association. Special editorial function of president Marx and vice-president Yaseen is to steer their bevy of prophets firmly along lines that will tell a nervous Building man not only what will happen next week, or next month, but exactly what to do about it.

To avoid the tenuous nature of most news letter ventures into forecasting, the National Housing Institute will bolster its bi-weekly trend analyses with periodic summarizing studies, thrown in with a membership subscription. First of these, "Your First Year of the Housing Boom," will soon be off the press.

RECONVERSION BOOST

Reaching out to set up the machinery that would help Building over the reconversion hump, WPB chairman J. A. Krug set up a late-coming, long-sought Construction Bureau. Headed by Arthur J. McComb, who was Otis Elevator Co. vice-president before he joined WPB last

NEWS

summer, the Bureau will pull together WPB's building materials, plumbing and heating, construction machinery divisions and large parts of the facilities bureau. Only lumber is left out. This final reshuffle is obviously more sensemaking than most of those which had preceded it.

Delays in war construction, while applications for equipment and materials passed from office to office, had long pointed up the need for an over-all Construction Bureau. But the need for strong building representation at WPB during the early reconversion period would not be less. First claimant agency for building, the Bureau will also, while restriction order L-41 is in force, take over construction programming, hitherto presented piece by piece to WPB by the Army, the Navy and the National Housing Agency. More important, the Bureau will have the job of speeding a go-ahead for building equipment through WPB reconversion councils. Building men hoped that, while the Construction Bureau was too late to help with the war job, its force would not be too little to smooth the road back.

HARDWARE BLACK EYE

In the jig-saw puzzle of building reconversion, would builders' hardware be a missing piece? The National Contract Hardware Association, meeting last month in Chicago, feared so. Said the hardware-makers, now turning out gun sights, firing mechanisms for anti-tank guns, component parts for bomb fuses: they had been among the first industries to convert to war production, they would be the last to be cut-back.

About 90 per cent of hardware plant capacity is at work on the precision tools of war; all the locks, hinges and door closers needed for ships, military installations and war housing are turned out by the remaining 10 per cent. Hardware manufacturers neither hope nor want to change this production ratio until the U. S. has every gun it needs to fire in World War II. But they would like to



Building the warehouse around the machinery is RFC's efficient solution for quickly clearing plants of surplus war tools. The heavy machinery is rolled out on a concrete block (above), enclosed in steel panel sections (right).

What was probably the last wartime boost for prefabrication came last month from the RFC, which wants easily demountable structures to store surplus war machinery. This was a steel prefab baby, and the first contracts for 1,200,000 sq. ft. went to American Rolling Mills and Great Lakes Steel Corp. Contracts for an additional 14,000,000 sq. ft. of this kind of storage space would soon follow.

The government's solution to the problem of how to clear war plants quickly to make way for reconversion is a workmanlike one. Instead of hauling heavy war machinery to a warehouse, RFC plans to bolt a steel warehouse around the machinery.



Removable side panels will make it easy to roll the machinery out for shipment to a possible purchaser or, eventually, to a government disposal center, where the prefabricated warehouse units can be re-used.

RFC says the prefabricated storage sheds will be as economical as they are efficient. Permanent warehousing plus an overhead crane for moving in heavy equipment costs about \$3.55 per sq. ft. The prefab units will cost RFC only about 75 or 80 cents per sq. ft. Ideaman back of the system: Lieut. Col. J. R. Walker. get a chunk of the national copper stockpile to put into their 10 per cent hardware output.

Except for ship fittings, manufacturers can make no bronze or brass hardware, fear that the black-finish steel hinges and locks that have gone into much war housing are giving their trade a black eye. WPB's recent lift of controls on the use of aluminum helped them out some. But not until the month's end did they see another, and copper-tinted, ray of hope. WPB let it be known that manufacturers would soon be permitted to finish their steel hardware with a brass, bronze or "antique copper" plating.

TWELVE MILLION HOUSES?

Beating its way through a formidable thicket of statistical assumptions, the National Housing Agency emerged last month with the newest measure of postwar housing need: 12.6 million new nonfarm homes by 1955. In a sense, NHA's assumptions were more interesting than the conclusions to which they led. Among them:

▶ An average national income in the postwar decade of about \$100 billion (1940 prices).

Earnings of less than \$3,000 for 83 per cent of all U. S. families.

Earnings of less than \$1,500 for 41 per cent of all U. S. families.

▶ Replacement of 50 per cent of the nation's 7 million substandard dwelling units within the postwar decade.

Since NHA's projection explored need rather than market demand, it gave no light as to how, within the framework of the national income levels assumed, the housebuilding industry would be able to replace 3.5 million substandard units or, indeed, supply a total of 12.6 million new homes by 1955. To give one-third of all U. S. families a new home in the next decade, it would, NHA thought, be necessary to build 4.2 million houses that would rent for under \$30 per month or sell for less than \$3,000, and another 4.2 million that would rent for under \$50 and sell for less than \$5,000.

NHA's hypothesis of housing need from 1946-1955 distributed by rental values looked like this (1940 prices):

Rental	Number of	Percentage
Value	Units Needed	of Total
Under \$10	1,074,000	8.5
\$1019	2,142,000	16.9
2029	2,451,000	19.4
30—39	2,753,000	21.8
40—49	2,327,000	18.4
50—74	1,305,000	10.3
75—	592,000	4.7

Qualified NHA: "It is an extremely hazardous undertaking to estimate the (Continued on page 146)

RESIDENTIAL REMODELING

In August 1943 THE FORUM proposed, among other ideas for community improvement, the creation of shopping centers with parking around the perimeter and with the center restricted to safe, pleasant, leisurely pedestrian traffic. Two months ago THE FORUM published the Linda Vista shopping center in which this proposal was admirably realized. Last month THE FORUM presented a projected rehabilitation of a typical Main Street in a typical small city. The response to this proposal indicates that it, too, will presently emerge in several communities.

In this issue THE FORUM brings its focus down to modernizing the individual house and shows numerous examples. The process which is unfolding through such developments as Linda Vista is in no sense different from that which must take place in the house. Conditions, in both fields, have changed. These have created new problems which can be solved only by new *ideas*. It is at this stage that the professional magazine can best discharge its responsibilities to its readers, and ultimately to the public at large. What happens afterwards is up to all the groups in Building.

No new idea is a fully developed reality. It still requires thoroughgoing research in design, production and merchandising. There must also be a nice balance of esthetic and financial considerations. Above all, there has to be an understanding of the fact that the amenities of gracious living now reach beyond the traditional slippered figure before the fire and have expanded to touch every point where Building serves the citizen.

Prominent in this issue is the first of a series of "House Ideas" jointly sponsored by THE FORUM and its sister magazine, LIFE.

These presentations mark the conviction of the Editors of both magazines that the postwar house can and should present a variety of new features to strengthen its appeal and usefulness to the public.

It supports this conviction not by airy generalities, but with specific and detailed design ideas which can be used in new houses and in most cases in existing houses. The Storagewall, the In-Line Bath and the Convertible Bedroom, shown hereafter, serve both.

LFE FORUM *House Ideas* are precisely what this label implies — ideas. Yet each is developed sufficiently in mock-up and model form to illustrate its validity. Publication in THE FORUM will, it is hoped, prompt further study by architects, builders and manufacturers and disclose how these ideas can be enhanced to adapt them for conventional building, and in some cases for prefabrication.

Early publication in LIFE, with its twenty-two million readers, will pre-test the appeal of these proposals to the largest magazine audience in the U. S.

Finally, and with the firm intention of restating a conviction many times stated on these pages before, the postwar house can and must be a better house than even the best prewar house. Back of this conviction is a solid array of improvements which for many months has been thoroughly documented in THE FORUM. Building lacks neither the ideas nor the means to carry them out. It lacks neither the market nor the public interest. This is not the time to "walk backwards into the future."

THE STORAGEWALL

A new answer to the housewife's demand for better storage marshals hard-to-closet articles in the space now I to partitions. Prefabricated units form flexible, two-way walls suited to every plan and purpose.



THE FORUM House Ideas THE STORAGE WALL

The skeleton tucked in the dark corners of most American closets is the hodgepodge of junk and useful articles which lie over, under and across each other in complete confusion. Everyone knows the ordeal of extracting a card table from its nesting place behind a row of coats and jackets without sweeping overshoes, roller skates, umbrellas and perhaps a set of golf clubs into the hallway. This dilemma, caused by the magpie tendencies of the average family, leads housewives to complain of the lack of closet space. But the same cry comes almost as frequently from the lady with ten closets as from the lady with three.

The joker, then, is that conventional closets provide really good storage for only one thing—clothes hanging on hangers. Small articles stored in large closets waste space and are a nuisance to get at. Equally incompatible are bulky objects such as portable typewriters, card tables and suitcases. These disparate household items deserve planned storage space of their own—shallow spaces into which they can fit neatly and from which they can be easily and quickly removed.

From this premise grew the idea of the storagewall, a functional and flexible answer to the need for organized storage. By replacing certain non-bearing partitions throughout the house with 12 in. deep cupboard units, convenient space is provided to house anything from vacuum cleaners to delicate china.



Some of the units open toward one room, some toward the other. Designed on a 1 ft. module, the units come in widths of 2, 3 and 4 ft. Those of the lower section are either individually sonstructed or combined to a total height of 6 ft. Dead storage cupboards, 2 ft. high, top this section, bringing the storage wall to the conventional ceiling height of 8 ft.

The units can be used in any combination and between any two rooms to answer particularized family needs. They may also be eliminated or extra ones added to adapt the storagewall to specific partition length. Because the storagewall provides a movable partition with interchangeable components it is not designed as a structural element. However, the concept of special storage space plus flexibility of use offers a real advantage for both remodeling and new building.

Small scale models show how standa



MINIATURE COMPONENTS ABOVE FIT TOGETHER TO FORM LIVING ROOM-FOYER



clike units facing in two directions are assembled to form various walls

1. UNITS ARE ALIGNED IN CONTINUOUS, RECESSED BASE

BEDROOM COMBINATION HAS FULL-DEPTH CLOSETS, BACK-TO-BACK DRES

KITCHEN-DINING WALL HAS TWO-WAY DISH CUPBOARDS AND SIL

FOYER SIDE OF THE WALL SHOWN AT LEFT, TOPPED BY

THE FORUM House Ideas

Full size mock-up of living room w







Back of dead stora units opening on h side

Typical book shelf!

This sample storagewall, for use between a living room and foyer, is a double-faced unit with appropriate compartments opening toward each of the two rooms it separates. Books, records, stationery, magazines, vases, an electric fan and a wine service are among the diverse articles housed in the living room sections. Open shelves (1) display books to advantage beyond the reach of children. Hinged desk (2) swings down to provide a writing surface topped by 1-in. drawers and ample pigeonholes, within reach of the seated letter-writer. Projecting drawer and cabinet combination (3) places record player at sensible height for operation, stores records in space adjoining machine.

Back of game close

Back of sports an

rporates major items of furniture in addition to storage units





tems that clutter ordinary closets

orts closet (6)

et storage

Upper part of sample wall contains six dead storage compartments (4) to house bulky, seldom-used articles. Game closet (5) is sized to accommodate card table, equipped with racks for small games. The sports closet and "wet" closet (6) are also designed for specialized functions. Flagpole, fishing tackle, and a beach umbrella stand upright the full height of the sports closet, while badminton and tennis racquets fit into holders on the door. Narrow compartments are provided for baseball gloves, tennis balls and other small items. The "wet" closet, limited to rainy weather paraphernalia, has a rod for raincoats, umbrella rack, and a shelf for hats.

et storage" door ceals game closet end of wall.(5)









THE ARCHITECTURAL FORUM

ts provide 500 cu. ft. of efficient, fitted storage



Although the storage wall provides an unheard of amount of closet and cupboard space for this small, two-bedroom house, the original plan (Gardner Dailey's house for LIFE, ARCH FORUM, Apr. '40) is completely unchanged. The net loss of floor area is only 2 sq. ft. This seeming contradiction is easily explained when one realizes that present partitions and bulky closets are mostly waste space. Extending their dimensions slightly provides the extra inches necessary for the storage wall. In the kitchen, the area used for dining actually becomes more than 1 ft. wider when an inefficient closet for cleaning equipment is replaced by a storagewall unit.

14ft.		living-Room - 7 ft	Dining alcove 6ft.
loset	Cleaning closet	Books, Radio Books, Records, Record player Game closet	Desk Dishes, glassware, Miscell. Sideboard
		magagines. Vasis, cir.	

NITURE PLUS ROOM FOR THE 1,000 HARD-TO-STORE ITEMS KEPT IN THE AVERAGE HOME

加能





BOOKSHELVES IN 2 FT. AND 3

SMALL WRITING DESK, 2 FT. B



E UNITS TOP CABINETS



GAME CLOSET ACCOMMODATES CARD TABLE





DRESSER HAS SMALL AND LARGE DRAWERS



LOW BASE UNITS FIT BELOW PHONOGRA



ET HOLDS GOLF BAGS



TWO WAY DISH CUPBOARD (KITCHEN SIDE)



KITCHEN-DINING "SIDEBOARD" UNIT

POSTWAR PROJECT FOR A WEEKEND COTTAGE near Carmel, Putnam County, N. Y.



ROBERT A. GREEN attended NYU and worked for leading east coast architects. Since opening his office he has designed numerous small houses in Westchester County.

That careful design involving only minor alterations can vastly improve the appearance and market value of the typical builder's house is clearly illustrated in this case. The house, built four years ago, is located on a wooded, sloping site commanding a nice lake view. It is well insulated, has good heating and plumbing but, like thousands of other builder-designed houses all over the country, its exterior appearance is awkward and barren. Barely meeting minimum standards of house planning, the interior arrangement is unimaginative and without distinguishing features.

In plan, the most obvious faults are those of circulation and haphazard storage arrangement. In order to reach the front door it is necessary to traverse the dining space and living room. Windows are small and out of proportion to both the size of the rooms and the view. Although a large dormer was constructed at the back of the house, the second floor is at present unfinished.

> Straight-line counter makes no allowance for retrigerator and range. Inadequate cupboards crowd windows



UNDERSIZED WINDOWS GIVE FRONT A SKIMPY LOOK

REAR VIEW INDICATES OBVIOUS LOCATION FOR A PORCH





POSTWAR WEEKEND COTTAGE. Minor changes in the plan, roofline and windows, and the addition of



The architect's redesign doubles the size of the downstairs doors and windows, adds two wings at either end of the house, and pulls down the eaves to create an overhang across the front. An enlarged chimney-top accommodates an attic vent and will do much to abolish the "startled" look which now characterizes the house. Emphasis on horizontal lines will help to unite it with the contour of the land.

The most important interior change creates an angle in the basement stairs so that they will terminate in the service area instead of the dining room. One result of this is that it becomes possible to relocate the closets and cupboards and proportion them for the storage of specific articles. By opening a door between the living room and converted bedroom, circulation will become much freer. Relocation of the coat closet, which formerly blocked this access, produces wall space alongside the fireplace for furniture.

The compact plan for the new second floor shows how all of the furniture, except the beds and chairs, can be built in. It creates a tailored appearance and generous closets, utilizing all available space—even that generally lost under the eaves.





For many years the New York State College of Home Economics at Cornell has been advising rural New Yorkers on home modernization. Its excellent program involves thorough research into the living conditions of farm communities. the technical and scientific aspects of home making, and architectural studies based on inexpensive methods of rebuilding and redecorating.

The farmhouse illustrated on this page is located in a remote valley of the Finger Lakes country. Its remodeling was undertaken by the College with financial assistance from the Farm Security Administration. The work will be staggered over a period of years, the family itself doing most of the remodeling work, cutting and preparing lumber, etc. Because of many such economies, the total cost of the job will be around \$800, with \$200 already spent on the first year's alterations.

The Housing Research department of the College under Grace Morin first made new plans for the run-down farmhouse and built a model, complete with furniture. It was found that the kitchen, traditionally placed in the center of the house, had become little more than an awkward thoroughfare for the entire family of husband, wife and six sons. The kitchen was accordingly moved to a space formerly used as a bedroom, and a hall, dressing room and bath planned to take its place. These bath and dressing facilities are for the members of the family who sleep downstairs. Dormitory rooms are provided upstairs for the boys.

A new living-bedroom was planned to take the place of two storage rooms, the windows of which commanded a fine view of the valley. Additional windows were introduced on the west side to provide cross-ventilation. A new screened porch was added and the built-in features so planned that meals can be served on the porch and many of the household chores, like washing clothes, performed in the cooler air outdoors in summer.

At Cornell a full-size model of the dining room demonstrates the skilfull use of inexpensive materials to change its entire appearance. Washable oil cloth walls, spatter-painted linoleum floors, and newly scraped and waxed mission oak furniture add a cheerfulness to the interior that is noticeably absent in the original. Added comforts improve the livability of the room - three sets of shelves form deep reveals for the windows, a serving table can be pushed through from the kitchen, at meal times.







BEFORE



ENTRANCE FRONT OF OLD FARMHO



LIVING ROOM WAS ONCE UNATTRACT



tation with a remodeled homestead at Watkins Glen, N. Y., which shows how good taste can improve living conditions.











SLIDING TABLE with drop leaf can be used for meals or as work table for canning, etc. in kitchen. Note doors concealing washing machine. Machine can be pulled out for operation on either kitchen or porch side.

SERVING TABLE can be used in dining room while meals are in progress. It pushes back into kitchen across top of cabinet, returning used dishes when meals are finished.



1 mary a





space. Dual purpose rooms are featured by Home Economics Department in solving problems of rural shelter.



FORMER BEDROOM OFFERED TYPICAL FARMHOUSE ATTIC ACCOMMODATION, LACKING VIEWS AND VENTILATION

Remodeling an old fashioned farmhouse bedroom, with irregularly spaced shallow windows and jutting corner cupboard, Cornell home economics experts transformed it into a charming guest bedroom and pleasant study. The west wall space with jutting closet was utilized to house a recessed couch bed, which can be pulled forward to make a full-sized guest bed when needed. Bookshelves filled in the space between the windows from floor to ceiling. A desk and simple touches of color add interest to this attractive dual-purpose room.





	processing in the

ELEVATIONS OF STUDY - BEDROOM SHOW ALTERATIONS FROM OLD VIEWS ABOVE. NOTE BUILT - IN FEATURES.

HEIGHT WAS ADDED TO WINDOWS BY HANGING RATTAN ROLL CURTAINS FROM CEILING, AND INSTALLING BOOKCASE



POSTWAR PROJECT FOR AN OFFICE-RECREATION ROOM, Berkeley, Calif. Michael G



MICHAEL GOODMAN, born in the Duchy of Lithuania, Russia, received his architectural degree in America—from the University of California. He has been in practice here since 1933, doing both residential and commercial work. At present he is also Associate Professor of Architectural Design and Instructor in Graphic Arts at the University of California.

By extending the space allotted to this small home office, the architect has been able to make it serve as both work and recreation room. The problem of enlargement was a relatively simple matter. Windows which separated the old office space from the open deck were removed and the entire deck section enclosed to form one fairly large room. Original lally columns supporting the roof were enclosed in the new construction.

Inspired by the extra space thus provided, the architect equipped the room with office furniture, bar, ping pong table, movie projector screen, kitchenette compartment, a companionable group of chairs and small table.

Segregation of this equipment for different functions prevents the room's many uses from interfering with one another. Office furniture — desks, tables, chairs and card index — is grouped along one wall in such a way that it can be completely shut off when the room is used for recreation. A double curtain from ceiling to floor conceals the office section and in addition provides a decorative texture contrast to the plaster walls of the rest of the room.

The convertible bar at the opposite side of the room harmonizes with the office furniture when closed. Near it is a disappearing door closet containing supplies, an electric plate, a small sink and storage compartment. To provide easier circulation, the ping pong table which occupies the center of the room can be folded up and stored when not in use.

A glazed panel adds interest to the far end of the room, and is itself enhanced by an exotic glass plant box set in the center section. It is used as one of the orchid growing domestic hothouses now in vogue on the Pacific Coast. For a further touch of floral life, a balcony containing potted plants has been added beyond the windows.

In preparing the presentation of this remodeled room, the architect was assisted by two of his students, Henry Lagorio and Jane Moorehead.







DOUBLE-PURPOSE ROOM can be used for entertaining guests (above) by concealing the identity of its work section behind a graceful curtain. As an office (below) the entire space is left open to circulation.



This guest cottage was converted from a combined garage and chauffeur's quarters by throwing out new bay windows in place of the garage doors and remodeling the interior space as a living room. The slate-shingled roof was projected down to form an overhang which shelters the entrance, and a small modern kitchen was fitted up in an existing corner room at the rear.

Greatest structural change was the addition of a servant's room and bath in a new wing to the right of the entrance. The main bedroom on the second floor was provided with a generous row of closets fitted under the eaves and an extra bathroom installed in the rear wing. The staircase landing was also remodeled in the process.

A white painted picket fence encloses a little garden at the front, in the space formerly occupied by the garage yard.



NEW OVERHANG LOWERS ROOF LINE, ADDING CHARM AND CHARACTER



CABINET AND BOOKS IN ALCOVE AND NEW FIREPLACE DRESS UP THE LIVING AREA FORMERLY OCCUPIED BY CARS


CONVERTIBLE BEDROOM

Based on intensive research into bedroom behavior, this double-occupancy bedroom-study-dressing room is easily attached to any house and adapted to the needs of all ages, can also be used as two single rooms.

FOLOWE ARTITION



Specially built by Life-Forum technicians, full size m

Ventilator (Open)

As families grow "older" the needs of the average household multiply and decrease. Not so the house itself, which remains static. The standard three-bedroom home-a bedroom for the parents, a room each for boys and girlsfalls far short of meeting the complex requirements of even the smaller family throughout its life. The two-bedroom house, which for economy's sake has practically supplanted the older type in recent years, has further aggravated this problem, making especially desirable the efforts of designers to add flexibility to our shelter requirements in the future.

LIFE FORUM Slouse Ideas

UM Mouse Ideas 2.

These changing requirements are happily met by the flexible study-bedroom-lavatory facilities provided in this convertible unit. Equally adaptable to Cape Cod cottage or modern bungalow, the convertible bedroom is exactly what the name implies: a divisible oneroom addition for the average house which meets a wide variety of needs. Chief combinations suggested: 1) boy and girl, 2) any two children of different ages with varying bedtime schedules, 3) sick room, 4) guest room for couple, 5) two single rooms for guests or members of family.

A wide door opening makes it possible to offset the addition in either direction to meet existing conditions, and insures independent access when the space is used as two separate rooms. Each unit provides a separate washbasin and all dressing and storage equipment for single occupancy.

Most remarkable is the efficiency of dressing and clothes storage space, designed by the architect in collaboration with Robert L. Davison and Associates after months of research. Dressers, nightstands and other mobile features of bedroom equipment are eliminated. The only movable objects are the bed and chair.

Closets are divided into two compartments, one of which is for out-of-season garments. Both compartments have chests with open front drawers and generous tops. The in-use closet is ventilated, to avoid the usual stuffiness of a closed interior. Air enters the closet above the door and is exhausted by a small fan through a laundry hamper to the outside. Its "storage door" is lined with removable and adjustable trays for small articles of apparel. A person sitting at the desk-dressing table is within easy reach of the clothes and shoes.

The whole unit is adaptable to prefabrication, which would make it available cheaply in the postwar period. Wall panels, closets and built-in furniture can be manufactured in units and erected by semi-skilled labor on the site.

Flexible light for desk and head of bed.

Oversized bed (Drawers under).

Desk-washbowl (closed)

Hook

space

adjustable poles. (For small children poles are set at lowest level, then moved up as child grows.)

hows convertible bedroom as occupied by Junior and Sis.



ruble doors' (For separate cess. By opening and closingitral partition, space may be ed as two single bedrooms or e double room.)

Storage closet (Used for dead storage of winter clothes in summer, summer clothes in winter.) Ventilated closet (Used for active storage of all clothing in daily use. Storage door and small chest inside closet hold items usually kept in separate chest of drawors.) CONVERTIBLE BEDROOM 2.





all activities. Clothing space is adaptable for children, adolescents, grown-ups.



lamp (3) floods the surface of desk, also illuminates mirror of dressing table and bed (4). Closets for in- and out-of-season clothes have full-length mirrors (5), pull-handles for easy opening. A unique feature of the beds is the set of four hanging drawers (6) concealed under the $\frac{3}{4}$ in. plywood base. Topped by a 6 in. foam rubber mattress, the total depth of the bed is less than the ordinary mattress and spring, allowing this extra storage space for blankets, toys, and sports equipment. With only one inch clearance above floor the drawers eliminate the usual under-the-bed dust-trap.





res demonstrate the room's varied functions and show applications of folding partition.



Boy Girt 7. 8. 10. 11.12. 9.

The folding partition can be drawn back in daytime to create the effect of one large room (7). Easily operable, even a child can close it when privacy is desired (8). Note dead storage compartments for suitcases, etc., over closet and entrance doors. Night view (9) shows rooms occupied by boy and girl of different ages. Girl reads in bed while boy sleeps. View of rooms in joint use shows use of bracket lamps as indirect fixtures (10). For study, rooms are used separately (11). Closed partition provides same privacy as fixed construction (12).



DRESSING CLOSET

MALCOLM GRAEME DUNCAN, ARCHITECT

DESIGN DATA 23.



POSTWAR PROJECT FOR A CONVERTED APARTMENT in New York City.



MINORU YAMASAKI was born in Seattle, receiving his architectural degree at the University of Washington in 1933. Coming east, he was associated for several years with Shreve, Lamb and Harmon and is currently with Harrison, Fouilhoux and Abramovitz. He has recently done several jobs independently.

The diminishing demand for larger apartments has led many owners to consider the possibility of converting to the smaller modern type. To demonstrate how this can be done, Minoru Yamasaki picked a typical 1929 building located in a choice residential section and prepared plans for remodeling the two apartments per floor into four units of varying size. Steel frame construction made it easy to remove exterior walls on the first floor, creating an open foyer. Above the first floor the old brick mullions and ornamental details were removed to install broader windows.







my

POSTWAR CONVERTED APARTMENT. The ample rooms of a once-sumptuous building lend themselves a

The first floor, beside allowing for a generous entrance lobby and plant-bordered terrace, contains a professional suite remodeled for two doctors living off the premises, and an apartment for the superintendent.

The plan for a typical remodeled floor contains several innovations to make incity living more attractive to those who will undoubtedly cast longing glances toward the neighboring countryside when the war is over. The old apartments were replaced by units of five, four, three and two-and-a-half rooms each. An interesting example of design ingenuity, this was done with only one major plumbing change-in the smallest apartment, where a new kitchen and bathroom were installed. Two of the apartments were provided with balcony terraces and useful features like storage walls and shelf partitions incorporated in the revised scheme.

Cost analysis of the project reveals a present rent roll of \$4,100 per floor per year. This contrasts with a rent roll of \$5,690 per floor in the remodeled apartments. Assuming a present occupancy of 75 per cent and an occupancy of 90 per cent after alterations, the difference in total rent is approximately \$25,000, sufficient to justify an expenditure of more than \$100,000 for remodeling.







AFTER TYPICAL FLOOR PLAN







LIVING-SLEEPING ROOM in two and one-half room apartment has concealed beds and folding dining table in wall. The table top lets down, revealing two-way cupboard for cutlery, chinaware storage and meal serving, connected with kitchen.

LIVING ROOM of four-room apartment (below) has floor-to-ceiling window wall opening on outside terrace.



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1

APARTMENT HOUSE. Recognizing the trend toward smaller apartments for busy moderns, Chicago dev



EXTERIOR REMAINS UNCHANGED

For quantity production of war housing in metropolitan areas the National Housing Administration has found that the conversion of old apartment buildings is still a good bet. Originally turned down because of its distance from the industrial and business area (although within a 20 minute ride of the Loop), the once-fashionable Greenbrier was finally accepted by Chicago's HOLC director when the NHA program fell behind actual needs.

The owner's remodeling scheme, already drawn up by Chicago architect Jim Pomeroy, was found suitable for white collar occupancy, at a rental range of \$62.50 to \$77 per month. The plan transformed the original 32 large apartments into 78 new ones, ranging from two-and-one-half to five rooms and accommodating some 202 adults against the original 102. The Greenbrier was one of the first steel-framed residential buildings in the country and new partitions were easily introduced in the form of gypsum and cinder block. The only major interior changes were the introduction of 32 new baths and 48 kitchens.

As remodeled, there are five typical units on each floor of each wing. The largest have five rooms, including two bedrooms and four closets, with combination-type dining room and kitchenette. The smallest are of two-and-a-half rooms, with living room, bedroom, kitchenette, bath, three closets and a linen case. In-between variations have slightly different kitchen and bedroom accommodation.

\$115,000 of the total \$150,000 cost was financed under the conversion plan through NHA, the difference being covered by the owner. The gross rent roll prior to conversion was \$34,800 with rentals ranging from \$50 to \$115 per month. The present gross rent roll is \$63,450.



AFTER

0 5 10 1

oern & Sons convert a residential building from eight-room suites to medium priced units for war and postwar occupancy.

Photos: Hedrich-Blessing



FIVE-ROOM APARTMENT IS CONVENTIONAL BUT LARGE (1.)





KITCHEN-DINING COMBINATION IS FEATURE OF SUITE (2.)



THREE-AND-1/2 ROOM UNIT RETAINS ORIGINAL MANTLE (3.)





MODERN KITCHENETTE IS STREAMLINED, COMPACT (4.)

From derelict house to comfortable modern apartments is the success story of this remodeling job, one of many undertaken by NHA to relieve acute housing shortages in defense areas. The toolarge dwelling, built in 1880, has been converted into six new compact apartments without a major operation on the bones of the house. Instead of extensive remodeling to provide front access through a central stair and hallway, the architect has taken advantage of two existing stairways which run the width of the house and flank its central portion. This scheme divides the space naturally into three apartments separated by the two stairs. Side entrances at left connect with each stairway and provide easy, private access to both levels.

The unit plans are simple and orderly and the rooms generous, but some compromise had to be made in circulation. With one exception, all apartments are entered through the living room, a disadvantage to one-bedroom apartments.

The house exterior has been cleaned up by removal of all unnecessary appurtenances, but under the conversion program, more extensive remodeling is prohibited. Refurbished with a muchneeded coat of paint, the converted dwelling is a practical solution to the need for increased living space.

Funds for redesigning such houses are provided by the Lanham Act and administered by NHA. This particular remodeling job cost a little over \$14,000, making the amount spent for each apartment approximately \$2,300-an expense comparable to the cost of new, temporary construction. The conversion program, while in no way a substitute for new projects, has certain advantages over hastily erected war housing which must be junked when peace comes. To convert old houses into new liveable quarters, NHA merely leases them from private owners at a flat rate for the duration of the war. Actual details of lease negotiation and remodeling are turned over to the HOLC because of its excellent local contacts with realtors, and knowledge of trade channels. After conversion, the new apartments are leased to war workers who pay rent directly to the government. When the war is over, the improved property-now an asset instead of a liability-will be returned to its owner. This system not only relieves critical housing shortages in a minimum of time and at relatively small expense, it salvages houses which would otherwise be demolished and increases the assessed tax value on old property.



sion program, provides housing for war workers in a former haunted house.



NG HOUSE WAS VACANT EYESORE



BEFORE mu=// First floor

OUS LOT WAS THE ONLY ASSET





REAR OF REMODELED HOUSE IS MINUS UNNECESSARY SHED AND SIDE PORCH



Because so many city property owners are apt to think of remodeling in terms of minor surface alterations, a thoroughgoing reconstruction such as this brings to light new possibilities for improving the unimaginative layout of antiquated city dwellings.

Aside from some additional space, the client desired nothing more than a town house to meet the demands of modern urban life. It was the narrowness of the lot (16 ft.), that presented the most difficult problem, since space could be gained only in depth. An addition built at the rear to a height of four stories provided two extra bedrooms and the new dining room. Since the building was practically gutted it was possible to disregard interior partitions and place the new stairwell toward the rear, adding considerable floor area to the front of the house. On the second floor this additional space was used to create a spacious living room while on the floors above it became part of the compactly planned storage-dressing-bath area at the center of the house. The existing penthouse, now a nursery, can later be used as a game room.

The dropped living room and altered entrance necessitated a change in floor levels up to the third story, and, since the old facade was completely stripped, relocating the windows presented no serious problem.









SECOND FLOOR



THIRD FLOOR



Bed Room

FOURTH FLOOR



Jacques Kahn and Robert Allen Jacobs' compact plan for the head-to-heels remodeling of a typical New York row house.

Photos: William Ward



PICTURE WINDOW FACES RIVER



LOW PLANT BOX SEGREGATES STAIR BUT RETAINS OPEN FEELING







GARDEN APARTMENTS. Architects Joseph Murphy and Eberhart Bros., builders, combined talents for



TENEMENT BLOCK PRIOR TO REMODELING

It took the esthetic eye of Dorothy Draper to spot the possibilities of this block of old-law tenements, which for years occupied one of the city's most desirable residential sites in threadbare defiance of its fashionable neighbors. Eclat, Mrs. Draper's trademark, is a salable asset and the one on which she promoted her remodeling scheme.

Assessed at over \$1 million, the buildings were a heavy liability to their owner, a large estate, since the apartments, which were obsolete, cold water flats not even equipped with bathrooms, rented for less than \$20 per month. In contrast, however, they offered a large, open court right at the river's edge.

The actual remodeling did not represent either a radical or an expensive undertaking. It was rather the wise and artistic treatment of the whole block as a single development that distinguished this building group. Aside from the installation of modern baths and equipment, the major work was that of renovating and subdividing existing apartments. Because tenement buildings are both wider and deeper than the familiar brownstone houses some difficulty was encountered in planning adequate light and ventilation for the smaller apartments. However, the owners were fortunate in having builders experienced in this type of remodeling who successfully overcame the greatest obstacles without major structural changes. (Continued on page 122)



BLENDED BY A BOLD BLACK AND WHITE COLOR SCHEME, NEW CO APARTMENTS OVERLOOKING RIVER HAVE BROAD CASEMENT W



rejuvenation of a block of old-law tenements hugging the border of New York's fashionable Sutton Place.







NOVEMBER 1944

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GARDEN APARTMENTS. Converted into small modern apartments, it is one of the city's most desirable living spots.

Photos: Ben Schnall



INTERIOR CHANGES WERE SIMPLE, PLAN BUT SLIGHTLY CHANGED

SOME APARTMENTS HAVE TERRACES, OTHERS BUILT-IN CABINETS



The last buildings to be completed, those on the south side of the block, burned down while in construction and had to be rebuilt from the foundation. This group of three, containing some duplex apartments was designed by Joseph Murphy. Unfortunately, it was later necessary to raze the two closest to the river to make way for the East River Drive which follows the bank at a lower level.

While charm is not usually accepted as a prerequisite of apartment buildings, in this case it plays an important role. The garden is romantically planted with syringa, apple and cherry trees. In all details, Mrs. Draper's decorating ability is very much in evidence. Each door was painted a different, bright color. Cast iron grills were wired to the fire escapes and painted white to match the trim. Proof of its soundness as an investment is a tenfold rise in rental value since remodeling.

THE IN-LINE BATH

Shaped to fit into one end of the average bedroom, this arrangement of conventional plumbing equipment offers the advantages of an extra bath plus the added privacy of individual compartments for each of the three fixtures.



LIFE FORUM Slouse Ideas THE IN-LINE BATH 3

Segregation of conventional bathroom compon

That additional bathroom — the one nearly every home owner wants and has contemplated installing — usually fails to materialize because few houses are planned to permit the sacrifice of sizable square or rectangular floor areas, the shapes required by conventional bathrooms layouts. Installation almost invariably infringes on valuable living space, creating an awkward design problem or involving unwarranted expense. The In-Line-Bath was specifically designed to fill this breach. As a basic idea it introduces a practicable and flexible plan for such additional facilities plus economy of space.

Like the swatch from the bolt that is scarcely missed, the In-Line-Bath takes only a narrow strip from the side of a room. It involves a loss no greater than a row of ordinary closets. Its other important assets are possible simultaneous use by two or three persons, flexibility of arrangement, and a total absence of the waste space unavoidable in conventional fixture groupings.

Adapted to both small and large houses, the individual units can be aligned in any sequence or used separately. In large, old houses, usually most wanting in baths, the entire strip can be easily installed as an auxilary facility in one of the typical overly-generous bedrooms, or a single lavatory or closet unit placed in a large closet. Whether the In-Line-Bath is built to ceiling height or augmented by overhead storage space is immaterial since it is the compactness of the plan that is all-important.

With the exception of the washbowl, (stock china set in a special cabinet), the fixtures are standard. As shown in the mock-up, there is enough interiør space for all three compartments to be used with the doors closed, a protection to the floor of the adjoining room. The units are designed for mechanical ventilation, involving only a brief duct and economically operated by a small, inexpensive fan connected to the light switch. Construction of the In-Line-Bath is extremely simple and could be handled by any reasonably skilled carpenter.



ts privacy and simultaneous use by two or three persons.



LIFE FORUM House Ideas 3. THE IN-LINE BATH 3.

Shower

A glazed, V-shaped trough at the top of the dividing partition lights both shower and dressing compartments. Fixtures and soap dish located under nozzle remain dry while shower is in use. A built-in stool at the rear of the dressing compartment leaves ample space for movement (1). Floor of dressing space is raised above level of shower to take the place of the usual baffle strip, and is kept dry by a long shower curtain hanging below the riser. Hinged curtain rod swings back against rear wall of shower compartment (2). Built-in cupboard on right wall (3), provides storage for bath towels and mats.

3.

2.

1.



Lavatory

Corner location of washbowl and reverse curve of counter utilize the small space to full advantage. Medicine cabinet is concealed behind center panel of the triple mirror. Recessed boxes above supply light and also illuminate interior of medicine cabinet (4). The counter is of varnished mahogany, proved water resistant by long use in ships' fittings (5). Pieshaped drawers for small items pivot under the counter. A tumbler stand and containers for paper tissues and towels are recessed under the mirror. Water is controlled by foot pedals (6). Laundry and cleaning equipment are stored under the counter (7).





4.



Toilet

tank fixture has been used. Wall cupboard (8), masks top of tank and accommodates miscellaneous bathroom accessories. Ventilating grill tops cabinet.

Typical plan of a large, old fashioned house shows two In-Line-Baths added to the upper story. The alternate locations indicated represent the simplest type of installation. Another solution would be to knock out the partition between the front bedrooms and turn the In-Line-Bath toward the larger of the two. In this way both would retain their good proportions but the three units, acting as a partition, would be available to the larger bedroom.



SUBURBAN RESIDENCE. A large house in Glenview, Ill. is remodeled by G. McStay Jackson, Inc.

That the large suburban house of period vintage can be cleared of its trimmings and thoroughly modernized is a fact well demonstrated by this design, which also proves that largescale reconversion can be productive of ideas for remodeling jobs of all kinds. The handling of the planning problems, fittings and materials lends a character to the interiors worthy of a house built from scratch.

At first glance it appears that structural changes must have been major, whereas in reality they were quite simple. The main alteration to the exterior was in the window treatment. To emphasize the long horizontal lines of the house and admit more light, continuous fixed plate glass windows were installed in the south and east walls of the living room. while new steel casements were introduced on the second floor. In addition, the main entrance was moved and given a flat-roofed canopy, the kitchens modernized, a study located in the upper part of the old entrance hall, and a semi-circular plan adopted for the east end of the master bedroom. The exterior was refinished in cream colored Portland cement stucco. The tile roof remains unchanged.



OLD EXTERIOR IN PERIOD STYLE HAS BALUSTRADED TERRACE

MODERN APPEARANCE AND HORIZONTAL LINES WERE OBTAINED BY ADEQUATE GLASS AND REMOVING ORNAMENT





The entire interior space was remodeled, and the tone throughout is modern, in keeping with the suite of reception rooms shown on these pages.

The already-large living room was extended at the eastern end to include the original sunporch as part of the interior. At the west end a portion was curtained off to make a lounge, which has a second fireplace. The fireplace in the main living area was modernized and the horizontal wall lines emphasized by the addition of a long mahogany unit consisting of bookcases, radio cabinet, a built-in sofa and table. On the other side of the fireplace is a second built-in sofa with mahogany arms and shelves, containing a return air-grille. The inlet grilles are located under the continuous windows.

Off the lounge is a square sunroom, partially separated from it by a bookcase-sofa. The sunroom is enclosed on three sides by glass, the west side forming one wall of the outdoor dining porch. At the east end of the living room the ground falls steeply to an existing swimming pool. A new ramp and loggia were added by the architects and gardens were completely relandscaped.

The use of elegantly finished woods contrasting with the creamy plaster of the walls and the clear glass surfaces results in extremely handsome interiors. Good-looking and comfortable modern furniture adds to the harmony of the ensemble. OLD LIVING ROOM HAD BEAMED CEILING, SUN PORCH AT END



odernization in the spacious interiors.



RELLISES DECORATED OLD BREAKFAST ROOM



IN NEW SCHEME, BREAKFAST ROOM BECOMES A SUN LOUNGE

SE OF WOOD AND PLATE GLASS COMBINED WITH CUSTOM-BUILT FURNITURE MAKES MODERN LIVING ROOM



Dining room is arranged for eating outdoors as well as in. Upstairs remodeling is highlighted by use of glass partitions,



OLD BUTLER'S PANTRY WAS NEW ONCE



NEW GLASS-FRONT PANTRY CABINETS, STAINLESS SINK AND TABLE



ORNATE CEILING OF OLD DINING ROOM

The dining room is separated from the lounge area by two sets of double doors. It has paneled walls, a built-in sideboard and table of mahogany. Vertical inserts are gold tile, illuminated by an aperture spotlight located in the sideboard. With the aid of the folding table under the sideboard the curved tables can be arranged to form various dining setups, serving from four to twenty-eight. In the window head is a movie screen which rolls up and down automatically. The dining porch was a new addition, separated from the dining room by plate glass windows.

Every effort was made to provide the kitchen with the latest in equipment and finishes. New top-hinged steel windows with venetian blinds were installed, along with steel cabinets and sheet rubber floors. A butler's pantry separates the kitchen from the dining room.

Upstairs there are four main bedrooms and four servants' rooms. The master bedroom has curved plated glass windows—a form which is repeated in the circular bed. The removable bedside table contains a radio, telephone, buzzers and alarm signals. The dressing alcove can be closed off by sliding glass doors.



DINING ROOM NOW HAS SIMPLE WOOD PANELING, PLASTER CEILING



SCREENED DINING PORCH HAS HICKORY AND LEATHER FURNITURE

POSTWAR PROJECT FOR A COUNTRY HOUSE. To designers Sylvia and William Wilde a small



Latter-day pioneers in the woods of New Jersey, these two designers acquired an "impossible" wooden shack for the munificent sum of \$800. This was back in the depression days. Since then they have brought their combined architectural talents to bear on what the neighbors' children called a "chicken coop" and what they themselves chose "for its lack of anything resembling a house."

First they made it livable, by installing a bathroom, kitchen, electric wiring and a strip of window. After this beginning they proceeded to fill in the space between the piers on which the house had been built and to insulate the floor. The new floors are of linoleum laid over plywood and heavy building paper on top of the old ones.

Second stage was to add a heater room with workshop and coal bin, a vestibule with a large coat closet, and a car shelter. Additional improvements included exterior walls refaced with 1 x 4 in. tongue-and-groove vertical fir boards painted red, and old windows replaced with bands of steel sash.

By this time the neighbors were beginning to treat the Wilde enterprise with more respect. When the job is completed after the war interest will be even greater. For the enlarged living room will have a projecting V-shaped plant window to enclose the dining space, the porch will be remade for meals in the open air, and the outdoors will be lighted with continuous fluorescent tubing built into the overhangs.

Postwar plans also include white pine horizontal boarding for the living room walls and wallboard tiles for surfacing the ceiling. Colors will be light, contrasting with the deep red exteriors.

Originally the designers would rather have built a new house, but had to make a choice between something or nothing. Since then they have become so interested in the idea of modernization that they are glad they made the decision to remodel. Abandoning earlier skepticism, their friends have come around to calling it "the house of tomorrow," and that, the Wildes feel, is a good enough compliment. SYLVIA AND WILLIAM WILDE were both born in Russia, but met in Puritan New England. Just before the outbreak of the war they developed a system of modular construction to meet present-day building methods and hope to use it in the future. Their executed jobs include homes, stores and other structures in Rhode Island, New Jersey and Florida.



REE VIEWS OF MASTER SUITE SHOW CIRCULAR BED AND WINDOW, GLAZED DRESSING ALCOVE AND TWIN LAVATORIES



otch Plains, N. J. invited architectural experiment. It is growing by easy stages and will be completed after the war.



Abasaal



SOLAR WEEKEND HOUSE. Designer Henry Wright creates simplicity in a rambling structure.

Photos: Ben Schnall



D HOUSE WAS HUGE AND AWKWARD

Drastic surgery and disciplined imagination were used on this ungainly summer home to convert its gabled awkwardness to a modern living scheme. With the elimination of the second floor and the addition of a new roof the house has acquired so contemporary an appearance that to the casual observer it appears to have been newly built. Actually, the changes were few but skilfully handled, with nearly all materials reused in the process of remodeling.

A typical legacy of our fathers' predilection for the rustic-baronial style which encumbers the woods and beaches of the eastern seaboard, the house stands on an eminence near a picturesque inland resort, commanding from the south windows magnificent views of one of Pennsylvania's loveliest river valleys. On the north side an elaborate flight of stone steps formerly led down to the driveway. The steps were partially removed and replaced by a ramp, and a new garage was built under the slope, since accommodation for automobiles had never been provided.

The vast old house proved easily adaptable once the bold decision had been made to remove the upper story, which was in any case badly in need of repair, and too large for the client's modest requirements. It was possible to salvage and reuse windows, sheathing and other materials as well as to retain the general organization of the original plan. The servant's quarters were modernized and the pantry transformed into a small, workable kitchen, with stairs down to the service entrance on a lower level. Dining room and reception hall were shorn of their Victorian trimmings and thrown together into a modern living room. A corner was cut off this space to make a porch, two useless chimneys removed, and bedrooms added on the main floor.



APPROACH TO REMODELED ENTRANCE IS ADAPTED TO CONTOURS







DARK-PANELED PARLOR WAS GLOOMY



EXISTING FIRST FLOOR had suite of badlylighted reception rooms, and overlarge service quarters, unsuited to present-day living.



BUILT-IN SHELVES BELOW WINDOW ARE PART OF RADIATOR FIXTURE

VIEW FROM DINING ROOM UNFOLDS ACROSS A SHARP RAVINE


nt to a balcony bedroom. Plans show the transformation of lower floor from a formal suite of rooms to an open living space.







SIMPLE WOOD ROOF SUPPORTS FOLLOW LINES OF OLD HOUSE WALL

REMODELED CHIMNEY AND LOWERED PIERS MODERNIZE STONEWORK





OLD VERANDA OBSCURED THE VIEW

Most striking feature of the remodeling was a new 18 ft.-high window, serving both living room and bedroom on the south side. This provided a true window wall, in the sense that only a small portion of the lower part is operable. In addition to double glazing with sealed air space for the full height, precautions against sub-zero temperatures were taken by installing a winter window 8 in. behind the bottom half. This forms a trough into which cold air descends behind the radiators, which warm it before transmission into the room. Radiators under the north clerestory windows (which were introduced to offset the effect of illumination from one side only) handle cold air in a similar way. The steam boiler for the heating system was retained in the original basement.

On the site of the new terrace, an old veranda with massive stone piers and dark overhanging eaves obscured the view of the living room. Its roof and wood floor were removed and the piers cut off flush with the old porch floor to form a new enclosure. To make the terrace, an excavated portion underneath the original floor was filled with debris up to grade level. With the addition of a short flight of steps up to the new porch, this exterior space forms an integral part of the living area and the transition from house to landscape becomes less noticeable and more convenient for modern use.

ving area. The heating system takes care of additional window space by warming cold air before it enters the room.



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SOLAR WINDOW WALL

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MONTH IN BUILDING

(Continued from page 80)

rental value distribution . . ." Many a housebuilder, looking for a broader market, joined many a plain citizen in hoping that actual family income levels in 1955 would call for an adjustment upward in NHA's scale of rent values.

STEEL'S HOUSING WEDGE

In 1938 the Stran-Steel Division of Great Lakes Steel Corp. initiated a merchandising program intended to put two tons of steel framing into many a small house. Wartime steel restrictions checked this Stran-Steel venture, diverted the firm's housing operations to production of the

Dave Robbins



VERMILYA will seek steel's answer

Navy's Quonset hut. But the company, like other big steel producers, never lost interest in the small entering wedge it had driven in a peacetime housing market—an interest now sharpened by the industry's enormously increased production capacity.

Nobody yet knew whether Stran-Steel would continue to push its prewar framing system, which-sold through local lumber dealers and merchandised to conventional builders for site-assembly-fits easily into traditional building practices. Nobody yet knew whether lumber shortage would hang over the resumption of normal housebuilding, give steel framing a big market boost. But many wondered: was Stran-Steel, like U. S. Steel Corp., looking for a bigger answer to the portentous question-how to move steel as a housing end-product? Buying into Foster Gunnison's prefabrication operations at New Albany, Ind., U. S. Steel had apparently put its money on a factory-produced house. Would Stran-Steel likewise try to move more of housebuilding into the factory?

Whatever Stran-Steel's eventual an-(Continued on page 148)

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MONTH IN BUILDING

(Continued from page 146)

swer, a large part of it would come from the John B. Pierce Foundation, which for many years has been trying to pin down the U. S. dream of a mass-produced house. Joining hands with Pierce, Stran-Steel said it would make the Foundation's research developments "generally available to the public," left the industry free to speculate just what this public relations double-talk would turn out to mean in terms of building's ganging production network.

Pierce in turn joined hands with Howard P. Vermilya, who has served the Federal Housing Administration as technical director for the last ten years. Vermilya, who developed FHA's design and construction standards, will direct a greatly expanded housing research program which, rumor had it, will soon get another customer as eager as Stran-Steel.

END OF A FRAUD STORY?

The charges before the federal district court were as explosive as the rocket powder made at the Sunflower Ordnance works near Lawrence, Kansas:

Excess labor costs had added \$30 million to the government's expenditure for construction of the ordnance plant. Thousands of truckloads of lumber had been dumped and burned; structural steel and 1,000 tons of cast iron pipe had been pushed into a reservoir and buried. Roofs had caved in, floors had buckled, foundations had been demolished and rebuilt.

The sixty allegations filed by engineer William V. Ryan, one-time chief construction inspector at the plant, told a tale of greed and graft so gross that the Sunflower works looked for a while like the biggest construction scandal of World War II. But last month, when the federal government withdrew from the action, the Sunflower mess looked more dud than dynamite.

Said U. S. district attorney George West: "Time was of the essence in construction of the Sunflower works. After a full and careful investigation, the United States does not believe there is sufficient evidence to support the allegations of fraud."

But many Kansans could remember Senator Harry S. Truman's opinion, based on the Truman Committee's investigation: "My worst fears have been confirmed . . . It's just \$25,000,000 dropped in a hole."

Initiated more than a year ago, Ryan's action was filed under a Civil War law permitting both the government and a plaintiff filing suit to recover damages on

(Continued on page 150)

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MONTH IN BUILDING

(Continued from page 148)

a 50-50 basis. Last spring the government intervened as plaintiff in the case. Ryan named as defendants contractors W. S. Broderick and D. G. Gordon, Denver; William S. Lozier, Inc., Rochester, N. Y.; Frank C. Delle Cese, Utica, N. Y., chief field architect and engineer in charge of all construction; other subcontractors. The giant plant is operated by munitions titan, the Hercules Powder Co., which pioneered the processing of smokeless powder from pine stumps and other wood waste.

PRECISION MERCHANDISING

Last month F. Vaux Wilson, who believes that the Homasote system of sectional construction already accounts for more U. S. houses than any other single factor in the industry, prepared to go to work on an even bigger section of the 194X market.

Wilson's postwar distribution formula is Precision-Built Homes Corp., a newlyformed corporation of which Wilson is president and in which Homasote holds a one-sixth interest. There will be room in it for everybody-from the smallest lumber yard to the biggest contractor. It will have a brand new link with the consumer-house sales over department stores counters.

As precisely built as the homes with which it would aim to blanket the nation, Wilson's plan promises an integrated production and distribution network, through which the housing product can move, without interruption from material producer to consumer. Every piece of material and equipment will be purchased by the Corp., shipped to fabricators.

The big volume of customer interest generated by Homasote's debut in department store merchandising (see



ARCH. FORUM, Apr. '43) prompted Wilson to get ready now to deliver the goods. Already San Francisco contractors. Barrett & Hilp. who produced the 5.000 - unit Homasote war village at Portsmouth, Va. and who appear as

F. VAUX WILSON

a stockholder in the new corporation, are setting up two fabricating plants in New Jersey, intended to meet the sales volume anticipated by two New York department stores, R. H. Macy and L. Bamberger. Wilson has applications from over 100 department and furniture stores who want to sell Precision-Built (Continued on page 152)

WORKING with the Architect

Mesker Brothers

Book of Apartment Windows

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Book of Hospital Windows

Mesker Brothers Book of Windows for Homes

Mesker Brothers

Public Building Windows

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Office Building Window:

Through the years, we at Mesker Brothers have had one binding purpose . . . to serve, not just to SELL the architect. The Mesker Window Books, recently being offered to architects, mark another milestone in the furthering of our purpose. To enhance the value of these books to the architect, they were illustrated by a well known architect and contain many helpful pencil renderings, new uses, ideas, treatments, and designs. We sincerely hope that these books have proved valuable to you ... that we have fulfilled our purpose.

MAIL THIS COUPON TODAY MESKER BROTHERS, Dept. F-114, 426 S. 7th St., St. Louis 2, Mo. Without cost or obligation, mail me the following Mesker Brothers Books: Book of School Windows Book of Apartment Windows Book of Hospital Windows Book of Public Building Windows Book of Windows for Homes Book of Office Building Windows The Mesker Brothers Book of Windows for Office Buildings will be available in December. Architect Address (Give Street Number or P. O. Box No.) City_ State Manpower shortages prohibit establishing a permanent mailing list.





MODERN LAUNDRY COMPANY, INC. LAUNDERERS AND DRY CLEANERS 502-512 South Nebraska Street PHONE 68 MARION, INDIANA

U. S. Machine Corporation Lebanon, Indiana

Gentlemen:

In enswer to your inquiry as to the satisfaction given by our Winkler Stoker, I'll let the following facts speak for themselves. In 1936 we converted from hand-firing by installing a No. 75 Hopper Model Winkler Stoker in our 128 H.P. high pressure boiler. The records indicate that the conversion to stoker firing has enabled us to operate at a saving of about 25% in coal tonnage.

This amounts to 20 tons per month, which at current coal prices means an annual saving of 31680.

Coal savings are only a part of the actual cash dividends we are receiving, when hand-firing, we frequently had to close down for a half-hour or so be-incomers idle. The cost of this lost time totaled up to an appreciable sum in a year's time. Now our reguired 75 lbs, pressure is maintained without any trouble.

The automatic operation of the stoker gives our fireman plenty of time for maintenance and other work about the plant - another saving in labor costs. Maintenance on the stoker itself has been negligible.

When hand-firing we also had complaints about smoke, a headache complately cured since converting to stoker firing. Viewed from an investment angle, the each returns from our winkler Stoker are almost incredible. The stoker cost 3175, which means that the yearly dividends represented by savings on coal alone - not to mention the saving in labor cost - are well over 100%. I wish that all of my investments were as secure and profitable.

I think that from the foregoing, you will see that we are more than pleased with our Winkler Stoker.

INKLE

fully automatic STOKERS

U. S. MACHINE CORPORATION . LEBANON, INDIANA

MODERN LAUNDRY COMPANY, INC. Bert G. Moore, Sec. & Treas.

It took two conditions to make possible the letter reproduced here. First, a method of accomplishing a desired result which is *basically* more economical. Second, a product qualified to put the method into most effective operation.

Stoker-firing with a Winkler Stoker fulfills both conditions. This fully auto-matic coal burner uses *low-cost fuel*... and burns it with maximum efficiency. That is why it is paying amazing divi-dends in thousands of installations.

Complete information on Winkler Stokers is given in this booklet-send for your copy.



(Continued from page 150)

Homes and expects to supply this big market from fabricating plants operated by five other stockholder contractors: Prefabricated Products Co., Seattle; E. L. Simmons, Decatur; R. W. Kuhne, Rantoul; Sidney F. Dwyer, Milwaukee; Woolsey & Cadwallader, Pennington, N. J.

Larger housebuilders and lumber dealers will also be encouraged to set up their own local fabricating plants, to which the Corp. will ship materials. Wilson thinks a good number of prefabers may abandon factory assembly in favor of Homasote and precutting. Plans are underway to set up counterparts of the U. S. system in Canada, Great Britain, Australia.

NEW BROOM FOR ROCHESTER

One good anchor for ebbing central real estate values, says the new Planning Commission of Rochester, N. Y., is also the answer to one of the city's prime needs: adequate buildings, functionally grouped, to house the municipal departments now scattered in a one-time shirt factory, several commercial buildings and a 70-year-old city hall. Next month

Herbert Schaeffer



KAELBER plans for Rochester

the 12-week-old Rochester Commission, a fledgling among planning agencies, hopes for a \$100,000 nod of approval from the City Council on its request for planning funds. With state aid for planning to match the city's \$100,000 grant. Rochester expects soon to have completed plans for Civic Center buildings and other major community improvements on its postwar works shelf.

So far the eight-man Commission has betrayed a healthy disregard for precedent in several directions: it has not become preoccupied with the single problem of Main Street bridge. Its pace of 15 meetings in 11 weeks has been anything but leisurely. And, more important, it decided to delegate to appropriate municipal officers the responsibility

(Continued on page 154)





Remodeling Means Pureaire Kitchens

Adjustment to modern conditions has created the tragic problem of too large homes, the pride of an era now past.

Such homes can be transformed into satisfactory income producing assets by remodeling into small apartments. And remodeling means Parsons Pureaire Kitchen equipment.

This compact, complete steel kitchen installs wherever connections are most convenient. Doors closed, Pureaire blends harmoniously into the wall. In use, its patented ventilation feature carries away all surplus heat, vapors and odors, allowing none to escape into the room. Just uncrate and connect; Pureaire is ready tocook the finest meal you ever ate.

DOT

ONI

Plan

The above plan by Architect Talmage C. Hughes of Detroit is a splendid example of remodeling transformation. No kitchen problems at all thanks to Pureaire and Mr. Hughes' clever designing! And eight occupancies instead of one! Remodeling will be a huge factor in post-war building. Forward looking architects are preparing for it now. Solve those remodeling kitchen problems with Pureaire.

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Central Control Desk Speeds Beauty Service. The central control desk—located in clear view of all sections of the shopwill serve as the "brains" of the salon. Here, an attendant can greet and route incoming patrons, control the flow of work, and handle miscellaneous details. The desk also provides an attractive display case for promotion of such items as perfumes, hair ornaments, and costume jewelry.

Floor Numerals Identify Booths. Design flexibility in linoleum makes it possible to identify each booth with a numeral inset in the floor. This is a convenience for both the operator and the patron. Inset directional lines also can do a lot to help increase efficiency and add a decorative note to the interior. Armstrong's Linoleum gives you many such opportunities to dramatize the salon and build goodwill for your beauty shop clients.





stimulate the beauty shop owners' interests in future remodeling, it is offered also as possible help to you who will be called upon to design their stores. For your copy, write Armstrong Cork Company, Floor Division, 2311 State Street, Lancaster, Pennsylvania.



MONTH IN BUILDING

(Continued from page 152)

for approving subdivisions, street wideenings, etc. Finding that such duties had taken up most of the time of its predecessor, the City Planning Board, the new Commission determined to be free for wider sweeps of the planning broom.

Head of the hard-working Commission is Rochester-born William G. Kaelber, who can count the University of Rochester, the Eastman theater, the post office, Rundel library and Bausch museum among his designs. Other Comission members are broadly representative: George H. Hawks, bank president; J. Howard Cather, Eastman Kodak engineer; architect Lucia Norton Valentine, wife of the president of the University of Rochester; Arthur H. Ingle, industrialist; Louis W. Johnston, president of Rochester's largest department store; Harold S. W. MacFarlin, city commissioner of commerce; realtor Harry P. Ruppert.

Like many another city, Rochester counts on a certain amount of federal or state aid for construction. But Rochester can also look forward to retirement of two-thirds of its municipal debt by 1949 and a \$6 drop in its present tax rate of \$30.38 per thousand. Anxious as it is to pare tax dollars, the Citizens' Tax League has already been sold on the notion of retaining \$3 of this possible saving for investment in the city's future. The Commission thinks that one part of its works program, a civic auditorium which will also be Rochester's war memorial, can be financed by subscription.

SMART DAGWOOD

Turning from Buck Rogers to Lil' Abner, New York State readers of the Sunday supplements are now likely to come across the four-color tale of Doug Reed. Like Dagwood, Doug Reed is an ordinary guy, but much handsomer. Unlike Dagwood, he never has any trouble with his wife, or with the neighbors. This is doubtless because he lives in "a home of his own . . . flooded with sunlight, surrounded by flowers, with a playroom for the kids." All this costs him much less than rent used to, and all of it is possible because smart Doug Reed started a "Plan a Purchase Account" with his local savings bank.

The Savings Banks of New York State, which naturally believe in regular savings, also believe that the present high tide of interest in home ownership is the best way to sell the weekly deposit. Cartoon ads dramatizing the benefits of home ownership are currently appearing in some 90 newspapers throughout New York State.

(Continued on page 156)



Find out <u>today</u> how TORIDHEET can serve your residential projects of tomorrow

Tomorrow's heating jobs will be even more scientifically planned than those of yesterday. New concepts of comfort, of automatic service, of fuel economy and heat control will dominate. New ease of installation.

Architect, builder and financier will be alert to recognize that a good name is important, but that a quality product of high efficiency is most important. Your best investment because it is bound to serve and satisfy everyone concerned. If it bears a good name like "Toridheet" that is a plus.

Just as important is the consideration given to type of fuel, whether it be oil, gas, bituminous or anthracite coal. Each has its values and its advantages that stem from location, as well as from buyer preference.

The "Toridheet" line of heating equipment is designed and built on the theory that heating and airconditioning are our business. Thus the Toridheet line includes the famous Toridheet oil burner—the cornerstone and foundation of our business—oil burning units in complete packages for steam, hot water, warm air, and oil burning water heaters, all of proven quality and performance. All nationally recognized for low service and low maintenance cost.

Toridheet also produces modern, efficient gas and coal equipment. The name Toridheet stands for *complete* domestic heating service. This is the service that we expect Toridheet franchise holders to be ready to give you.

Architects and builders are invited to correspond with us for more intimate detailed information. *Toridheet* heating units cannot be shipped now because we are wholly engaged in war production. But we assure you that when "tomorrow" comes, Toridheet will be ready. Write.

TORIDHEET DIVISION CLEVELAND STEEL PRODUCTS CORP. • CLEVELAND 2, OHIO Oil Burners • Air Conditioning Units • Oil-Burner Boilers • Coal and Gas Furnaces • Water Heaters



If you are casting about for a beautiful paint that will wear as stubbornly as elephant hide... we earnestly suggest Eagle Pure White Lead, esteemed by American architects since 1843.

Thomas Jefferson knew and approved of white lead paint for exterior and interior surfaces. In England before him, Christopher Wren was solidly for it. As this most simple of paint mixtures (pure white lead ground in pure linseed oil) has preserved many of the world's architectural masterpieces, so Eagle Pure White Lead can safeguard the surface of the buildings you design.

In addition to its superb good looks, Eagle Pure White Lead has these most practical properties: (a) its tough film protects against the wear of time and weather; (b) by clinging tenaciously to the painted surface, expanding and contracting with it, Eagle Pure White Lead does not crack or scale; (c) it ages gracefully and slowly; (d) at repainting time, the surface is *ready*, requires no burning or scraping. As for coverage and economy ... ask any master painter!

You need no priorities for Eagle Pure White Lead. Deliveries are prompt. And the cost is no more than that of other quality paints.

MONTH IN BUILDING

(Continued from page 154)

BRITISH INDUSTRIAL LEVER

Unlike the U. S., the British government will not stop building factories after the war. Last month the Ministry of Works started construction of six factories to be leased to private operators for postwar manufacture. These plants, located in Scotland, North-East England, and South Wales and providing 1,000,000 sq. ft. of floor space, are only the first of a building program that will expand the government's wartime role of industrial landlord.

Part of Britain's drive to maintain its position in world trade, the governmentbuilt plants will also be an important lever in bringing about the regional diversification of industry and the more even national spread of employment which most of Britain now believes imperative for economic health. While World War II brought work back to the "depressed areas" left in the wake of World War I, it has done little to alter the country's lop-sided industrial structure. In North-East England, for example, the slackening demand for labor in shipbuilding, coal, iron and steel industries will leave one-tenth of the working population unemployed if lighter and relatively footloose industries are not introduced.

The markedly regional character of Britain's prewar unemployment problem has led to the adoption of controls which permit the government to say where industry may not locate, but the government has no authority to prescribe positively where industry must be established. Positive incentives will, however, be provided by the government-built plants, located in depressed areas and leased on favorable terms to the type of industry needed to round out a region's development. The plant construction now underway follows the standard wartime designs prepared by the Ministry of Works for strict economy in the use of steel and timber.

SUBURBAN ADMONITION

A timely Cicero, the Municipal Finance Officers Association recently shook an admonitory finger at local governments, few of which are looking very hard for ways to shape postwar subdivision development. Prime cause of municipal fiscal headaches in 1929-1935, MFOA reminded, was the volume of improvements built by local governments in the preceding decade of ballooning subdivi-When the balloon eventually sions. burst from its own over-expansion, many cities found themselves with nothing but a plethora of tax-delinquent lots to show (Continued on page 158)

Communed on page 1507



Westinghouse has prepared two books which will prove invaluable aids to architects, engineers and industrial designers in preparing lighting layouts and installations, or in making recommendations.

Designed as practical working tools, the "Lighting Handbook" alone contains

175 pages of lighting information, tables, formulae sketches and suggestions. The price is \$1.00 per copy.

"See-Ability for Tomorrow" which is free, is a portfolio of modern installations capable of many adaptations for home, store, office and factory. It is full of new ideas that the practical planner can put to work.

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> LIGHTING HANDBOOK

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 () copies of your free booklet "See-Ability fo Tomorrow,"
Name
Address
Firm Name and Address



MONTH IN BUILDING

(Continued from page 156)

for the miles of sewage connections and water pipes with which they had optimistically equipped suburbia.

The plight of Flint, Mich., MFOA said, was typical. In 1938 this city of 151,000 population had 28,256 vacant lots, of which 12,257 were so long tax delinquent that the state was selling them. Some 19,791 of the vacant lots had sewer and water facilities. Tax delinquency forced the city to default on its debts, and the citizens at large guaranteed payment of the special assessment debt covering improvements. Between 1930 and 1940 Flint's population dropped 5,000, but population in the metropolitan area outside the city jumped nearly 14,000.

Recommended budget-minded MFOA: Immediate foreclosure on all properties with accumulated tax delinquencies, this land to be held by the state or community to guide future growth.

Planning authorities on a county-wide basis, with power to pass on all subdivisions.

State zoning laws, which would authorize municipalities to control subdivision outside the city limits.

State-wide building codes.

♦ Careful study of past tax history before authorization of special assessments to cover improvements. "Where the risk is too great the private developer, and not the municipality, should take the gambler's risk."

SCHOOL BUILDING DOLLARS

University of Iowa president Virgil Hancher pointed to need: "The state has not spent any substantial sums for capital improvements at the university for the last 15 years. In the interval the needs of the university have become very pressing and will be even more acute as soon as veterans return to the campus."

Among other things, President Han cher wants a \$1,000,000 library, a \$1, 000,000 auditorium. These were major items on the \$10,000,000 building pro gram which he hopes soon to accomplish Four other state educational institutions plan \$8,257,000 worth of construction When Iowa's legislature assembles nex January, the state board of education will be ready with a neatly packaged initial request for \$9,662,000, which will start Iowa's school building in 1945.

Iowa's school building program was only a sample. The nation's educational plant, like a lot of U. S. building, was run down. Scrimping along over the tight war years, most schools would need to expand and rebuild to match the expanding role of education in a full-employment economy.

Look forward to PLUSUOOD Flooring A Wood Alloy

An aesthetic, postwar material with many practical advantages

Many and varied are the applications of Pluswood as an ideal floor material for residential, commercial, institutional or industrial usage. This tough-asmetal wood alloy is highly resistant to abrasive action. It can withstand the hardest punishment of foot or wheeled traffic for a length of time equal to or beyond that of other applied floor materials. Pluswood flooring will not support combustion, is impervious to mild acids or alkalines, and water has no measurable effect on it. It is available in a choice of highly desirable woods and finishes, ranging from dark mahogany to light birds' eye maple, so that you can achieve many attractive design effects. Of equal interest is the fact that Pluswood is initially economical, and the installation is the simple and easy matter of laying it over any existing surface through the action of a mastic. Truly, beyond the war, Pluswood should contribute toward making "floor plans" more stimulating to the architect or builder and bring more lasting satisfaction to the owner.



Only with completely CONTROLLED PRODUCTION could BIRD create these Better Building Papers

Sticklers for Trifles

Other examples of Controlled Production:



BIRD MASTER-BILT Shingle—rich in texture and color, thick butts for extra protection.



BIRD TRI-TAB HEX Shingle—colorful, draftfree—wind-resistant.



BIRD INSULATED SID-ING, in many attractive brick tones. HE waterproof experiment illustrated above can be duplicated in your own office with a sheet of Bird's Neponset Black Building Paper. It dramatically proves one of the many qualities which make Neponset Black ideal not only as a general building paper, but as a Vapor-Seal for insulation and air-conditioning.

For Neponset Black answers many insulation problems. Waterproof, air-proof, dust-proof and odorless, it handles easily because of its unusual tearing and bursting strength.

Neponset Black is the result of painstakingly Controlled Production, from raw materials to the finished product. These controls start with the most scientific and best balanced formula of any comparable product on the market. The dry paper base is made in Bird's own paper mill, long famous for heavy-paper production.

This dry base is felted by a special machine that gives it unusual strength both with and across the grain. This extra strength is necessary to hold sufficient asphalt to waterproof the paper thoroughly. At the same time the pores are kept open for maximum absorbency of the asphalt saturant. Each run is laboratory-checked for proportions of stock, weight and thickness, before it is sent to the waterproofing mill.

Here it is given another laboratory examination, then heavily saturated in an asphalt bath, and finally treated with a waterproof coating to seal all the pores.

The result? A building paper of unusually low moisture absorbency and penetration that retains its many qualities for years. When properly applied, Neponset Black creates an efficient vaporbarrier that keeps destructive moisture from any type of insulation.

Building paper is a small item cost-wise. But Bird's Neponset Black has become a "tremendous trifle" no architect or builder can reasonably overlook. It is an excellent example of Controlled Production, which has contributed so much to the quality for which Bird has been famous for 150 years.





POWER PLANTS of Wright Aeronautical

No. 1 and No. 2 Power Plants at Wright Aeronautical Corporation, Lockland (Cincinnati), Ohio. Albert Kahn Associated Architects and Engineers, Inc., Detroit, Mich. Insulations applied by Robert A. Keasbey Co., New York.





The No. 7 Boiler House contains four huge boilers fired by pulverized coal. Carey Insulations used.



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Both plants are equipped throughout with dependable CAREY HEAT INSULATIONS assuring maximum power production from minimum fuel in this vast project, just as they do in hundreds of other war plants, civilian industries, and utility power plants the nation over.

Through years of scientific research and testing, Carey 85% Magnesia and Hi-Temp Heat Insulations have been carried to their present state of high efficiency and durability. And continued research assures rigid maintenance of the quality standard.

For full details, write Dept. 20.

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SAVE FUEL * HELP POWER THE ATTACK

TWO NEW SCREEN CLOTHS

Out of the wartime necessity which accelerated research and process development, we have taken two *forward steps* toward greater peacetime protection for the American home of tomorrow—protection from the discomforts and dangers of disease-bearing insects—the better protection afforded by two new screen cloths which we announce and offer to our trade.

One of these is Green Edge AlcrominA ... the new super screen cloth with the

newly developed *superfinish*...non-staining...more highly resistant to corrosion than other finish on steel cloth—a worthy competitor of bronze or copper screen, yet it costs much less.

The other new screen cloth is Red Edge CrominA—proved by independent engineering laboratory tests to be a superior screen cloth from every standpoint—far superior even to the AluminA grade which it replaces, yet it will be competitively priced.



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under present government restrictions BOTH AVAILABLE IN 16 MESH ONLY...IN LIMITED QUANTITIES



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. another new development

THERE IS A NEW TREND IN STORE DESIGN and the second second

GRUEN & KRUMMECK'S conception of a Haberdashery Store

"A store for men should have a quiet and dignified appearance. A haberdashery store sells merchandise of widely different sizes Some of it, such as shirts, sweaters, jewelry, neckties, etc. warrants a showcase-like display Other merchandise, such as sport suits, and jackets are displayed on mannequins and, therefore, needs a large show window In our design we have chosen an unsymmetrical arrangement which gives both display possibilities. The treatment of the exterior walls continues into the sales room."



Pittsburgh Glass and Pittco Store Front Metal lend themselves perfectly to the design of striking, sales-winning store fronts and interiors. A complete line, including a type of glass or metal for every store need, these products are versatile, adaptable, and high in quality. And they are readily available through a nation-wide system of branches and dealers.

Merchants in all leading retail fields are being urged by Pittsburgh Plate Glass Company to consult architects. Advertisements in 21 magazines suggest enlisting an architect's aid now to plan for postwar store building and alterations.

Two perspectives, plan, and several details of this design-a $21'' \ge 25''$ sheet. The sixth of a series of store designs some of America's leading architects. Mail the coupon ne

SILG



Please send me, without obligation, your sheet showing more complete drawings of the Haberdashery Store by Gruen & Krummeck. Name Occupation_ Address State "PITTSBURGH" stands for Quality Glass and Paint

PITTSBURGH GLASS FOR STORE FRONTS INTERIORS AND

FLEXICORE FACT FILE NO. 1

Clip and save for permanent reference. A durable "Fact-File" folder will be furnished free when you send for the new sketchbook on FLEXICORE. Watch for the next "Fact-File" to appear in this publication.

what is flexicore floor and roof slab?





Arched roof showing long FLEXICORE spans

In addition to the Dayton plant, FLEXICORE Floor and Roof Slab, is made available by: Midwest Concrete Pipe Co., Chicago; Independent Concrete Pipe Corp., Inc., St. Louis; Anchor Concrete Products, Inc., Buffalo; Marietta Concrete Corp., Marietta, Obio. **F**LEXICORE Floor and Roof Slab is a unique precast, hollow-cast, reinforced concrete unit. Hollow-cast design saves weight, saves material, insulates, fireproofs (D-2 rating) and provides for flexibility in installation of utilities. Prestressing, or application of permanent tension to lower steel reinforcing rods, eliminates concrete shrinkage cracks and increases strength to permit spans up to 22 feet for light load. Standard unit design makes FLEXICORE readily adaptable.

In addition to these structural advantages, FLEXICORE speeds installation...it's precast, precured, easily handled...top side provides level base for any floor covering...underside presents smooth ceiling ready for painting. Although a comparatively new development, *several million square feet of* FLEXICORE *have been installed* in many industrial, commercial, institutional, agricultural and residential buildings. Thousands more square feet are being installed each week.

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"Impractical"

Give them the same colors, the same delicate pastel tints, that you'd put on the most exquisitely feminine chaise longue.

With Velon, any color is practical—anywhere!

No dirt or dust can dig its way into Velon's impenetrable fibre. It won't absorb moisture, it offers no foothold for grease. It resists acids and alkalis. Can't stain, can't fade.

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cleaning fluid will restore Velon instantly to its original colorful beauty—clean, fresh, bright as new—easy as dusting.

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And *Velon*, which is non-inflammable, is virtually indestructible, too. In use for more than three years on thousands of train, car, taxicab, bus and plane seats, *Velon* upholstery material has not yet shown a sign of wear.

Velon will be available in almost every conceivable color and in an infinite variety of weaves and patterns. For help in your plans to use Velon, write to Firestone Industrial Products Co., Akron, Ohio, or Fall River, Mass.

P.S.—For completely modern seating, make the cushioning Foamex, Firestone's latex foam.

For the best in music, listen to the Voice of Firestone Monday evenings over the entire NBC Network.

ANOTHER CONTRIBUTION TO A BETTER WAY OF LIFE by

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"ON THE BOARDS"- EVERYWHERE MORE CURTIS WINDOWS



Curtis Silentite windows may be used to design several different kinds of bays to add variety and charm. Such windows, too, help satisfy the demand for more space.



Because the Silentite window line is so complete, you have more scope in planning modern window arrangements, such as this corner window. Wide variety of sash styles.

More than ever, windows will be used in groups. Curtis stock windows—low in cost—easy to install —make such groups economical,

even for the smallest homes.

With the famous Curtis Silentite line, you can find the right window for every size and type of bome. Here, large bay sash go to the floor—a very stylish treatment.





A^{RCHITECTS} all over the country are doing some *practical* thinking about windows for post-war homes. That's why you'll find Curtis windows on the boards and in the post-war plans of so many architects. There are sound and compelling reasons back of this choice. Here are some of them:

- 1. The public wants more windows—and stock windows by Curtis offer the most practical means of meeting this need, at low cost.
- 2. The demand for a wider variety of window styles and sizes immediately points to the broad Silentite line—including windows for every need, every use, every home.
- 3. Tomorrow's windows must be weather-tight—and Curtis Silentite windows, made of wood (in itself an insulating material) provide scientific weatherstripping . . . low fuel cost . . . easy operation.
- 4. Through years of research, Curtis has become a natural leader in the window and stock woodwork field. That is why architects look to Curtis for latest improvements.

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In large buildings the need for locating key men without delay presents a major problem. Holtzer-Cabot has two solutions for this problem: visual paging for general use, and voice paging for conditions where voice is not objectionable and the noise level is not excessive.

An outstanding feature in the Holtzer-Cabot Auto-Sequence visual paging system is the elimination of pauses between calls, no matter whether one or several code signals are transmitted at the same time. Three or six different calls may be flashed automatically in sequence depending on whether a three or six circuit control keyboard is used. After the person called has been located, the action in eliminating the call without disturbing the flashing sequence of other calls is automatic.

Holtzer-Cabot complete signaling equipment, such as Nurses' Call, Phonocall, Staff Registers, Return Call, Night Lights, etc. are available for new installations or additions to existing systems. Our engineers will gladly analyze your needs, make recommendations and supervise installations. Ask for their help.

Catalog on Holtzer-Cabot Signaling and Communications equipment will be sent on request.



LETTERS

(Continued from page 36)

veloped and began to prove lucrative to architects, who soon learned that the great *quantities* of houses being produced could at least bring them some degree of livelihood, the architectural profession muffed the ball again by fostering and encouraging the far fetched and impractical ideas of thick lensed, bespectacled modern theorists.

c. During these stages publications such as yours did little to neutralize these deficiencies. Your constant publications of architectural twaddle is an endorsement of these angular leanings. Accordingly, your duties to the public you serve have been sadly neglected. It would appear your mission would be to make studies of projects that tend to utilize the maximum of engineering efficiency in the proper utilization of interior space coupled with practical modern adaption of the exterior architectural periods. . . .

... May I state that the great majority of American housing enthusiasts and potential house owners feel like Mr. Stafford? By actual observation I can tell you this vast majority feels let down, and rightfully so, by *someone*. You claim if they are let down it is by the architectural profession. They, and I, feel you let them down...

GILBERT D. SPINDEL

Jacksonville, Fla.

It is not THE FORUM'S purpose to walk backward into the future. The overwhelming evidence of recent opinion polls indicates a clear popular majority for modern design. Mr. Spindel's rejection of this trend adds weight to our suggestion that his quarrel is primarily with a changing world and consequent changing attitudes toward architecture. THE FORUM will continue to reflect these changes and frankly to espouse them as evidence of a mature contemporary architectural solution to modern living.—En.

Forum:

You suggest in your comment on the letter that the quarrel of laymen with contemporary design "is more with the architectural profession than with the architectural press." But after all, the architectural editors pick for publication what they consider the best and most interesting buildings. For some time now they have evidently thought that, journalistically considered (and the architectural press is now more journalistic in character than ever before), a building in the so-called "contemporary style," no matter what its faults, is the exciting thing to publish. A "traditional" design, whatever its merit, is dull stuff.

E. WILLIAM MARTIN

Wilmington, Del.

(Continued on page 168)

COMPACT Bath-lavette FOR ONE-STORY HOMES

When Kohler's post-war plumbing fixtures and fittings are presented, they will include many refinements and some entirely new models.

Right now, Kohler is devoting considerable attention to the latest concepts of bathroom planning . . . for new construction and remodeling.

Above is a combined bathroom-lavette which provides utmost utility in a one-story two-or-more-bedroom house. All the advantages of two bathrooms and a washroom are achieved with two lavatories, two closets and one bath, and with economical piping. Entrance can be made from bedroom or hall.

KOHLER o

MBING FIXTURES AND FITTINGS

A towel cabinet serves both units. The lavette has a built-in cabinet and storage space. There are recessed wall cabinets for soap, medicine and accessories. Notice the grab rail over the tub.

Fixtures: the Bench Bath with Triton mixer fitting, Integra one-piece, siphon jet closets and Gramercy vitreous china lavatories with shelf, metal legs and towel bars. The Kohler compact radiators provide concentrated, efficient heating. Kohler Co., Kohler, Wisconsin. Established 1873.

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LETTERS

(Continued from page 166)

Forum:

... Blame it on the architectural profession if you will but I am sure there are a *few* in the profession that design houses that the average person would live in—the average mortgage company would make a loan on—that would fit into the average community—and that would please your average reader.

For the good many sane and sensible people that are left, why not give us a sane and sensible house once in a while? One that you can tell the front from the rear?

G. A. PETITT, JR.

Vulcan Realty Co. Birmingham, Ala.

Forum:

... For many years your articles and illustrations have reflected the best architecture that was produced in America, but recently you have emphasized so strongly your preference for the freakish and the fantastic and for designs produced by architects and designers with foreign names, that I am beginning to believe that you are following a program of trying to make your subscribers and the public believe that this type of design is the only kind that has any merit, and that you are deliberately trying to mold and form public opinion to an acceptance of this type of work.

Your domestic selections are largely of the corn crib and chicken coop pattern which can appeal only to those who have tendencies toward exhibitionism, and apparently the crazier and more bizarre they are, the more highly you exploit them. Your selection of public buildings, commercial and industrial structures, educational, religious, etc., appear to be more thoughtfully chosen, but here, too, there is evidence that you are influenced by the foreign and the extreme in design, and your insistence in lauding this type of work almost to the exclusion of the more traditional and generally accepted type of design is becoming rather tiresome. A certain amount of the unusual would undoubtedly prove stimulating, but a steady diet of its creates an aversion . . . EMIL R. JOHNSON, R.A.

Uniontown, Pa.

Forum:

... Many of the interiors you have shown are quite interesting, but it would seem that the architect had exhausted himself on the interior and has draped around his floor plan a mass of wood walls and roofs, thrown together without making the exterior attractive ...

H. B. POPE

Sanford, Fla.

(Continued on page 172)

why you should specify KIMSUL^{*} Insulation



It stops heat or cold! KIMSUL blanket is one of the most remarkable heat and cold stoppers ever developed. Thermal efficiency: 0.27 Btu./hr./ sq. ft./deg. F./in.

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Easy to install! KIMSUL is easy to handle and install. Usually one man can do the job, making worthwhile savings in labor cost.

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Economical! Mass production makes KIMSUL's cost low. The exclusive *compressed* feature reduces storage, shipping and handling charges.

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5 Fire-resistant! There is *no* insulation known that will make a wood frame structure fire-proof. But an insulation must not add to the possibility of a fire. KIMSUL meets this requirement because it is chemically treated to resist fire.

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Light weight! KIMSUL blanket is one of the lightest insulations known ... 1,000 square feet, Standard Thick, weighs only 128 pounds. Average density of KIMSUL, including asphalt-saturated cover paper, is only 1.45 lbs. per cu. ft. Thus, it is easy to handle and install ... adds negligible weight to structural load of building.



Flexible! KIMSUL fits in corners, tucks behind pipes, electrical wiring and other "tight spots" . it is as flexible as a towel.

3 thicknesses — 4 standard widths! KIMSUL blanket comes in Commercial Thick (nominally ½ inch), Standard Thick (nominally 1 inch) and Double Thick (nominally 2 inches) . . . giving you choice of thicknesses to fit specific needs. Each thickness is available in four standard widths: 16 in., 20 in., 24 in., and 48 in. Also furnished on special orders in wider sizes to fit unusual requirements.



Resists vermin, insects, fungus! The materials of which KIMSUL is made-principally wood fiber and asphalt-do not offer any subsistence to insects or vermin. A chemical treatment makes KIMSUL resistant to mold and fungus growth.



LOOK AT KIMSUL!

KIMSUL blanket is soft and flexible... free from dust or harsh, irritating ingredients... unusually easy to handle and install. Made of chemically treated wood fibers, impregnated with asphalt, KIMSUL is one of the best "heat-stoppers" known. Faced with a tough, water-proof covering, KIMSUL blanket resists rough handling... gives an installation of outstanding neatness.

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*KIMSUL (Trade-Mark) means Kimberly-Clark Insulation

FEDERAL ELECTRIC COMPANY, INC.

What do you want to know about your lighting problem?

Federal Electric Company, Inc. offers help, through "Lighting Information Service." Fill in the form below, attach it to your company letterhead, and mail it, with a detailed letter if you wish. Federal Electric Company. Inc. lighting engineers will study your problem, and give you their recommendation. There is no charge or obligation for this service, except your cooperation in giving us full information. Available to architects, engineers, distributors, contractors, and managers of stores, offices, buildings, hotels, shops, and industrial plants.



In planning to meet the keen competition for peacetime production an 'sales, management is giving special consideration to proper lighting. During the conversion period, as manpower and materials become available, there will be many new installations, especially of fluorescent lighting. It is important that these new installations be properly designed.

Federal Electric Company, Inc. recognizes the value, to itself and to the lighting industry, of satisfied users, and successful installations, regardless of whose equipment is used. Therefore, this company offers to share, freely, its years of experience and knowledge of lighting, with any prospective user, in cooperation with his architect, consulting engineer, electrical goods distributor, and electrical contractor.

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CHANGES C, that would and use of space, that would and lighting—please state briefly. MY PROBLEM: (state here, or in a separate letter if you wish, any enecide of the problems, unusual or custom-built requirements, special colors or thanker of to be included, architectural features such as concrete or steel beams, concer- to be included, architectural features such as concrete or steel beams, energies NAME: POSITION OR TITLE:	Ing intension rolfers, etc.) Tolfers, etc.) Tolfers, etc.) Branch Offices: Cincinnati • Dallas • Duluth Houston • Indianapolis • Kansas City • Louis- ville • Milwaukee • Minneapolis • New Orleans New York • Philadelphia

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There are 2 kinds of fluorescent lighting "Hot Cathode" is the common heater filament type of fluores-cent lighting; "Cold Cathode" is the im-proved, shell electrode type, of which Zeon is the outstanding example. Long life, lower mainte-nance cost, and greater flexibility are distin-guishing features.



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LETTERS

(Continued from page 168)

Forum:

About the same time that Mr. Stafford sent you his subscription I too subscribed because I was contemplating the erection of a home office building for my small life insurance company as soon as building conditions would permit, but I too have been disappointed. Not with the fact that you have been depicting so-called modern architecture, but because of the quality of the architecture that you depict regardless of its style. Of course my statement is sweeping and there are always exceptions to any sweeping statement.

There have been depicted here and there buildings which in my opinion deserve commendation for their design. In your comment on Mr. Stafford's letter you say: "Forum pages are . . . reserved for the best and most interesting build-ings we can find." My suggestion, which I hope is constructive, is that you do a little bit more hunting and if you can't find that which is desirable among structures already erected during the war period, then for heaven's sake, go to the boards of the architects and see what they are contemplating for the future

. . .

HARRY V. WADE

Indianapolis, Ind.

THE FORUM'S pages are indeed reserved for the most interesting buildings we can find. Reader Martin's comment, "A 'traditional' Reader Martin's comment, ' design, whatever its merit, is dull stuff," we consider rank understatement. We share and deplore reader Pettit's difficulty in occasionally "telling the front from the rear," but treasure the hope that postwar designers will improve their output. Editorial criteria will be raised as rapidly as available material permits.-ED.

Forum:

I think Mr. Stafford expects a little too much from your magazine. We recently renewed our subscription after several years of inactivity, and we find your magazine everything we expected.

We do not expect to find in your pages our ideal house . . . but we do expect to find and are finding an idea here and there for our kitchen, bath or living room which we can incorporate into the plans we are making. . . .

... There has been a lot of nonsense written both for and against the socalled modern architecture. Every school of architecture from the Greek to the Gothic started out to be purely functional and developed in accordance with the taste of its times.

The flowering of American architecture which sprang from the Chicago Fair of '93, came before the age of steel and concrete was fully upon us. (Continued on page 176)



Installation "KNOW-HOW"

built this Floor

Nothing is more important to an architect than the knowledge and conviction that the materials he specifies will be installed in a craftsmanlike manner. Practically all building materials require application by skilled mechanics before they become useful as a part of the building.

It has often been said that an asphalt tile floor is just as good as the mechanic who installs it. Because we know this is a fact, we have exercised the greatest care in selecting approved contractors to sell and install our products.

Tile-Tex contractors are experienced floor men who employ mechanics that have asphalt tile "know-how." You can rely on product quality and on contractual responsibility when you specify Tile-Tex Asphalt Tile installed by approved Tile-Tex contractors-and remember that behind the performance of the approved Tile-Tex contractor, there stands the integrity and backing of The Tile-Tex Company.

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Installation over existing walls requires merely truing-up. Special wall preparation is eliminated. No fuss or muss.



Rapid-setting waterproof white or colored cement grout fills the joints between the tiles.



Waterproof adhesive applied to back of the tile insures life-time bond with foundation.



Squeegee removes excess grout; joints are pointed; tiles cleaned with sponge and fine steel wool.

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More than 20 of the leading American oil companies have installed Veos Tile in 15 thousand of their finest rest rooms. These companies naturally employ able architects. Their united opinion is praise indeed. Everybody likes Veos Tile. It is quickly installed, means little or no interruption whether in the home or public building. Light weight permits use on old walls or even ceilings. And the smooth vitreous porcelain surface is always easy to clean.



MODERN TILE SIZES... Veos-tiled walls and ceiling in operating room of an Ohio hospital, show one⁴ of many distinctive effects possible with the Veos wide range of tile sizes. In addition there are stock SHAPES to meet every room condition. Colored tile is furnished at same price as black or white.

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Send for FREE SAMPLE of both Veos Tile and Veos Foundation Board, Architects Specifications and fullcolor book showing a wide variety of installations.



A. Ernest D'Ambly, Consulting Engineer, Philadelphia, Pa. Member A. S. H. & V. E. Studied Mechanical Engineering at Pennsylvania State College.

I believe steam will be the preferred medium for heating larger buildings being planned for construction after the war," writes Mr. A. Ernest D'Ambly, Philadelphia Consulting Engineer. "Not only because of its low first cost and economical operation, but because steam easily meets the wide range of heating needs. With modern Controlled Steam Heating we can anticipate and satisfy any demands that the weather may make. The amount of steam produced can be automatically varied as outdoor temperatures change, or as heating requirements for different parts of a building may vary."

A. Ernest D'Ambly has specified the Webster Moderator System of Steam Heating for such installations as Abington Hospital, Abington, Pa.; St. Elizabeth's Convent, Cornwells Heights, Pa.; Hill Creek Homes, and Home of the Merciful Saviour for Crippled Children, both in Philadelphia. He also acted as engineer for the following Webster Hylo System installations: Nazareth General Hospital and St. Christopher's Hospital, Phila.

WARREN WEBSTER & CO., Camden, N. J. Pioneers of the Vacuum System of Steam Heating:: Est. 1888 Representatives in Principal U. S. and Canadian Cities Darling Bros. Ltd., Manufacturers & Licensees for Ganada



LETTERS

(Continued from page 172)

The freedom it brought to architectural design went to the heads of the Bauhaus group and resulted in a number of atrocities though fortunately none of them were sufficiently monumental to be of importance.

But in grasping the new tools, the keynote that ran through all previous schools of architectural was lost. That keynote was a sense of proportion and balance.

I believe that modern architecture, having sown its wild oats, is regaining that sense of proportion and balance and will, in the future, with the many new materials and techniques, go on to produce buildings as harmonious as any of the older schools. . . .

MACALLASTER MOORE Gig Harbor, Wash.

Forum:

. . . You have shown very few houses that "I would build, buy or live in" exactly as they are planned but you have given me many good ideas which may be incorporated into the kind of house that would be pleasing to my own tastes and the mode of living in my section of the country. . . .

W. E. BABER

Gainsville, Fla.

Forum:

Would Mr. and Mrs. Thomas D. Stafford tell us the name of an architect and a well known home of his that appeals to them?

Will they write us a letter giving their idea of (home) beauty?

I think they are right in pointing out that you have not made THE ARCHITEC-TURAL FORUM helpful to the private home builder who wants ideas. Ideas need explanation. If some of the work you present were explained Mr. and Mrs. Stafford and others would see the educational rather than dictatorial policy you in truth follow.

G. M. LOEB

Redding, Conn.

Acutely aware of the shortcomings reader Loeb points out, we have for some time been experimenting with various new means for getting modern design ideas off paper and into the reader's mind. For the latest and, we hope, a successful attempt see pp. 83 to 92, of this issue, 103 to 110 and 123 to 128. —ED.

Forum:

Mr. Thomas D. Stafford conceded that his wife hit the nail on the head by the "Cowshed" classification of FORUM houses.

Does he fully realize how squarely she hit it?

Isn't the basic function of sheltering the human carcass the same as that of (Continued on page 180)



SEND FOR THIS BOOKLET

THERE'S a new science in factory painting — the science of giving color a FUNCTIONAL use to improve production and worker morale. It's described in detail in a new publication—"Color Power for Industry." A note on your business letterhead will bring you a copy with our compliments. Write for it today.

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Today practically every heating, cooling, ventilating, air con ditioning or processing problem calls for the movement of air Often this problem of air movement can best be solved by th use of a blower. Not just any blower, but a blower designed and constructed for the performance required by a particula application.

The Herman Nelson Corporation, manufacturer of blowers for over thirty years, is in a position to furnish blowers for most these applications. Herman Nelson blowers with wheel diameter from 6" to 73" deliver from 250 to 308,200 cu. ft. of air p minute. Arranged for either belt or direct drive, they are available able with forwardly or backwardly curved blades. Both sing inlet single width and double inlet double width blowers ma be operated against static pressures up to 5" W.G. and wi handle air up to 700° F. They are available with top horizonta bottom horizontal, up blast, down blast, or angular discharg and either clockwise or counter-clockwise rotation. If we haven the blower for your application, we will tell you.

The next time you have a heating, cooling, ventilating, air co ditioning or processing problem, contact the Herman Nelso

Cutaway view of a for-wardly curved blade SI SW, Arrangement 3, angular discharge, Herman Nelson Blower.

distributor in your locality or write to and we will have a Herman Nelson Produ Application Engineer contact you.



Forwardly curved blade, SI SW, Arrangement 2, bottom horizontal discharge, Herman Nelson Blower.



Forwardly curved blade, SI SW, Arrangement 3, top horizontal discharge, Herman Nelson Blower.

Backwardly curved blade, SI SW, Arrangement 1, bottom horizonta! discharge, Herman Nelson Blower.





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Belt Drive

Propeller Fans





10 ha





Herman Nelson Belt Drive Unit Blowers







Herman Nelson Blower-Fan Type Heaters







OLD TIME, special SI SW Herman Nelson Blower built in 1917 for American Smelting and Refining Company. Capacity 272,000 c.f.m. at 200 RPM; belt-drive; overhung wheel; the water-cooled bearings weighed 3,200 lbs.; wheel diameter 120", width 64"; height of housing 240"; outlet, 122" x 78".

MODERN, standard SI SW Herman Nelson Blower, Type H, Unit 12, built for Central High School of Needle Trades, N. Y. City. Capacity 54,400 c.f.m. at 142 RPM; belt-drive; cen-

terhung wheel (Arr. 3); ball bearings; wheel diameter 75", width $371/_2$ "; height of housing 123"; outlet $801/_4$ " x $561/_4$ ".

Forwardly curved blade, SI SW, Arrangement 1, up blast discharge, Herman Nelson Blower.





Backwardly curved blade, DI DW, Arrangement 3, top horizontal discharge, Herman Nelson Blower.

The Herman Nelson Corporation is a member of the National Association of Fan Manufacturers. Herman Nelson blowers are tested and rated in accordance with the standard test code as adopted by the National Association of Fan Manufacturers and the American Society of Heating and Ventilating Engineers.



Herman Nelson Direct Drive Unit Blower.



Herman Nelson Direct Drive Unit Blower.

Herman Nelson Belt Drive Unit Blower.



Backwardly curved blade, DI DW, Arrangement 3, bottom angular up discharge, Herman Nelson Blower.

Part of a shipment of 1015 Herman Nelson Blowers used in heating trailers for the armed forces.







Interior view of cell block containing 512 cells, Colorado State Penitentiary, Canon City, Colorado. The architect was William Bowman, Denver, Colorado. ¶ Right now the manufacturing facilities of the Stewart organization are engaged in war work, but our engineering staff is available to work with architects and builders on future plans for entirely new construction or the modernizing of existing structures. We invite you to discuss your plans with us and to take advantage of the technical facilities of the Stewart jail and prison engineering department. There is no cost or obligation for this service. The Stewart Iron Works Co., 1165 Stewart Block, Cincinnati 1, Ohio.



LETTERS

(Continued from page 176)

creating comfort for a cow? Then why should it be so different?

If Mr. Stafford has the means to collect, maintain and display, a collection of traditional details and fol-de-rol without depriving his family of needs more important than such collecting; then we have no quarrel with him. Many of us can only afford to rent these dusty details, cast-off by former generations. We really prefer a bright airy cowshed in a bit of pasture for our very own.

I have rather felt THE FORUM to be a meeting place of "thinkers" not necessarily always architects in the home business as Henry Ford was in the wagon business. The first Model T was very abhorrant to the buggy builders. But it put American workers on their own wheels.

HARRY W. MILLER Kenmore, N. Y.

CALLING ALL ARCHITECTS Forum:

I have been reading THE FORUM and any and all other achitectural magazines and articles I can get my hands on for the past six months or so. You see, I am one of perhaps thousands of young people who is now anxiously planning my postwar home. To my husband and myself, this will be the place where we raise our family from childhood to maturity and where we can, God grant, grow old together. In other words, our only home. That is why it is so very important to us to have expert advicethe help of a capable architect.

As will be the case with many young people after the war, we plan on building a small home, around the \$6,000 mark. We have been taught the importance of an architect especially in a small home through your magazine and the other reading we have done on the subject, and from discussion with men of your profession.

However, when we have found a capable man-one whom we really believe in, he tells us that he is not interested in a "small job" such as ours and thousands of others would be, as it is not to his advantage. He can make more profit on a big job. That point is granted. He tells us that by all means a small home builder needs an architect much more than the fellow who builds a large home -because he can't afford to be without one. This is all very good advice, to which my husband and I heartily agree. Perhaps some architect who reads this can explain the situation to us. Frankly, to a layman, it is quite a puzzle.

MARGARET C. LAWSON Minneapolis, Minn.

(Continued on page 188)



Did You Know That -

Intend to Buy An



YES, an extensive survey made this year for The National Electrical Manufacturers Association shows that: 35.4% of today's home owners

44.9% of all families interviewed (tenants and home-owners combined) intend to buy an electric water heater after the war.

Why this great swing? Because *electric* water heaters are:

AFE-Flameless, fumeless

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EASILY INSTALLED - Require no flues or vents, no lengthy hot water pipes-and as

TROUBLE FREE as electric lights.

Give home builders and buyers what Give home builders and buyer heaters they want. Include electric water heaters in every home you build.

ELECTRIC WATER HEATER SECTION NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

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1900 "And will it have Electric Lights, dear?"

IT'S EASY TO SELL WOMEN THE THINGS THEY REALLY WANT!



"And will it have an Electric Range, dear?"

Women do want the cleanliness, economy, safety and convenience of *modern* Electric Cooking! Builders and architects who incorporate plans for Electric Range wiring in their after-victory homes will sell these houses quicker.

Here are the Facts!

In 1941, ten times as many consumers demanded Electric Ranges as in 1933. The trend is rapidly towards Electric Cooking.

Reliable surveys show that 2 to 3 times as many

women *intend to buy* Electric Ranges as now own them !

The additional cost of wiring for an Electric Range adds less than 12c a month to payments on a 20-year F. H. A. loan!

Get the details—now! Write for the FREE booklet, "WIRE AHEAD." Address:

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Architectural concrete radio transmitter building at Wheaton, Md., E. Burton Corning, architect, and George C. Martin, contractor, both of Washington, D.C.

Dam and power house at Austin, Texas, built by Lower Colorado River Authority.



ARCHITECTURAL CONCRETE for communications and power

Architectural concrete is especially well suited for utility buildings. Such concrete structures retain fine appearance through years of hard service.

Architectural concrete meets the most exacting design and service requirements at reasonable cost. It combines both architectural and structural functions in one firesafe, economical material.

Maintenance cost is low because concrete provides the strength and durability for hard service and the most severe weather exposure.

In addition to the advantages of strength, firesafety, long life and distinguished appearance - concrete gives owners low annual cost, the true measure of construction economy.

Literature on recent design and construction practice with architectural concrete mailed free in United States and Canada. See Sweet's Catalogue 4/33.

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For modest homes without basements, Viking "tuckaway" forced circulation furnaces (gas or oil) are ideal for utility room installation.



Oil or gas fired Viking floor furnaces provide automatic heat for the small homes.



No matter what else you do to modernize an old dwelling it will only be acceptable to the occupant if it has the comfort of modern heating. And modern heating is automatic heating. The owner-occupant, renter, landlord or speculative operator gets the best return from a modernized house only when it offers real indoor comfort at low operating cost.

The VIKING line provides every type of equipment you need for automatic heating and cooling,—at reasonable cost, whether you use oil, coal or gas. For indoor comfort in a 4 room cottage or a 14 room mansion, VIKING provides the units you need for a completely satisfactory job. For quiet automatic service, and matchless heating comfort, VIKING offers the line of modern equipment you need in any modernizing project.

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Include year 'round climate control - now!

Year 'round Air Conditioning can be included in your Modernization Plans NOW. The mechanical refrigeration units which will be a part of the Viking Year 'Round Air Conditioning line postwar are in production now, although presently diverted to war orders. However the automatic heating units which we can supply now, are so designed that cooling can easily be added as soon as available.





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This is the message we are delivering to home owners in advertisements in national consumer magazines. "Insulation and Your Home" contains *unbiased* information on *all* types of insulation. We will be happy to send you a complimentary copy. The coupon is for your convenience.



CITY_

LETTERS

(Continued from page 180)

To Mrs. Lawson and others like her is due more than explanation. If the profession cannot find a basis for serving young people whose "fortunes" are in the future, it will fall short of an obligation implicit in every branch of professional practice. Architects cannot point to our ugly countryside with one hand and keep behind their back the other which would remedy this situation. For those architects who would count it a privilege to help this fine American couple, we append the address: 4836 31st Ave. S., Minneapolis, Minn.—ED.

COMPETITIONS WANTED

Forum:

... My husband is a young army officer in the Corps of Engineers. There are quite a number of budding young architects in his organization, some of whom did have the opportunity to practice their profession before the war, most of whom did not. These men are vitally interested in the postwar world and, if their lives are spared, you must admit that they will certainly help build it.

Why don't you give these inexperienced, inspired young men a break? I have seen so many carefully detailed plans for postwar housing, each a labor of hours of painstaking care, hit the wastebasket! You must agree that only frustration and discouragement can come from the present lack of recognition and appreciation.

May I suggest more competitions for architects who, because of the chaotic state of world affairs, *have never built a house?* Why stack them up against their more fortunate professional colleagues? They don't want prizes merely a goal, some recognition — certainly this is preferable to a wastebasket!

ADELE G. KLATE

Alexandria, Va.

THE FORUM can report a deep concern for and a strong sense of responsibility to our returning servicemen throughout the country. An increasing number of architectural competitions is anticipated which will serve to focus attention on unknown, but highly talented designers.—ED.

BUILDING MAINTENANCE

Forum:

. . . During the past ten years my principal concern in architecture, along with construction and remodeling, has been building operation and maintenance. We have a small architectural force which we expand from time to time and I have been dismayed at the lack of importance attached to building operation and maintenance by the draftsmen and architects that we have employed.

(Continued on page 188)



With this efficient robot on the job, Kinnear Rolling Doors are raised and lowered by Door traffic

merely touching a button! Door traffic is speeded up, and since doors are not left open through neglect, heating and air-conditioning costs are substantially reduced. Added to the space-saving efficiency, the protection, and eye appeal of the rugged Kinnear inter-locking-slat construction, this means thorough door satisfaction for any client! Check a few construction features of the rugged Kinnear Motor Operator: machine-cut gears of chilled nickel bronze, worms of nickel steel, bronze and graphite oilless bearings - proof that it's engineered for long, faithful service! And every Kinnear Motor Operator is matched to the load requirements of the particular door which it is to operate. Write for full





Something to be thankful for ...

SHE "toils not, neither does she spin"-yet Solomon in all his glory never cooked a dinner like this one!

Yes, the Bjones family has *much* to be thankful for on this Thanksgiving Day—and every other day throughout the year.

Bill Bjones and little Oswald . . . not to mention "Barkus" the wistful wire-haired . . . are savoring the succulent delights of the wonderful feast to come.

As for Mary Bjones, her modern automatic electric range is doing wonders in timing the cooking, maintaining proper temperatures, preserving precious vitamins—without any effort, whatever, on her part.

All this is as it should be ... thanks to the important part played by better wiring, in making this happy domestic scene possible.

To help you make certain that electrical equipment functions properly in the homes you design or build, the Westinghouse Better Homes Department offers you *free technical advice* on this important subject.

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Thousands of members of the building profession are using the new book, "Electrical Living in 194X," to explain to present and prospective home owners the many advantages of "better wiring for better living."

Write for your free copy, now! Address: Better Homes Department, (AF-114) Westinghouse Electric & Manufacturing Company, Pittsburgh 30, Pennsylvania.

TUNE IN John Charles Thomas, Sunday 2:30, EWT, NBC ... Ted Malone, Monday, Wednesday, Friday 10:15 pm, EWT, Blue Network

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"Masonite" is a trade-mark registered in the U. S. Pat. Off., and signifies that Masonite Corporation is the source of the product. Sketch of remodeled kitchen above shows wall surface of Masonite Presdwood Temprtile scored in 4" squares, enameled by manufacturer or painted on the job. Counter tops are Tempered Presdwood, natural finish and varnished. Cabinet panels and doors of Presdwood, painted. Bath below shows Masonite Presdwood Temprtile and plain Masonite Presdwood panels, installed over old construction, painted on the job.

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LETTERS (Continued from page 184)

If the architectural profession does not realize the importance of building maintenance how can the general public be expected to attach any significance to this function? In my opinion this lack of building operation and maintenance is one of the causes of the blighted condition in the city of Chicago and elsewhere. A number of endowed institutions have found to their sorrow that it is easy enough to build buildings but it is another problem to care for them properly and keep them from becoming white elephants.

With all the postwar planning that is now in progress, I believe that now is an opportune time for this subject to be brought to the attention of the architectural profession. It is my belief that a magazine with the qualities of THE ARCHITECTURAL FORUM can render a real service to the public through the architects in furthering this cause.

H. W. PEARCE University of Illinois, Chicago, Ill.

THE FORUM thanks reader Pearce for an excellent suggestion.—ED.

SOUND CONDITIONING

Forum:

Your article on Sound Conditioning (see ARCH FORUM, Sept. '44) is the most intelligent approach I have seen to the problem of acoustically treating the home. Many of the other articles which have come to my attention either recommended using acoustic material as a means to cover up a poor design and construction or suggested constructing the house so that it became a medieval fortress. Your intelligent approach should be helpful to architects and acoustical engineers.

W. L. MANNING

THE ARCHITECT SPEAKS

Forum:

Chicago, Ill.

When Pfc. Hugh Moore, Jr. (Yale '43) takes time off from his army duties to talk on "Architecture and the New Church" it is time for the studio aesthetes to sit up and take notice. I was present at the meeting of the Presbyterian Westminster Foundation at which Private Moore talked and wish to attest to the value of this type of activity to the architectural profession.

THE FORUM is doing a fine job with photographs and the written word. Personal contact and the spoken word on the part of aggressive architects will supplement the cause."

POLLY CONGER, Librarian State College, Penn.

(Continued on page 194)

INSTALLATION SIMPLICITY ON THE TOUGH JOBS

In industrial ventilation involving high temperatures, corrosive fumes, or excessive moisture it is desirable and frequently necessary that motors be located outside the airstream. Complicated duct work can often be avoided, however, and installation costs kept low, by using Propellair extendedshaft fans.

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Are you double-talking \ or straight-thinking about the building-boom?

HOUSING EXPERTS REPORT: The mere mention of tomorrow's housing needs makes many builders break into pure double-talk!

Tell such builders there'll be a need for 1,000,000 houses a yearand they see themselves building dream-houses like carpenters in a fast-motion movie!...

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For, as Frank W. Cortright, Executive Vice-President of the National Association of Home Builders of the United States, puts it: "The success which the construction industry can achieve in supplying better housing at lower costs, and in providing work for millions of men, depends entirely upon intelligent, effective planning and follow-through between now and the time of total victory."

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Joe Kaufman

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You can have the same advantages in the commercial buildings you design - in floors, walls, roofs and partitions. STEELOX panels even simplify air conditioning, and make it more efficient.

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LETTERS

(Continued from page 188)

Forum:

Correction please!

Kirkpatrick's Restaurant, Seattle, (ARCH. FORUM, Oct. '44) is not a cafeteria.

Attest: twelve beauteous waitresses per shift. Seattle, Wash.

PAUL THIRY

TIME WILL TELL

Forum:

Having viewed the continuing battle between the traditionalists and the exponents of the much maligned "modern" home from the comparative safety of a Manhattan apartment, I consider it high time to place security aside, tongue in cheek, foot in mouth and, pen in hand, enter the arena.

Leave us begin at the beginning, and, in the words of the immortal Voltaire (and Will Durant), take as our starting premise the necessity for defining our terms. Perhaps we shall find that many of the disputants have been shadow boxing, or grappling with members of their own team.

If the exponent of the "modern" style will clearly state what constitutes "modernity" in housing, we may find that many of the ideas with regard to function-he has been plugging for - more light, bigger windows; flexibility in expansion; open vistas, a blending of house and its environment; a practical, well-planned floor layout; the use of the best available new materials without regard for the shattering of habit-all these he may find in a home which might, conceivably, be labeled "tradi-tional." It is time for the "modernist" to separate himself from the concept of pure logic in exterior design as the arbiter of the modern home.

On the other hand, there can be no compromising with the rococo gingerbread which has piled up the cost of the "traditional" home in the past. The people, we are told, don't like the modern home. I have a heavy suspicion that it is not so much the prospective home buyer as it is the real estate man, the bank or the builder who hesitate to make the break from the past, lest the advent of the eminently desirable features which should now be incorporated into every home precipitate an exodus from the boxlike caverns in which so many of have "lived" in the past.

However, to be realistic, let us acknowledge that the public interest will be the final arbiter. One can oppose change, but often only by casting one's self under the chariot wheels. The next ten years should tell the story.

GEORGE PHILLIPS New York, N. Y. (Continued on page 198)



Rebuild, Recondition Old, Worn Roofs BFTTFR—FASTER With ABESTO

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No investigation has been made by General Electric Company regarding the patent situation on the design or construction suggestions shown in this advortisement.





FOR THE POSTWAR APPAREL SHOP

GENERAL ELECTRIC presents another visualization in its series of postwar lighting perspectives by leading architects and designers. G-E offers them not only as a help to you but as a stimulus to your creative thinking. Here you see a suggestion for lighting a women's apparel shop by Walter Wurdeman and Welton Becket, A.I.A., Los Angeles.

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Here's one way to give a store more selling power:

"In planning women's shops, the basic objectives include such psychological subtleties as atmosphere, emphasis, and the direction of store traffic . . . all of them jobs for light.

"Thus, in this sketch of a postwar woman's ready-to-wear store, the continuous luminaire above the promenade picks up the inward movement suggested by the street display window and leads shoppers to the innermost sales areas of the store.

"Likewise, new forms in light units lend themselves to more fluid planning and the creation of graceful flowing lines of light which are particularly desirable in providing atmosphere for a women's store.

"At the same time, light can focus the customer's attention on selected merchandise and give it dramatic presentation . . . emphasis that means sales."

This new booklet "Light to build Customer Traffic" pictures more fully the strikingly modern but decidedly practical lighting ideas of Wurdeman & Becket. For your copy write General Electric Co., Div. 166-AF 11, Nela Park, Cleveland 12, Ohio.





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LETTER FROM RUSSIA

(Letters continued from page 194)

This description of the replanning of a Russian town was sent us by a member of the Academy of Architecture, USSR.—ED.

Forum:

The town of Istra, which the Germans burned down before they were driven from the Moscow region in 1941 was one of the prettiest towns in the region. The winding river, wooded hills and green fields made a beautiful landscape background to the old Russian township. The famous New Jerusalem Monastery, built by the Patriarch Nikon in the seventeenth century and rebuilt in the eighteenth century by the great architect, Rastrelli, harmonized beautifully with the general architectural features of the town.

The Germans spared neither the town nor this beautiful monument of Russian architecture. They burned down all dwelling houses and public buildings and blew up the cathedral belonging to the monastery. They also blew up the monastery tower, the church at the monastery gates and the museum buildings.

Immediately after the Red Army had driven away the Germans in the historic



1941 victory at Moscow, the people returned and began to adapt what was left as dwelling houses and municipal buildings. Shortly afterwards it was decided to draw up a plan for rebuilding Istra and I was appointed by the Academy of Architecture to plan the new town.

We designed the new Istra as a health resort, a playground for Moscow. The city is in need of a nearby resort and the natural surroundings at Istra make it an excellent site for the purpose.

In the environs of the town of Istra we intend to build hotels and summer homes, boarding houses, tourist hostels and summer cottages. The hilly nature of the terrain, the steep banks of the river and beautiful landscape determined the planning. One-and two-story houses will predominate and many of them will be built up on existing foundations. We will strive to retain the pleasant and comfortable appearance of the small Russian town, with the picturesque silhouette of its buildings against a background of birch and pine trees. At the same time, we want to build a town which answers modern requirements.

Pervomaisky Street will run along the western ridge of the town's hill. It will take the form of a wide boulevard, linking up the three main squares: the central, administrative and market squares. On the slopes of this hill we plan a park of about 250 acres around the Kursaal Sports Grounds, and general resort features. The park runs down to the river and continues on the far bank in the form of a well-equipped swimming pool.

The bigger public buildings will be built on the three main squares. The office building of the central executive committee will be the outstanding architectural feature of the town. I have designed a building with a tower facing south which should stand out against the picturesque background of the town. The building will be red brick with a white stone arcade and a colored Jajolica border to the windows. New architectural motifs are being designed on the basis of ancient Moscow architecture with its lively and jolly forms.

A small square at the highest point in town will carry a monument to patriotic war heroes. In the residential districts there will be a technical institute, schools, polyclinics and fire station. Each house will have its own garden. The German barbarians destroyed ancient Istra but in the ruins of the town the new Istra has already begun to take shape and the day isn't far ahead when extensive building work will be developed here. It has been an interesting task to plan this ancient Russian town and I am now devoting all my energy to the task of rebuilding Russian cities that the Germans wrecked.

Istra, Russia

ALEXEI SHCHUSEV



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Even, healthful heat, automatically controlled, plus an unfailing, year round supply of hot water for laundry, kitchen and bath, produced by a single system—that is Taco's tested contribution to modern living comfort. The Taco-Abbott System.

Specializing in domestic water heating, Taco has available over a hundred styles and sizes of built-in water-heaters of the tankless and storage types. Current Taco recommendations include the latest designs of heaters for incorporation in the most modern boilers.



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WINTER

Some of the MANY NEWSMAKERS who have accepted TIME's invitation to appear on the March of Time and tell America the story of the news they helped to make. We hope you will listen as future newsmakers broadcast their stories over the microphones of THE MARCH OF TIME (sponsored by the editors of TIME).



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Whether you're designing a new school ... or the modernization of existing facilities ... you'll find TODD combustion engineers extremely helpful. They will be glad to cooperate with you on your specifications for the heating system ... or will, without obligation, make a study and give you impartial recommendations for the plant.

TODD engineers are available for consultation with architects and school authorities at any time. Don't hesitate to call on them.



FORUM OF EVENTS

(Continued from page 6)

TWO EXHIBITS OF SCULPTURE

Seventeen sculptural pieces done since Mary Callery's return to America after the fall of France have recently been on exhibit at the Bucholz Gallery. Her work has a forthright and vigorous character to distinguish it, particularly in view of the effete little ornaments that seem to be cluttering up most of the galleries at the present moment. Miss Callery's exhibition includes a variety of techniques which is, in a way, rather disappointing



Tree, Figure and Acrobats by Mary Callery



How to Combine Beauty and Strength with WOOD AND LAUCKS GLUE

CONSULT LAUCKS

AMERICA'S GLUE HEADQUARTERS

A.

Here is a vivid example of the new strength and design flexibility which Laucks construction glues have added to wood.

Early in the war laminated structural members like the arches for this barn were publicized chiefly as a means to faster construction or as a solution to critical shortages of structural steel.

Now you are hearing more and more from designers and engineers about the inherent advantages in *permanent*, postwar building types of wood combined with Laucks glues—strength, durability, uniformity and interesting new design possibilities. For more information on recent, interesting developments in laminated arches and beams... and the use of construction glues in stressed cover structures and dry-built construction... write the world's largest manufacturers of waterproof and water-resistant glues.

I. F. LAUCKS, Inc. A Subsidiary of Mansanto Chemical Company LAUXITE RESIN • LAUXEIN GLUES

SEATTLE (4)—911 Western Avenue; LOS ANGELES (1)— 859 E. 60th Street. Factories: Seattle, Los Angeles, Portsmouth, Va., Lockport, N. Y. In Canada address: Laucks, Ltd., Granville Island, Vancouver, B. C., or Laucks, Ltd., Eastern, Stanbridge, Quebec.





Reclining Figure

lery's first New York show. She began her training under Edward MacCartan at the Art Student's League and in 1930 moved to Paris where she studied for two years with Jacques Loutchansky. There is no doubt that subsequent acquaintances made in France strongly influenced her work. Among them were Picasso, Leger, Laurens and Lipchitz. With this beginning Miss Callery's future work should hold great promise.

Mitzi Solomon's recent exhibit at the American British Art Center showed, by contrast a more conservative trend. Her figures are at once classical and romantic, disclosing an extremely delicate sense of beauty. Miss Solomon, who wrote her Master's thesis on the relation of sculpture to architecture, clearly expresses the standard which she holds for her art. She says, "I conceive of stone sculpture as a compromise between the artist and the rock, between the artist's conception and the resistance of the material. I consider this limitation of the material a challenge and a desirable thing. The artist must never lose the quality in his sculpture that the original stone posesses - compactness, immobility, permanence. There can be no (Continued on page 206)



Sketches by JOHN TJAARDA, Industrial Designer

Servants from the Seven Seas

The fleets of Defoe-built Destroyer Escort ships, PC boats and landing craft which have sailed the seven seas with the Navy have taught Defoe engineers many things in compact, functional design which might well be applied to create smart, new servants for dwellings of tomorrow! These ideas are suggested by Defoe as typical of the many manufacturing possibilities that may be expected from industry to make America more livable and to help maintain a high level of employment in the future. Until Victory, of course, every one of Defoe's workers-there are now nearly 4,000 of them-will be engaged in building fighting ships for the Navy. And only craftsmen who build well can measure up to the shipbuilder's standards. For these reasons, whatever Defoe produces after the war will embody exceptional quality and value for peacetime America.

DEFOE SHIPBUILDING COMPANY. BAY CITY, MICHIGAN

BACK THE ATTACK BUY WAR BONDS

Four White Star Renewal Citations now decorate the Navy "E" Award won by Defoe workers. SHIPS FOR VICTORY SERVANTS FOR PEACE

Post Pages Plant the Seed that



Grows Into Homes Like These



FORUM OF EVENTS

(Continued from page 202)

room in stone scultpre for the transitory or impressionistic, if only because there is so much real sweat in the activity of carving that it would be dishonest to the material and the process to make it appear otherwise . . . I look forward to a real orientation of sculpture in the modern world. I want it to be recognized and loved by people as a part of their scene, like a fountain in a village square, not relegated to museums. Thus I am concerned about modern technics, move-



Sleeping Cat-Mitzi Solomon

ments, education, all forces which are concerned with people, making their



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YOU use reenforcing to give concrete strength. And to give SISALKRAFT its strength, sisal fibre reenforcing is used.

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Odalisque

world (our world), a more beautiful and efficient place in which to live."

Most of Miss Solomon's work is executed in compartively rare and costly materials such as ebony, red Spanish marble, alabaster, bronze, etc. She is well known in this country and has had pieces in group shows at numerous large museums.

Miss Solomon, who was born in New York, studied at the Art Students' League, the University of Upsala in Sweden and the Academie Colarossi in Paris. She also worked with Oronzio Maldarelli at Columbia.

BATTLE PAINTINGS

The Museum of Modern Art in New York is presenting through November 12th an exhibition of American Battle Painting from 1776 to 1918. Planned in



Naval Engagement-1813

collaboration with the National Gallery of Art in Washington, the exhibition reveals the continuing American tradition, from the Revolutionary War through World War I, of the use of artists to record war.

For the many contemporary American artists who are now interpreting their nation's bitterest struggle, it is hoped (Continued on page 210)



-we learned about heating from them!

FITZGIBBO

BOILERS

We sent this questionnaire-at requestto some thousands of home planners. The response was most impressive. In every state of the Union, folks sat down with pen and ink, filled in blanks, answered questions, gave us a clear picture of what they wanted (and did not want) in a heating plant for their new post-war homes. Thrifty housewives, saving for the great day when they could own a modest home ... Doctors, lawyers, business executives-figuring on new homes in keeping with good incomes ... Even "GI Joes", now in uniform, somehow obtained that questionnaire, and with inspired faith sent us the completed data - in envelopes sans postage, marked "Free".

STEEL HEATING



BUY AND HOLD U. S. WAR BONDS and STAMPS These people mean business. They are determined to build. The echoes of the last gun in this war will almost merge with the sound of the hammers on their new homes. They are planning those homes now, with confidence in the future. With confidence too, apparently, that FITZGIBBONS can give them just what they desire in a heating boiler or warm air conditioner. This confidence is secure. We will see to it.

The Fitzgibbons steel boilers and warm air conditioners in the homes of tomorrow, will be just what the homeowners want. They have helped to design them. **FITZGIBBONS BOILER COMPANY, INC.** 101 PARK AVENUE, NEW YORK 17, N. Y. Works: Oswego, N. Y. • Branches in Principal Cities

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10

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FORUM OF EVENTS

(Continued from page 206)

that the exhibition will provide encouragement since it demonstrates the overwhelming documentary value of our visual records of past wars and emphasizes the need of preserving the chronicles made by artists of the present war. With the paintings are being shown maps and sketches made by Lee, Sherman, Grant and other distinguished soldiers.

From October 25 to January 14, the Museum will feature two exhibitions, one of Lyonel Feininger's work, the other of Marsden Hartley's. From November 29 to March 4 an exhibition on the Problems of Clothing will be presented. Its purpose will be to focus impersonal attention in a way that will bring about some realization of the fact that certain conventions are useless, impractical, irrational and harmful. It is further intended to demonstrate that dress is undergoing changes due to the present war and that by understanding fundamental causes intelligent change can be brought about. The exhibition will not be a display of costumes and will not offer specific dress reforms.



Toronto, Canada

London, England

Woodshed, Savannah-Dix



Grain Mill_Kessler



Ware Houses-Sterner

PORTRAIT OF AMERICA

On view at New York's Metropolitan Museum of Art through December 3 are 150 contemporary paintings in the exhibition, Portrait of America. The paintings were selected from 5,000 entries for \$11,000 in prizes offered by the Pepsi-Cola Co. Organized by Artists for Victory, Inc., the competition produced a nation-wide cross section of contemporary American painting ranging from the abstract to the academic. Any canvass reflecting a facet of our national life today was eligible. The four top prize-winning pictures were by Waldo Pierce, Philip Evergood, Louis Bosa and Joseph de Martini.

COMPETITIONS

The U. S. Plywood Corp., and Arts & Architecture Magazine are sponsoring a \$2,500 competition for the design of "America's ideal postwar small home for the average family". It is open to architects, engineers, draftsmen and students. Full particulars may be had by writing to U.S. Plywood Corp., 616 W. 46th St., New York City. The competition closes (Continued on page 214)

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These 5 advantages are proved by 30 years of service on projects and homes designed by leading architects, and identify MINWAX as the type of wood finish that will produce the better results owners are expecting in the post-war period. For further information, see SWEET'Sor write to MINWAX Company, Inc., 11 West 42nd Street, New York 18, N. Y.

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THE ARCHITECTURAL FORUM has just completed an extensive list of Dealers, Distributors and Manufacturers' Agents who are interested in adding new lines (building products, materials, specialties, household appliances, etc.). This registry is available to you on request. Personal calls or letters invited.

> George P. Shutt Advertising Manager THE ARCHITECTURAL FORUM 19 West 44th Street New York 18, New York

housands of women are WAITING FOR THE TIME WHEN THEY CAN GET St. Charles The Steel Kitchens

Increases in requests for the St. Charles book-for kitchen plans-and actual orders placed in advance, show the mounting interest in postwar St. Charles kitchens. St. Charles leadership in kitchen design and construction will be more pronounced than ever. Our new designs have many striking new improvements—nothing fantastic-but features kept practical

iences have been worked out, special

purpose units, improvements in construction, a new finish of extra luster and long-life, handsome new hardware -postwar kitchens that are delightfully efficient, yet strikingly beautiful

and durable.

Peninsular KITCHEN



One of Many Forward-Looking New Kitchens Introduced by St. Charles

An attractive feature of this kitchen is the glass sidewall made possible by placement of the sink and range work centers so as to project into the center of the room. Permits full-height cabinets against one wall, greatly adding to storage capacity, and eliminates most square corners.

The basic design is adapted to enlargement or reduction to suit the needs of any home. The cost is not out of proportion for those desiring a truly distinctive kitchen.

According to Survey of Users

A recent survey of homes and apart-

A recent survey or nomes and apart-ments equipped with St. Charles kitchens showed that 91 per cent pre-ferred kitchens of steel Of the re-

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- · New design cup rack.
- Improved cutlery tray.
- · Lid and tin file . . . and various other improvements in detail of construction.

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These are additions to the already extensive variety of standard and special units and accessories which make it possible to fit the dimensions of any room, or suit the needs and tastes of any home owner with a truly custom-built arrangement.

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kitchens snowed that 91 per cent pre-ferred kitchens of steel. Of the re-mainder, half were undecided, not having had previous experience with other meteriale. The three leading other materials. The three leading reasons given were: (1) Easy to clean (2) No warping (3) Finer appearance

These are facts to remember when inese are facts to remember when consulting with clients regarding kitchens in new or remodeled homes.

FORUM OF EVENTS

(Continued from page 210)

December 20, 1944.

The Brooklyn Daily Eagle announces a \$5,000 competition for the design of the Brooklyn War Memorial. It is open to all persons who have been legal residents of New York City since July 1, 1944. Copies of rules can be secured from Joseph A. McNamara, Secretary, Brooklyn War Memorial Board, Room 21, Borough Hall, Brooklyn 2, New York. The competition will close at noon, January 2, 1945.

COMMITTEE ON CRITICISM

The New York chapter of the AIA has formed a new committee on architectural criticism and esthetics. Arthur C. Holden, president of the chapter, commented that analytical and constructive criticism by architects of one another's work will not only be mutually beneficial, but will give the general public a better understanding of the technique of planning.

ASPHALT TILE INSTITUTE

The Asphalt Tile Institute of New York, an outgrowth of a former trade association has recently adopted a constitution



BRIGHT SPOTS

One of the highlights of the industrial picture is the speed with which American manufacturers developed adequate products when war took their vital materials and key manpower.

Take Von Duprin, for example. Using brass and bronze for interior members only, Von Duprin engineers produced an amply large and fully satisfactory line of devices, using malleable iron for all exterior parts.

In actual use these Victory model devices have proved completely safe in every emergency. They have provided the people in your buildings with constant, sure, instantaneous exit. They have done well the job for which you install any self-releasing fire and panic exit device.

They are in every way worthy of the Von Duprin name they bear.



and by-laws and laid out a constructive program for the advancement of the industry. Among its aims is the support of research work and conduct of scientific and technical investigations which may be helpful in manufacture and distribution.

APPOINTMENTS

Charles C. Wagner, architect from Brooklyn, N. Y., has been appointed to the committee on architects of the Brooklyn Modernization and Housing Committee, to function in cooperation with the Federal Housing Administration.

Creation of a new post, Director of Libraries at the Massachussetts Institute of Technology, and appointment of Professor John E. Burchard, now director of the Bemis Foundation, was announced by Dr. Karl T. Compton, president of the Institute.

AIA FELLOWSHIPS

Recently advanced to Fellows of the AIA were, Archibald Manning Brown, New York, Charles Frederick Cellarius, Cincinnati, Harold Coulson Chambers, Los Angeles, Matthew Edmunds Dunlap, Philadelphia, J. Andre Fouilhoux, New York, George Herbert Gray, New Haven, George Howe, Washington, Charles Albert Langdon, Toledo, Joseph Daniels Leland, Boston, George A. Licht, New York, Sherley Warner Morgan, Princeton, Harris Hunnewell Murdock, New York, Henry Bartol Register, Philadelphia, Winchton Leamon Risley, Los Angeles, Eliel Saarinen, Bloomfield Hills, William Lawrence Bottomley, New York, Clarence Cullimore, Bakersfield, Cal., Clair William Ditchy, Detroit, Branson Van Leer Gamber, Detroit, William Gehron, New York, Alfred Morton Gitkens, New York, Ernest A. Grunsfeld, Jr., Chicago, Hugo Franz Kuehne, Austin, Texas, Niels Hjalmar Larsen, Boston, James L. Montgomery, Charleston, W. Va., W. Oscar Mullgardt, St. Louis, Henry Carlton Newton, Los Angeles, Edmund Randolph Purves, Media, Pa., Alexander C. Robinson, III, Cleveland.

OPENING OF OFFICES

WILLIAM C. SCHNEIDER, architect announces the opening of his office at 5920 West North Ave., Milwaukee, Wis.

DAVID AYER, formerly a set designer for Paramount Pictures, announces the opening of his studio at 155 E. 54th St., New York City, where he will design interiors and furnishings.

GRUNSFELD, YERKES & KOENIG announce the opening of offices for the general practice of architecture at 520 N. Michigan Ave., Chicago 11, Ill.

(Continued on page 218)



Remodeling?

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Will the heating system be zoned?

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FORUM OF EVENTS

(Continued from page 214)

PRODUCT DESIGNERS, formerly the firm of Nichols & Palma, have opened their offices at 230 N. Michigan Ave., Chicago 1, Ill. They will specialize in product design, engineering and tooling.

ROY C. BERTELL and WILLIAM H. SHEF-FIELD, former vice presidents of the Ivel Corp., have organized the Bertell-Sheffield Co., designers and builders of industrial and educational exhibits and displays. In addition to this service, their company will specialize in the design and construction of showrooms, reception rooms, offices and stores. The offices will be at 11 W. 42nd St., New York City.

WILLIAM A. STONE announces the reopening of his office for the practice of architecture at 1507 American National Bank Building, Kalamazoo, Mich.

MARIO CORBETT, architect, has reopened his office in the Shreve Building, 210 Post St., San Francisco, Cal.

GEORGE B. ALLISON and ULYSSES FLOYD RIBLE announce the formation of a part-

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For further information write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

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nership for the practice of architecture at 650 S. Grand Ave., Los Angeles, Cal.

ANNOUNCEMENT

SKIDMORE, OWINGS & MERRILL, New York and Chicago, announce the appointment of James Waller Rogers as director, land development division.

CHANGE OF ADDRESS

ROBERT GRUEN ASSOCIATES, designers, have removed their offices to 509 Madison Ave., New York.

EATON W. TARBELL & Associates, architects and engineers, announce the removal of their offices to 84 Harlow St., Bangor, Me.

DIED

DWIGHT L. ARMSTRONG, vice president of the Armstrong Cork Co., in Lancaster, Pa. A grandson of Thomas Armstrong, founder of the company, he was a graduate of Yale University and served in the Navy during World War I.

GEORGE J. ATWELL, president of the George J. Atwell Foundation Co., in New York. From 1941 until his resignation last year he was also president of the Thompson-Starrett Co. Profoundly interested in postwar planning, Mr. Atwell was the first to advocate excavating beneath the New Jersey Palisades to house industrial plants. Coming from a man who had done the excavation work on the approaches to the Lincoln and Queens-Midtown Tunnels in New York, the plan received serious consideration. Mr. Atwell was president, director and trustee of numerous large corporations and was prominent in New York Democratic circles.

CORRECTIONS

Accidentally omitted from the October issue were the names of Dawson & Oliver, architects of the Doubleday, Doran book stores. Also omitted in the New Haven theater article was the name of Jacob Weinstein who acted as associate to architect Ben Schlanger on the project.

Architect J. R. Davidson has called our attention to the fact that the dressing room—tub compartment of the Houston Branch house in the September issue is equipped with an exhaust vent. Therefore the editorial comment regarding the possible nuisance from steam in the dressing room was unfounded.

PLANNING WITH YOU

AF-P-5

A limited supply of the ARCHITECTURAL FORUM'S postwar planning booklet *Planning With You* is still available. Copies for distribution can be obtained by sending \$10 for the first hundred, \$5 for each additional hundred.

THE EYELINE OF FIFTH AVENUE





Illustration shows the shop of Mosse Inc., 659 Fifth Avenue, New York City. Paul T. Frankl, Designer. Morris Ketchum, Jr., Associate. Anaconda Bronze Work by General Bronze Corporation, Long Island City, N.Y.

The world's most fashionable shopping district not only reflects the inherent dignity and good taste of architectural bronze—but it emphasizes the fact that this ageless metal adds distinction to displays of merchandise, that it lends a feeling of warm substance and integrity to the establishment whose front it graces.

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FOR DETAILS, CONSULT SWEET'S CATALOG OR WRITE ANDERSEN



BOOKS

(Continued from page 28)

the other hand, his thought, however visionary, remains inapplicable for its refusal to accept such vulgar powers as those of politics, finance and society.

With his unprejudiced and revealing portrait of this man who was, if not the most profound, one of the most mercurial and dynamic thinkers of his time, Mr. Boardman has rendered a service by broadening the public understanding of Geddes' influence in shaping our modern standards of sociology and planning. THE TECHNIQUE OF THE TERRAIN. By H. A. Musham. Reinhold Publishing Corp., New York. 202 pp. Illustrated. $5\frac{1}{2} \times 8$. \$3.50.

Prepared primarily for the armed forces, this compact little treatise nevertheless offers a basic introduction to the principles of map construction and interpretation valuable to draftsmen and students of architecture or engineering. It also gives sound instruction on the use of maps in the field.

Covering all phases from the rudiments of map geometry, and construction, through the measurement of distance and the study of relief, the book includes an interesting chapter on aerial



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TOPOGRAPHY OF VALLEY AND CAPE

photography and its interpretation. Here the distortion resulting from oblique shots and the problems of light and orientation are clearly explained.

It would be impossible for the contents to be more briefly and simply set forth—in fact, most readers will be surprised to find the subject so easily understood. Two useful but highly specialized chapters on tactical topography and military geography notwithstanding, the book contains a quantity of interesting information.

A HANDBOOK OF MAP SYMBOLS. Published by the Department of Commerce, State of New York. Albany, N. Y. 29 pp. Illustrated

This pamphlet was compiled to serve as a reference list of essential symbols needed as designations on maps of zoning and land use, population density, transportation routes, etc. Selection of the symbols was made largely from the standard map symbols in universal use on the basis of their popularity and satisfactory representation of cartographical meaning. No explanatory text is included or required. The grouping of symbols is well organized and indexed and the pamphlet would be a useful reference in any architectural or planning office.

INSULATION AND YOUR HOME. Edited by Arthur McK. Stires. Published by The National Mineral Wool Association, New York. 23 pp. Illustrated. \$.25.

There is probably no one better qualified to explain to the public the application and relative qualities of various building materials than the manufacturers. So far, however, they have tended to rely on architects and contractors to put the advantages of their products across to the layman. Realizing the importance of public appreciation, the National Mineral Wool Association has at last broken rank and come out with a clever little book explaining the why when, where and how much of insulation Intended for any individual who owns.

(Continued on page 226)



THESE APARTMENTS ARE EQUIPPED with HONEYVELL Personalized HEATING CONTROLS

Yes, the "No Vacancy" sign is destined for a long run on these apartment buildings now being constructed just outside Cleveland. Tenants will clamor for an apartment with Personalized Heating Control, where they can select or regulate temperature to their own satisfaction, whether it be 68° or 75°. This has been proved wherever Personalized Apartment Heating Control has been installed—and by nationwide surveys where

tenants state they would be very willing to pay additional rent for this healthful comfort privilege. If you are not already familiar, investigate Personalized Apartment Heating Control. Your clients will welcome the opportunity to include it, because it saves fuel as well as rents apartments. Minneapolis-Honeywell Regulator Company, 2740 Fourth Avenue South, Minneapolis 8, Minn. Branches and distributing offices in all principal cities.

EMS

EA

ev

CONTROL SYS

Mul, Cellular Glass Insulation...

VAPOR-PROOF WATER-PROOF FIREPROOF PERMANENT

PC Foamglas for floors

composed of tiny sealed cells of ageless glass, helps to control temperature and humidity, to prevent condensation. It is impervious to most elements which cause deterioration in other insulating materials. It does not crush or pack down.

• The performance of PC Foamglas in a wide variety of industrial plants has proved that this new material provides efficient insulation—permanently. Remains uncrushed under floor loads far above normal. Reduces maintenance, repairs and replacement costs.

PC Foamglas comes in 12 by 18

inch blocks-2, 3, 4, 41/2 and 6 inches thick-packed in convenient containers. When necessary it can be shaped and cut to fit, right on the job with ordinary tools. It is widely used also in ductwork and core walls and on roofs, in all sorts of plants.

When you are facing floor insula-

tion problems, our specialists will be glad to consult with you, to suggest the installation of PC Foamglas best suited to meet the conditions. Also, we have published a new folder, "PC Foamglas Insulation for Floors." Just fill in and mail the convenient coupon and your *free* copy will be sent to you promptly.



MAIL COUPON TODAY

2373-4 Grant Bldg., Pitts	sburgh 19, Pa.
Please send along my your new booklet on Insulation.	free copy of PC Foamglas
Name	
Address	
City	State



Stock Douglas Fir Interior Doors are now available with these precision features. Savings on the job more than offset the slight additional cost.



FACTRI-FIT doors are pre-fit at the mill trimmed to exact size, ready to hang without sawing or fitting.



FACTRI-FIT doors may be ordered completely machined at your option —gained, bored or mor-tised by high-speed pre-cision tools.



FACTRI-FIT doors 'like all Douglas Fir Doors' are edge grade-marked for ease in ordering, specify-ing and supplying.



FACTRI-FIT doors are scuff-stripped to protect the precision-cut corners during handling and ship-

New Factri-Fit Features Mean a Better Building Job for Your Client

For Door For Jications Specifications

When you specify Douglas Fir Interior Doors "FACTRI-FIT," your client receives several distinct advantages. Because these fine doors are pre-fit, time and labor costs are reduced and construction speeded. The danger of misfitting and the possibility of a door being scarred by on-the-job cutting are largely eliminated. And the fact that Douglas Fir Doors are offered in basic, allpurpose, 3-panel designs assures your client a door that is beautiful as well as durable. For these basic designs are adaptable to all types of building and are in line with modern architectural trends.

In your post-war planning, make full use of the advantages offered by these new FACTRI-FIT Douglas Fir Interior Doors.



Now Available Only for Essential Building, Douglas Fir Doors Will Be Ready Again When War Needs

Lessen.

WRITE FOR CATALOG SHOWING THE COMPLETE LINE OF DOUGLAS FIR IN-TERIOR DOORS, TRU-FIT ENTRANCE DOORS, AND NEW SPECIALTY ITEMS.

BOOKS

(Continued from page 222)

buys or builds a home, indoor temperature control and fuel economy are simply explained by paralelling them to the temperature and functioning of the human body. The technical aspects of heat loss through conduction, convection and radiation suddenly become very untechnical and readable. Various types of insulation are explained and an ingenious graph provided for measuring the comfort and efficiency of different types of insulated construction. The book is il-



COLD WALLS CAN CREATE DRAFTS

lustrated with attractive pen and ink drawings and well laid out. Aside from



Improved Appearance FOLLANSBEE seamless terne roll roofing

No cross seams mar the smart appearance of a Follansbee Seamless Terne Roof-because this modern version of the time-tested terne plate is made in 50 and 100 foot rolls. The clean, unbroken lines further enhance the beauty of standing vertical seams, which lend themselves so well to a variety of architectural designs. And, of course, a Follansbee Seamless roof can be painted any color to complement others used on the building exterior.

The elimination of cross seams enables Follansbee to offer

FOUR EXCLUSIVE FEATURES:

- 1. Greater ease of handling 2. Savings in time and materials
- 3. Greater durability, less maintenance 4. Smooth, improved appearance

Send for complete data for use in preparing specifications.



FOLLANSBEE STEEL COPORATION

GENERAL OFFICES ' PITTSBURGH 30, PA. Sales Offices — New York, Philadelphia, Rochester, Cleveland, Detroit, Milwaukee. Sales Agents — Chicago, Indianapolis, St. Louis, Nashville, Los Angeles, San Francisco, Seattle; Toronto and Montreal, Canada. Plants-Follansbee, W. Va. and Toronto, Ohio ALLOY BLOOMS & BILLETS, SHEETS & STRIP . COLD ROLLED CARBON SHEETS & STRIP FOLISHED BLUE SHEETS . ELECTRICAL SHEETS & STRIP . SEAMLESS TERNE ROLL ROOFING



LATH - MARKS FROM COLD ATTICS

its value in educating the public, it can save the harassed architect or builder precious hours he usually spends struggling to give a popularized explanation of a technical subject.

THE BOUNTIFUL COW. By Helen and Michael Czaja. Henry Holt & Co., New York. 52 pp. Illustrated. 10 x 81/2. \$1.50.

Architect Michael Czaja's illustrations for his wife's story, the bovine biography of Bug-Eye, the Bucks County Cow, have a humorous appeal which will melt the oldest reader as well as the juvenile audience for whom it was intended. Despite her soulful eyes, Bug-Eye had a faint heart and came perilously near to letting down the owner of the dairy farm. Pulled together in the nick of



Bug-eye, Chezelle

time, she makes her exit in a blaze of glory that would do credit to Elsie, the Borden beauty. The book is extraordinarily well designed and it is the bet of this reviewer that most copies will sooner or later be pilfered from the nursery to adorn the bookshelves of the family library.

THE AMERICAN SCHOOL AND UNIVERSITY -1944. The American School Publishing Corp., New York. 440 pp. Illustrated. 8 x 11. \$2.50.

The 1944 edition of this reliable annual maintains the high standard that it achieved in recent years. There are, as usual, some excellent articles by outstanding architects and educators. Of particular interest is a rather lengthy one by Leonard Power on Lessons from the Lanham Act for school plant design and construction.

ON GUARD, Rain or Shine, in the <u>WAR AGAINST</u> <u>WEATHER</u>!

Many of America's earliest structures are still standing today – landmarks to the simple honesty with which they were built and to the wisdom that dictated regular painting with pure white lead.

Year in, year out ... through countless nights of rain and sleet, endless days of cold and heat ... they've fought off the worst that three centuries of weather could offer.

And Dutch Boy White Lead, inheritor of this proud standard, has carried it forward through peace and war for many a decade.

No wonder America's architects, guardians of the Nation's building traditions, recognize in the Dutch Boy an ally who serves under their banner.

The Boy in the Blue overalls sticks to his post through thick and thin. His gleaming armor doesn't crack and scale ... saves burning and scraping at repaint time.

These days Dutch Boy is helping the architect see yesterday's property safely through. When tomorrow's buildings come off the board it will, as always, be his *First* choice for making things *LAST*."

Today, Dutch Boy is available not only in the long-familiar Paste form but also as the new ready-to-use Dutch Boy Pure White Lead Paint. This comes in two special forms: (1) Exterior Primer for a first coat with extra sealing and hiding power and (2) Outside White for an unusually durable finishing coat or for general painting. Together they set a standard for two-coat protection even on new wood!



PASTE OR PAINT

Specify DUTCH BOY PURE WHITE LEAD

NATIONAL LEAD COMPANY-New York, Buffalo, Chicago, Cincinnati, Cleveland, St. Louis, San Francisco; Boston (National-Boston Lead Co.); Pittsburgh (National Lead & Oli Co. of Penna.); Philadelphia (John T, Lewis & Bros. Co.)



SPECIFICATION:

Client to rearrange partitions and electrical outlets after occupancy.



Q-Floors enable you to assure clients that electrical outlets, lights and partitions can be easily relocated as often as changing conditions dictate.

From the architect's point of view, this avoids some of the worst headaches in the business.

Q-Floors are constructed so that an electrician can drill anywhere, anytime and set up electrical outlets six inches apart. A new outlet takes only a few minutes, requires no trenches, no muss or fuss.

A building with Q-Floors is ready for any electrical emergency the day it is completed and as long as it lasts. Floor plans remain



fluid. Changes can be made *quick*. Q-Floors help keep a building in pace with increasing mechanical demands.

Structurally, Q-Floors have advantages, too.

No wet materials hold up progress; no shoring, no forms. Two men can lay 32 square feet of Q-Floor in thirty seconds. The installation is quiet, clean, fireproof. The Q-Floor immediately becomes a working platform for all other trades. The floors can be completed almost as soon as the structural frame, which, incidentally can be lighter, because Q-Floors are light in weight. All these factors contribute to reducing building time from 20 to 30%.

And there are still other favorable factors —cost for one. Despite the immediate and continued advantages of Q-Floor, cost stacks up well with "average appropriation". For detailed information write for Q-Floor literature, or a Robertson representative will gladly call on you. Electrical Fittings for use with Robertson Q-Floors are available through General Electric construction materials distributors.

BUILDING REPORTER

(Continued from page 16)

PLASTIC SCREEN CLOTH for postwar use.

Name: Lumite.

Features: Lumite, a plastic insect screen cloth, used extensively by the armed forces, can withstand extreme weather changes and is impervious to rust and corrosion. Woven of Saran, a plastic developed from brine and petroleum, it possesses the tensile strength and durability of metal, yet is light in weight, flexible and easy to handle. Acid fumes, salt air, rain, snow or fog do not affect this material. Tested under every conceivable climatic condition by use with the armed forces, this product offers proven advantages for postwar building. *Manufacturer:* Chicopee Mfg. Corp., 40 Worth St., New York 13, N. Y.

ORGANIC CEMENT offers wide range of new products.

Name: Pliobond.

Features: Pliobond, an organic cement, has been used in aircraft fuel tanks and elsewhere to seal the joints in metal motor cases, preventing gasoline or other fluids from seeping in. It has also been used to bond synthetic rubber to metal and bands of rubber to glass, ceramics



High Efficiency CONSTRUCTION that is ATTRACTIVELY DESIGNED

Pella's prefabricated stock size units have created this attractive corner window grouping. Pella's rigid rust-proofed steel frame fits neatly with the small *prefabricated* Pella corner mullion. It is window efficiency plus time saving construction. Windows of tomorrow demand larger light areas, increased efficiency and advanced design. Pella stock size units are right in step with a wide selection of sizes and light arrangements.

ofree FILE FOR ARCHITECTS

Casement Units for all types of installations. Come in handy A.I.A. File Folder. Send for your FREE set today! Write:

22 loose pages of scaled details on Pella

BOLSCHEEN COMPANY, Dept. 2114, PELLA, IOWA,



ROLSCREENS—the original roller-type inside screens. The ultimate in screen efficiency and convenience.



DUAL GLAZING—a single panel type that mounts on inside of sash. Inconspicuous. Easily removed for cleaning.



or metal, thus providing a flexible seal against water and moisture vapor seepage. This material can attach sheet rubber to vitrified abrasive wheels, in this way eliminating vibration and noise. Other uses include adhering wood and plastics to metal, canvas to plastics, rubber to leather, paper to leather, canvas and other fabrics to metal and felt to cardboard.

Manufacturer: Goodyear Tire & Rubber Co., Akron, Ohio.

TIME SWITCH for 7 day automatic operation.

Name: Paragon 700 Series Time Switch. Features: This 7 day calendar, dial time



switch, has been successfully developed for timing automatic heat, ventilating, lighting, pumping or flushing operations. It is equipped with a 6 in. calendar dial which makes one complete revolution every 7 days, allowing settings in advance Dial

to be made a week in advance. Dial trippers can be independently set for different daily on and off schedules, and any day's operations may be omitted entirely on a pre-set program. Operations can be set as close as three hours apart and can be separately adjusted throughout each 24 hr. day in the week. *Manufacturer:* Paragon Electric Co., 39 West Van Buren St., Chicago 5, Ill.

SLIDE RULE & DECIMAL POINT LOCATOR solves decimal point placement in slide rule calculation.

Features: This device enables persons with limited mathematical background to determine the decimal point mechanically in involved expressions with results up to 19 digits or zero. A novel scale arrangement gives 30 in. scale accuracy for cube root and 20 in. scale accuracy for square root. With one setting of the hairline, the computer is able to read square root, cube root and logarithm. One setting of the hairline also determines the decimal point location for square root and cube root. An instruction manual written by Prof. M. L. Hartung is available with this calculator. Manufacturer: Pickett & Eckel, 53 West Jackson Blvd., Chicago 4, Ill.

(Continued on page 234)

CHANGING the PLANT LAYOUT?

IF BUSDUCT distribution for light and power is already installed, it will be a simple matter to adjust it to new requirements. It is practically 100% recoverable.

PLUGIN DEVICES

111111

The Plugin Devices can be arranged to go on either or both sides of the Plugin Busduct, and each Plugin device is supported by independent fastenings. All Plugin Devices are equipped with proper capacity of rugged compression type bus bar connectors. They are made in three types. See illustrations below:



Or, consider the conveniences and economies of this modern system in new planning ... Feeder @ Busduct is ideal for large capacity connections between generators (or transformer station) and main switchboard, and between the latter and the feeder distribution system to the various parts of the building ... Plugin @ Busduct affords great flexibility for machine layout. The plugin outlets spaced on 12-inch centers, make it possible to locate machines at any desired position, and to plug in quickly at the most convenient outlet - with minimum loss of production hours ... Both Feeder and Plugin types are made in standard 10-foot sections. Suitable

elbows, tees, cross connections, intermediate feed-in and feed-out boxes, end closures with surge discharge protectors, and reducing capacity sections, make it possible to fit () Busduct to any desired arrangement. It is adaptable to any required position or location... Extensions may be made readily to existing systems, without disturbing them, and at minimum labor cost... Installation of () Busduct is economical for small plants, as well as large.

Designed for 2, 3 and 4-wire feeder systems; 250 volt DC, 575 volt AC, maximum. Capacities in accordance with Limitation Order L-273.

Write for Bulletin 65

Also for name and address of nearest @ Sales-Engineer. Whether revamping the distribution system, or installing a new one, his long experience will be helpful to you ... Frank Adam Electric Co., Box 357, St. Louis 3, Mo.

Frank Adam ELECTRIC COMPANY ST. LOUIS

How Will the Increasing Demand for "Shower Bathing" Influence Your New Building Plans?

Bathe-Rite SHOWER CABINETS

TODAY'S QUALITY STANDARD

With over 100,000 Bathe-Rite Shower Cabinets already in use in homes and military bases all over the world, the popularity of shower bathing is more than a trend. It's a growing demand-factor to be considered in every new-home plan and specification.

BATHE-RITE SHOWER CABINETS have set the quality standard today in prefabricated shower facilities. By any standard of comparison they prove the finest that can be built today. And you may depend on Bathe-Rite designers and engineers to offer you the kind of showers that will fit into your proudest plans for future building.

We invite your inquiry, suggestions and comments.

MILWAUKEE STAMPING CO. 827-5 SOUTH 72nd STREET • MILWAUKEE 14, WIS. SIX STEPS OF PROTECTION IN THE PUBLIC INTEREST ,...(4th of a Series)

> PLANT No.6

He has traveled hundreds of miles to protect a nation's homes

This technician has traveled hundreds of miles in the public interest. Employed by NDMA, he has inspected toxic treating equipment and practices in use by licensees throughout the country. He renders a service designed for the greater protection of all who specify, use or buy wood products such as windows, screens, shutters, storm sash, doors and frames.

Toxic preservation provides greater endurance for wood under severe demands of modern construction. And the minimum toxic preservative treatment standards and testing methods set up by NDMA help to assure the public that wood—always foremost as a building material—will continue to provide outstanding value in the homes of tomorrow.

The NDMA Seal of Approval—available by license to all manufacturers and distributors who conform to the toxic preservative standards of the NDMA—represents these six steps of protection:

- An efficient test for measuring effectiveness of toxic preservatives
- 2. Minimum standards governing the toxic preservative treating of woodwork products
- A seal identifying products treated in conformity with NDMA Toxic Preservative Standards
- **4.** Mill inspection of treating equipment and practices
- 5. Laboratory check-tests of preservative solutions
- 6. Educational effort in the public interest

NATIONAL DOOR MANUFACTURERS' ASSOCIATION McCORMICK BUILDING - CHICAGO, ILLINOIS

LICENSE

NO. PROVED DOOR MFRS. ASSN. NATL.

TOXIC-PRESERVATION

Was the roof of tomorrow here yesterday?



A KOPPERS ROOF can look to its PRESENT and FUTURE

with equal pride

The best recommendation an architect can give his clients today is one based on the good past performance of a product, and an expectation of the same continued service in future years. Because of records made in the past by Koppers Roofs of Old Style Pitch and Approved Tarred Felt, designers are specifying these materials for modern roofs.

And the roofs of tomorrow will be made of the same dependable, low-maintenance materials, giving the same

> Refer to your Sweet's Catalog or write us for complete specifications

performance that will make records in the future. Specify Koppers Roofs of Old Style Pitch and Approved Tarred Felt.—Koppers Company, Tar and Chemical Division, Pittsburgh 19, Pa.

KOPPERS coal tar built-up roofing KOPPERS coal tar membrane waterproofing

BUILDING REPORTER

(Continued from page 230)

PENETRATING SEALER eliminates dusting and cracking of cement floors.

Name: Synkrete.

Features: Synkrete, a penetrating sealer, is useful in preventing concrete floors from dusting, crumbling and cracking. This liquid which seeps into the pores of the cement, reacts chemically to form a water-insoluble, rock-like mass that fills the pores and reinforces the binder. With this treatment crumbling, cracking and dusting are prevented, floors are harder and more resistant to traffic, and are easier to maintain. By closing the pores of cement, Synkrete also creates a firm base for painting. Saturation can be accomplished with any type of applicator and one gallon of the liquid diluted with three parts of water will treat a basement area of 800 sq. ft. One coat allays dusting, two or three provide permanent control. Almost colorless, the liquid does not affect floor appearance. *Manufacturer:* Synthex Products Co., 2 West 45th St., New York 19, N. Y.

DRAWING INSTRUMENTS for accurate perspective drawings.

Name: Truper Instruments.

MR. ARCHITECT POSTWAR STYLE

One of the most perplexing problems facing postwar-planning architects and engineers is *how to reduce costs* — and still maintain high standards of operating efficiency.

Reduced costs come from little economies piled one upon another. From the best use of materials and the use of the best materials — from efficiency of design and execution.

As one of the big, little economies much thought should be given to problems of proper vertical transportation. Consider Sedgwick Elevators and Dumb Waiters, for example.

For more than 50 years Sedgwick has designed, manufactured and installed elevators and dumb waiters in factories, hotels, hospitals, schools, restaurants, stores, libraries, churches, private residences and commercial offices, as well as institutional and public buildings—drawing on each preceding year's experience to improve succeeding models.

Added to past experience, the lessons learned in wartime manufacturing will take form in improvements in design, construction and performance of Sedgwick's postwar elevators and dumb waiters.

Sedgwick experience plus Sedgwick engineering "know how" can help solve at least part of your cost reduction problems by moving men, material and merchandise better and faster.

Sedgwick welcomes inquiries regarding elevators, dumb waiters and special lifts for postwar installation.

N.B.—The Sedgwick line of elevators and dwmb waiters includes hand power dumb waiters—freight, sidewalk, residence and hospital elevators, as well as a complete line of electric elevators, dumb waiters and special lifts.

"MEN WHO KNOW ARE SOLD ON SEDGWICK"



Since 1893 designers and manufacturers of specialized lifting equipment ELEVATORS • HOISTS ROTO-WAITERS • MATERIALS HANDLING EQUIPMENT



Features: This line of drawing instruments includes perspective graphs, circles and scales, which aid the draftsman in presenting his subject as it actually appears to the eye. The wide variety of perspective graphs permits the artist to show his subject at any chosen angle. A set of perspective circles, not ellipses, avoid the distortion usually found where ellipses or freehand circles are used. Perspective scales show diminishing units of measurement as they recede toward the vanishing point at the designated angles. In each case lines are located mathematically to insure accuracy at any scale, angle or visual distance. Manufacturer: Chas. W. Downs & Son Co., 2280 14th St., Detroit 16, Mich.

SOD resists droughts, weeds and insects. *Name*: Flawn.

Features: Flawn is a semi-tropical sod, that thrives in hot weather and does not appeal to chinch bugs or Japanese beetles. To date none of the fungus diseases that attack grasses have bothered it. It is planted from sod, not seed, and spreads by extending small runners which hug the ground and put down roots every two inches or so. Flawn forms a dense, tightly-knit lawn which will withstand heavy traffic the year round. Its woody root structure crowds out weeds as the grass becomes established. Until recently Flawn has been limited to military installations and special experimental uses, but it is now available for home owners and gardeners who desire a lawn impervious to weeds, drought and insect pests.

Manufacturer: F. H. Woodruff & Sons, Inc., Milford, Conn.

PAINT for exterior masonry.

Name: Mason-Bond.

Features: This ready-mixed exterior paint simplifies and improves the method of protecting masonry surfaces exposed to weather. It goes equally well over damp or dry masonry, adheres excellently to smooth or rough surfaces and is resistant to lime and alkali.

Manufacturer: The Wilbur & Williams Co., Park Square Bldg., Boston 16, Mass. (Continued on page 238)

THE WALLS OF TOMORROW'S HOMES MUST DO MUCH MORE THAN INSULATE

Naturally, insulation is a "must" in modern homes. But the walls of tomorrow's homes must do more than insulate.

Because of modern methods of heat control and air-conditioning, the walls of tomorrow's homes must be so constructed as to *reduce moisture conden*-

sation to a minimum—or watch out for serious trouble.

When you specify the Approved Insulite Wall of Protection, here's what it provides: Double Insulation, plus Superior Bracing Strength, plus Protection Against Moisture Condensation Within The Walls.

Study the drawings to the right. They explain why the Approved Insulite Wall of Protection does both jobs, and does them efficiently.

Eminent scientific authorities substantiate these statements. Send today for free "Scientific Facts" booklet, which tells the complete story.

> INSULITE MINNEAPOLIS 2, MINNESOTA



OUTSIDE THE STUDS, Insulite Bildrite Insulating Sheathing. The large boards provide a wind-proofed, weather-tight wall, Bildrite Sheathing provides a bracing strength four times that of wood sheathing horizontally applied. INSIDE THE STUDS, Sealed Lok-Joint Lath, furnishes a second wall of insulation. The patented "Lok-Joint" provides a strong, rigid plattering surface, prevents joints from opening under trowel pressure.

Structural Insulation

DING

How moisture condensation is effectively minimized in the Approved Insulite Wall of Protection. Sealed Lok-Joint Lath, with asphalt barrier against the studs, effectively retards vapor travel. Bildrite Sheathing, being permeable to vapor, permits what little vapor escapes to pass naturally towards the outside.

MADE EXCLUSIVELY FROM WOOD

235

Wall Marks of Quality

THE OWN ADDRAFT SCOPELY CO

There are no finer finishing limes than the original "Ohio White Finish" and its famous twin "Hawk Spread." Made from rock quarried from the heart of the world's purest deposit of dolomitic limestone, both are always fresh—make a pure white easy working putty—spread far.

For the protection of architects, dealers and plasterers, both brands are always packed in bags marked with distinctive Red Zig Zag Stripes.

> For literature describing our complete line of Ohio lime products, write to:

The Ohio Hydrate & Supply Co. Woodville, Ohio





Roper "AMERICA'S FINEST GAS RANGE"

• Superlative functional design, combining distinctive styling with outstanding performance . . . that will be the test of equipment in post-war kitchens.

Specify Roper gas ranges for your most critical clients. Improvements that will arrive with the peace will bring ROPER even greater popularity.

GEO. D. ROPER CORPORATION, Rockford, Illinois, manufacturer of ROPER, "America's Finest Gas Range," for all gases including L.P. (Liquefied Petroleum) gas.



SPECIFY WAR BONDS NOW . A ROPER () GAS RANGE LATER

THE Modern METHOD OF JOINING COPPER AND BRASS PIP

Where leaks would mean expensive repairs





valves and fittings are joint-insurance

HEREVER you use copper and brass pipe - and especially in public buildings where leaks would be unusually troublesome and costly to repair - be sure to specify Silbraz * joints made with Walseal valves, fittings and flanges. Silbraz joints provide positive protection against leaks because they actually

become part of the pipe - make it literally into a "one-piece" line. These modern threadless, silver-brazed joints will not creep or pull apart under any pressure, shock or corrosive action that the pipe itself can withstand.

That's the reason why Silbraz joints and Walseal products were specified for the hot water generating plant of the modern high school building shown above. And here, as in thousands of similar installations, Walseal products and Silbraz joints have proved beyond question their ability to provide reliable, leak-proof service, and eliminate maintenance and repairs.

Walseal bronze valves, fittings and flanges are patented products of the Walworth Company, makers of valves and fittings for over a century.

A "ONE-PIECE PIPE LINE" WITH

VALWORTH

valves AND fittings

60 EAST 42nd ST., NEW YORK 17, N.Y.

* Registered trade marks

BOSTON WORKS

KEWANEE WORKS





Even in close quarters, Walseal valves and fittings are easily installed.



THROUGHOUT

For complete information on Walseal valves, fittings and flanges - as well as detailed description of Walworth's complete line of valves and fittings - write for a free copy of Catalog 42.

THE

WORLD DISTRIBUTORS PRINCIPAL CENTERS IN

BUILDING REPORTER

(Continued from page 234)

INDUSTRIAL FLUORESCENT FIXTURES newly designed for immediate use.

Names: Spero LVR-448, Maze-Lite, Mitchelite.

Features: High efficiency, modern design, minimum glare and low maintenance costs are combined in the Spero LVR-448. Four 40 w. tubes are shielded by evenly spaced egg-crate louvers, which minimize glare. Reflecting surfaces, finished in "Plastox," are arranged to eliminate trapped light re-



Spero LVR-448

sulting in high intensity combined with low surface brightness. Plastic side panels shield the end tubes, and louvers are hinged for easy maintenance. The



8 EXCLUSIVE FEATURES OF WHITE-RODGERS HYDRAULIC-ACTION TEMPERATURE CONTROLS

1. May be mounted at any angle or position, above, below or on level with control point.

2. Hydraulic-Action Principle incorporating solid-liquid filled bulb and capillary provides expansion force comparable to that of a metal bar.

3. Diaphragm motion uniform per degree of temperature change.

4. Power of solid-liquid charge permits unusually study switch construction resulting in positive contact closure.

5. Heavier, longer-wearing parts are possible because of unlimited power.

6. Dials are evenly and accurately calibrated over their entire range because of straight-line expansion.

7. Controls with remote bulb and capillary are not sensitive to change in room temperature. Accuracy of control is not affected by temperature changes in surrounding area.

8. Not affected by atmospheric pressure. Works accurately at sea level or in the stratosphere without compensation or adjustment.

TO MAKE DOUBLY SURE

THAT YOUR WHITE-RODGERS CONTROLS ARE CONSISTENTLY ACCURATE

Ordinarily the critical inspection of materials, parts and subassemblies, combined with the final calibration and operation tests which all White-Rodgers Controls undergo would seem ample assurance to the most exacting user.

But the White-Rodgers Engineering Department makes doubly sure that these controls are consistently accurate. Random samples are taken from each production lot before the controls reach you. These are again tested by a member of our Engineering staff under conditions simulating actual use. If the results of

these tests do not measure up to the rigid test specifications, the whole lot of controls is rechecked.

You can make doubly sure too by specifying White-Rodgers Controls today!



St. Louis, Mo.

WHITE-RODGERS ELECTRIC CO.

1292K Cass Ave.

unit is available with Spero Insta-Lite, providing instantaneous lighting, and in different designs for stem or flush mounting. For stem mounting, it is equipped with an attractive ceiling canopy. *Manufacturer:* The Spero Electric Corp., 18220 Lanken Ave., Cleveland, Ohio.



Maze-Lite

This heavy-gauge steel industrial and utility lighting fixture for use with two 40 w., three 40 w., and two 100 w. fluorescent lamps is strong, rigid and durably finished. Its reflector is available with either porcelain enamel or synthetic enamel surface, and the reflector ends are rounded for safety. The Maze-Lite can be obtained with hot cathode or cold cathode auxiliaries. Its reflector provides high light utilization with normal lamp shielding.

Manufacturer: Edwin F. Guth Co., 2615 Washington Ave., St. Louis 3, Mo.



Mitchelite

Mitchelite all-steel units are available in two 40 w., three 40 w. and two 100 w. models, with choice of openend or closed-end reflectors, in baked enamel or porcelain enamel finish. "Instant-Start" feature is available on the two 40 w. models, and accessories provide for every method of mounting or hanging, individually or in continuous rows. A new type of latch is provided for quick, easy release of reflectors without the use of tools. Power factor is over 90 per cent and stroboscopic flicker is corrected. 110-125 v., 60 cycle, AC is also available in higher voltages.

Manufacturer: Mitchell Mfg. Co., 2525 Clybourn Ave., Chicago 14, Ill.

CELLULAR RUBBER MATERIAL has excellent thermal, electrical and sound insulation qualities.

Name: Cell-Tite.

Features: Cell-Tite, an ebony-like cellular rubber material that has proven itself (Continued on page 242)

Controls for Refrigeration • Heating • Air-Conditioning

The Name HOPE'S Guarantees 1818 WINDOWS 1944



Satisfaction with a home is the sum of many little conveniences.

Graphically illustrated in the photograph is the ease and safety with which HOPE'S metal casements can be cleaned by the housewife herself.

Buyers of the homes to be built in the next few years will also value highly the maximum daylight, the enhanced view from within, and the pleasing exterior effects of metal windows.

And the selection of HOPE'S WINDOWS will assure the practical benefits of positive weather-tightness, controlled ventilation and long-life with a minimum of maintenance care.

HOPE'S WINDOWS, INC., Jamestown, N.Y. BACK THE ATTACK ** ** BUY WAR BONDS

BUILDING A NATION...

DO THE JOB RIGHT!

Engineers, architects, contractors and builders are face to face with a never-dreamed-of opportunity.

Building the world's greatest nation is going to be resumed. There's so much to be done, we can't afford the labor and materials to do any job over . . . it has to be right the first time. And whether the job's done once and for all the first time depends in a large measure on your specifications — particularly for materials.

There is one material you *can* depend upon to stay put in sewage and drainage systems . . . It's *Clay Pipe*, manufactured from nature's most enduring material!

SPECIFY CLAY PIPE! For Permanent Pipe Installations

With Lower Final Cost . . .

Clay Pipe resists acids, alkalies, industrial wastes, gases, the abrasive action of silt and gravel without decomposing, crumbling or corroding... and eliminates the need for frequent service or premature replacement. Clay Pipe can be depended upon to outlast bond issues ... to pay its own way! Specify Clay Pipe for highway, street, airport, rail-

Specify *Clay Pipe* for highway, street, airport, railway, farm and home drainage . . . for public and private sanitary sewers . . . for industrial and trade waste lines.

National Clay Pipe Manufacturers, Inc. 111 W. Washington St. • Chicago 2, Illinois

GUARANTEED FOR 50 YEARS!

National Clay Pipe Manufacturers, Inc. members back their Clay Pipe with a 50-year guarantee. No other pipe matches this guarantee of service!

YOUR LOCAL AUTHORIZED DEALER Has the material you need. He's listed in the Yellow Pages of your Telephone Directory, under "Pipe" and this trademark:

C-1044-5





• Eliminate special design and tool costs by selecting your coils from the wide range of standard sizes and models made by Young. Or take advantage of Young engineering service to obtain coils to meet your specific requirements as to size and materials (within the limits of government regulations). • Young coils embody many exclusive construction features ... are made of quality materials ... are thoroughly tested and accurately rated. • In addition to coils, Young produces many other types of heat transfer equipment. If your problem is heat transfer, consult Young engineers.

YOUNG RADIATOR COMPANY

Dept. 154-L, Racine, Wisconsin, U.S.A. Application Engineers in Principal Cities



HEAT TRANSFER ENGINEERS

Manufacturers of Oil Coolers • Gas, Gasoline, Diesel Engine Cooling Radiators • Intercoolers • Heat Exchangers • Engine Jacket Water Coolers • Unit Hearers • Convectors • Condensers • Evaporators • Air Conditioning Units • Heating Coils • Cooling Coils • and a Line of Aircraft Heat Transfer Equipment.



Education is a problem for much discussion in plans for post-war activities. Higher standards will be sought in all phases...and this means, too, higher standards in comfort and equipment. Halsey Taylor fountains have always been designed with this thought in mind...they offer the highest standards of sanitation and convenience for school installations., Patented features make them ideally health-safe and hygienic under every candition of service. Get our catalog NOWplan on the best for tomorrow!

The Halsey W. Taylor Co., Warren, Ohio

HALSEY TAYLOR Drinking Fountains

Mr. & Mrs. America

are doing their post-war planning with Weldwood!

Plywood is in the post-war plans of your clients.

Mrs. America is looking forward to that warm, livable wood room she's always wanted.

Formerly the rich beauty of wood-paneled rooms was denied her because of the high cost of materials and labor in solid wood construction.

Weldwood . . . in genuine Walnut, Ma-hogany, Weldtex,* Knotty Pine, Oak, Gum and other fine hardwoods . . . brings her dream within reach for the first time.

And for those rooms to be covered with paper or paint, inexpensive Weldwood Utility Panels with their extra-heavy hardwood faces provide an ideal undersurface free from checking or grain raise.

Mr. America is sold on appearance, too.

But the structural advantages of plywood interest him even more.

He likes the fact that, when he builds, construction time will be shortened - as much as four to six weeks.

He's sold on the fact that, with dri-wall construction instead of plaster, he eliminates the hazards of warping and swelling in sash and wood work.

Weldwood Plywood Panels are crack-proof and are guaranteed for the life of any building into which they go.

Yes, Mr. and Mrs. America are interested in Weldwood. They're learning more about it every day.

And when your specifications call for Weldwood Plywood in any form, you're giving your clients the best in what they want.

WELDWOOD Plywood

Weldwood Plywood and Plywood Products are manufactured and marketed by UNITED STATES PLYWOOD CORPORATION THE MENGEL COMPANY New York, N. Y. Louisville, Ky.

Distributing units in Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, High Point, Los Angeles, Newark, New York, Oakland, Philadelphia, Rochester, San Francisco, Seattle, Also U.S.-Mengel Plywoods, Inc., distributing units at Atlanta, Jacksonville, Louisville, Send inquiries to nearest point. Write for complete specifications on Weldwood Plywood and other Weldwood products.

Mengel Flush Door with

"Airlok" Grid Core

... Strength and beauty. The modern door for the modern home.





Plastic and Wood Welded for Good

Waterproof Weldwood, so marked, is bonded with w alerproof we eacoood is to marked, is omarked, which phenol formaldebyde synthetic resin. Other types of water-resistant Weldwood are manufactured with extended urea resins and other approved bonding agents. Back of these Weldwood Products are unatched facilities and experience in Plywood production and fabrication. Available also are the services of qualified engineers, chemists and wood technologists.

BUILDING REPORTER

(Continued from page 238)

in combat planes, is now filling many industrial needs. Its makers claim that it has the best strength-weight ratio of any synthetic material yet produced. As proof they cite its performance in propeller fairings of the P-51 Mustang, fastest airplane in existence. Made in various weights from 8 to 20 lbs. per cu. ft. the material has attributes of great strength and hardness. It has more buoyancy and lower water absorption than cork, plus excellent thermal, electrical and sound insulation qualities. Impervious to water and weather, and with high resistance to chemical attack, Cell-Tite has first-rate aging properties. It can be molded to almost any shape or form, and worked like wood.

Manufacturer: The Sponge Rubber Products Co., 144 Housatonic Ave., Derby, Conn.

PLUMBING ITEMS prevent contamination. Name: Boosey No. 2010 Vacuum Breaker, Boosey No. 2021 Fixed Air Gap.

Features: The Boosey No. 2010 Vacuum Breaker and the Boosey No. 2021 Fixed Air Gap are used with installations of



Banish odor troubles from the postwar home...

You can eliminate the disagreeable unhealthy smoke and odors of the gameroom – the greasy vapors of the kitchen – the steam of the bath – with the "spot" ventilation of Blo-Fan.

This unique and revolutionary ventilator combines the advantages of both breeze fan and blower. Its volume – plus its power – capture the unwanted air at the source and rid the room of it instantly.

The home of tomorrow will not be complete without this modern *ceiling* ventilation. It offers 100% effectiveness.

SPECIFY BLO-FAN FOR KITCHEN, BATH, GAMEROOM, LAUNDRY. See Catalog in Sweet's or Write for Details.





Boosey Vacuum Breaker

many types of hospital, industrial and laboratory equipment in eliminating cross connections between safe water supply and contaminated contents of equipment and sewer lines. The Vacuum Breaker is designed to prevent contamination by siphonage and to eliminate in terconnection between water supply lines and processing equipment where fixtures have inverted water supply. It operates without floats, checks or other moving parts, and is installed between the fixture and the water supply valve. The Fixed Air Gap eliminates interconnections between water lines and sewers, thus preventing contamination of fixtures and equipment through direct connection and water supply contamination by siphonage.

Manufacturer: Norman Boosey Mfg. Co., Div. of American Skein & Foundry Co., 420 N. La Salle St., Chicago 10, Ill.



SLIDE RULE designed for greater ease of reading.

Name: Bruning 2401.

Features: Precise graduations which are molded into and form an integral part of this smooth-working, carefully made slide rule assure good visibility throughout its use. Graduations and numerals are in red to facilitate readings. A, B, CI, C, D, K, S, L, and T scales are included on the rule to adapt it to the widest range of service. Scales on the beveled edges are shown in both inches and centimeters. Enclosed in a stainless steel frame, the glass indicator can be easily replaced if broken. This rule is not a duration substitute, but a precision instrument designed for fast easy operation.

Manufacturer: Charles Bruning Co., 102 Reade St., New York, N. Ý. (Continued on page 246)

WHY "HILLS AND VALLEYS" Are Bad News in a Paint Film . . .

WRONG: Ordinary paints dry with "hills and valleys"-better known as brush marks. In the "valleys" the paint film is thinner-more likely to break down. Not so when you paint with Pittsburgh Paints. Pittsburgh Paints are not easily marred by time.

> RIGHT: Pittsburgh Paint Film. Smooth as glass. Levels out smoothly because Pittsburgh Paint is enriched with "Vitolized Oils," assuring better paint application. Pittsburgh Paints resist heat and cold provide live-paint protection.

"HILLS AND VALLEYS" is a painter's expression for pronounced brush marks in a paint film. The upper illustration is a typical example. In the "valleys," the film thins out and is more likely to break down. This paint is due for "a short life and a sad one."

Now look at the photograph of Pittsburgh Paint. Brush marks are practically invisible. No deep valleys. Instead, a uniform film which resists cracking and peeling. The smooth leveling of Pittsburgh Paints is due to the special "Vitolized Oils" used in formulating them. These improved oils not only promote better application, but they also keep the paint film live, tough and elastic enable it to contract and expand as the temperature changes. This is known as live-paint protection and is still another reason why Pittsburgh Paints resist cracking and peeling.

In addition, many Pittsburgh Paints

TSBURGH

SBURG

PLATE

PITTSBURGH

PITTSBURGH STANDS FOR QUALITY PAINT AND GLASS

are fortified with special molecularselection oils, which vastly improve the drying qualities and make it possible for Pittsburgh to control uniformity of paint performance.

Thanks to these oil developments, Pittsburgh technicians are able to "build" paints that have every desirable quality architects look for. For paint jobs that reflect credit on your professional judgment, specify Pittsburgh Paints.

COMPANY

GLASS

If it's BRIGGSit has these essential features



it's safe

Briggs engineers designed and produced the only real Safety Bottom Bathtubs . . . a maximum area of level bottom, serpentine embossed for safety. This non-slip tread is an exclusive, patented Briggs safety feature. Wide rim seat, low sides and convenient hand-grip are other safety features pioneered by Briggs.



it fits — Exactness of dimensions in plumbing fixtures is required today if full advantage of mass production principles in the building industry is to be realized. Briggs Beautyware fixtures meet this requirement because they are die-formed and are engineered to permit easy installation . . . keep construction costs down.



it's leakproof — Leaks along the built-in edges of bathtubs are a problem familiar to every builder. Briggs solved this problem with a one inch integral lip flange which provides a perfect flashing — a permanent water seal — tub to walls.



unnecessary weight

is eliminated — Briggs Beautyware Formed Metal Plumbing Fixtures — one-third the weight of their old-fashioned predecessors — are typical examples of how reduction in weight goes hand in hand with increased utility and beauty.

Copyright 1944 BRIGGS MANUFACTURING COMPANY

NRC Y



Sandstone Sea Green Light Sky Blue Light Tuory Butter Yellow White



T

11,

MICHIGAN

it's

smartly styled

Modern and pleasing in appearance, each Briggs Beautyware fixture is designed to give the fullest utility and convenience. A Briggs bathroom is a room of beauty, an enhancement to the charm of the home.

it's colorful - Briggs took the lead in popularizing the use of colored fixtures and has made it possible for home owners with even the most modest budget to enjoy their advantages. Color in a variety of pleasing pastels blends tastefully with the most distinctive wall and floor treatments, and lends a homelike warmth to the room.

it's acid resisting - Briggs Beautyware Fixtures are of one qualitythe highest - acid resisting porcelain enamel . . . easy to clean and easy to keep clean . . . and at no extra cost. Acid resisting enamel preserves original fixture beauty and protects it from the etching and surface staining common to regular enameled fixtures.



DETR

BUILDING REPORTER

(Continued from page 242)

COATING RESIN extends oil quotas. Name: Duraplex AL-210.

Features: This low cost resin, a binding medium for air-drying paints and enamels, contains only 50 per cent reportable oil. It produces coatings that are flexible and possess good adhesive and wearing qualities. Supplied as a dark colored, viscous liquid which pours slowly at room temperature, the resin is designed for use in protective paints for freight cars and structural steel, for aluminum paints, red lead primers, and all kinds of industrial maintenance. Manufacturer: Resinous Products & Chemical Co., 222 W. Washington Sq., Philadelphia, Pa.

CLOTHES DRYER for postwar use. Name: Hamilton Automatic Clothes Drver.

Features: This automatic clothes dryer eliminates the drudgery of hanging out wet clothes on the line, and protects them from soot, smokes, sudden showers or snow-hazards of outdoor drying. A gentle tumbling action in clean warm air damp-dries a washer load in 15 to 25



1 HARDNESS deposits scale in heating coils and pipelines (as shown in the photograph above), ruins plumbing, wastes fuel. Hard water clogs washing machines and other appliances with sticky soap curd. It makes drudgery out of housework.

- **IRON** stains porcelain, plumbing fixtures and linens, deposits an insoluble red soap curd.
- B DIRT in water is unsightly as well as unsanitary.
 - BAD TASTE and ODOR make water unpalatable and unpleasant to use.
- G CORROSION damages pipe-lines and appliances. * * *

Permutit* Home Water Conditioners prevent all these troubles, make water soft, clear, iron-free. Write for full information to The Permutit Co., Dept. AF, 330 West 42nd St., New York 18, N.Y. *Trademark Reg. U. S. Pat. Off.



PERMUTIT The home appliance that turns hard water into SOFT WATER!



minutes, with complete drying taking slightly longer. Constructed of steel with white dulux enamel finish, the dryer is well insulated, requires no lubrication and operates quietly at low cost. A switch starts the drying operation and an automatic thermostat shuts off the heating element thus eliminating damage to clothes. The maximum washer load is 9 lbs. of dry clothes and 18 lbs. of wet clothes. This appliance will be available in both electric and gas models, 39 in. high, 31 in. wide, and 25 in. deep.

Manufacturer: Hamilton Mfg. Co., Two Rivers, Wis.

CIRCUIT BREAKER permits lighter panel construction.

Name: De-ion Circuit Breaker.

Features: The newly designed "De-ion" circuit breaker requires less space and makes possible lighter structures for distribution panelboards, built-in applications and bus duct plug-ins. All ratings are available in one compact breaker with uniform pole spacings and terminal arrangement, providing complete interchangeability between ratings. The new F Frame permits a 100 amp., 600 v. AC or 250 v. DC breaker in the space formerly required by the 50 amp., 600 v. AC or 250 v. DC ratings. Both two and three-pole units are available.

Manufacturer: Westinghouse Electric & Mfg. Co., P.O. Box 686, Pittsburgh, Pa.

SYNTHETIC RUBBER CEMENT without priority.

Features: This synthetic rubber cement meets most of the essential requirements of a good cement and is available without restriction. An excellent adherent, it is transparent, does not smear ink, and will not curl or wrinkle the flimsiest tissues. It is popular with the graphic arts industries for mounting papers, drawings, etc., and is available from desk bottles to gallon can containers. Manufacturer: Craftint Mfg. Co., 210 St. Clair Ave., N.W., Cleveland, Ohio.

(Technical Literature, page 250)




... Ever Hear of a "Wall Welder"?



SHEETROCK Fireproof WALL AND CEILING PANELS









What in the world is a "wall welder"? Instead of welding ships' hulls, he welds walls...Sheetrock* walls and ceilings. First the Sheetrock is

applied in big panels...

they go up on the "double quick" with speed and ease that saves time and money in building. Then the "wall welding" begins. With the simplified Perf-A-Tape* System of joint concealment almost anybody now can qualify for the job.

A few deft touches—like a "disappearing act" the joints are cleverly concealed—in their place are smooth sweeping surfaces—stronger at the "weld" than the Sheetrock panels themselves ... and that's that.

The results also are a real revelation in converting old rooms into smooth, smart interiors right over the old surfaces. New Sheetrock interiors are quickly and easily built with walls and ceilings that "stay young."

These and other Sheetrock developments are due to U·S·G research—always probing new possibilities—proving new products and processes to meet every modern need for better, stronger fire-armored walls and ceilings. For Sheetrock has a name to maintain—the best known name in gypsum wallboard. *Trademarks Reg. U. S. Pat. Off.

UNITED STATES GYPSUM

Manufacturers of Building and Industrial Products Since 1901 PSUM • LIME • STEEL • INSULATION • ROOFING • PAINT

TECHNICAL LITERATURE

ALUMINUM TRIM. Chromtrim, 16 pp., 4x9. This illustrated brochure describes Chromtrim, an aluminum trim with a hard surface and a soft lustrous finish. This material will bend, fabricate, is long lasting and easy to keep clean. Twenty-seven profiles, the first shapes to be released, are illustrated and include counter edgings, straight face nosings, drip-proof nosings, edgings, coves, insert type nosings, cap sections, but edgings, and stair nosings. Also included is a list of stock sizes of Chromtrim welded pre-formed sink-well frames, data on application of mouldings, methods of bending or forming turns, information on how to order, packing and prices. R. D. Werner Co., Inc., 295 5th Ave., New York 16, N. Y. HEAT CONTROL. Save More Fuel. Change the

HEAT CONTROL. Save More Fuel, Change the Size of the Heating System to Fit the Weather With the Johnson Electronic Duo-Stat: Johnson Electronic Duo-Stat Technical and Installation Data, 10 pp., 14 pp., 8½x11. General features and advantages of the Johnson Electronic Duo-Stat, a precision, weather-compensated heat regu-lator, are presented in the first booklet. Diagrams

illustrate the Duo-Stat system as applied to con-ventional heating systems and to zoning. Duo-Stats, outdoor bulbs, valves and other auxiliary equipment are illustrated and described. The second booklet, a technical manual, gives com-plete specifications, operating principle and in-stallation details for the Duo-Stat heat regulator. Johnson Service Co., 507 E. Michigan St., Mil-waukee 2, Wis.

waukee 2, Wis. LIGHTING. Light for the Postwar Food Store, Lighting Goes Dramatic for the Postwar Drug-store, Lighting to Invite more Customers to Postwar Department Stores, 10 pp., 8½x11. Postwar store lighting design projects executed by well-known architects, and utilizing many recent developments in light sources and dis-play techniques are presented in these three at-tractive booklets. The food store is by Morris Sanders, the drug store by Gordon Lippincott, and the department store by Egmont Arens. All comprise an extensive study in lighting for mer-chandising problems. Suggested floor plans, store layouts, and new lighting fixtures are attrac-tively illustrated, and discussed in the lighting



PREFABRICATED ready to install



Prefabricated elbow unit



Prefabricated T-branch unit



Prefabricated anchor unit



Prefabricated gland seal

FACTORY PREFABRICATION SAVES TIME AND MONEY ON THE JOB

The Ric-wil Unit Method eliminates 80% of the field work usually associated with the installation of insulated piping and makes possible phenomenal speed on the job. Prefabricated 21-foot sections are delivered to job sitecomplete with pipe, insulation, couplings and accessories -ready for hoisting onto trusses or lowering into narrow trenches. Often a number of units are welded and coupled on the ground before installation, minimizing overhead and trench work under difficult conditions. On one job, 1500 feet of Ric-wiL Conduit were installed and pipe welded, ready for couplers and insulation between units in only two working days ... Ric-wiL Insulated Pipe Units are available in single or multiple pipe systems, for piping steam, hot water, oil or viscous fluids where flow temperature must be maintained.

Write for the new Ric-wil Catalog

PREFABRICATED EXPANSION LOOPS Completely assembled expancompletely assembled expan-sion units are provided as required, fitted with couplers, ready for quick installation. Adaptable to underground,

surface, and overhead systems.

RIC-WIL INSULATED PIPE CONDUIT SYSTEMS THE RIC-WIL COMPANY - CLEVELAND, OHIO



notes. Lamp Dept. General Electric Co., Nela Park, Cleveland, Ohio.

UNIT HEATERS. Resnor Suspended Unit Heat-ers, Blower Type, Data and Dimensions: Duct Type: Propeller Fan Type, 3 pp., 8½x11. Three data sheets show rough-in drawings, dimensions, input and output ratings for three types of Reznor Gas Fired Unit Heaters—the propeller fan type, blower type and duct type. Reznor Mfg. Co., Mercer, Pa.

fan type, blower type and duct type. Reznor Mfg. Co., Mercer, Pa. STEEL TUBES. Seamless Steel Tube Data, 320 pp., 8/x11. Price \$2.50. Technical information on steel tubing presented in this handbook was assembled as a service to manufacturers and users of equipment employing carbon-steel and alloy tubing. The content is classified into four principal sections covering general data, me-chanical tubing, pressure tubing and reference tables. General data includes a summary of steel tubing's history, manufacture, tests, special shapes, and chemical composition. The section on mechanical tubing covers information on typical uses, suggestions for determining proper size, tolerance tables, properties re-quired for beams, and a digest of standard specifications. The Pressure Tubing section in-cludes commonly used pressure formulas; speci-fications and tolerance tables for boiler tubes, heat exchanger and condenser tubing, still tubes, and alloy steel pipe; and stainless steel analyses with complete metallurgical data. The reference table section is extensive and includes many formulas,-weight tables for rounds, squares and other tables commonly found useful in tubing applications. Definitions of terms gener-ally used in connection with steel tubes and in the steel industry are contained in the glossary. Seam-less Steel Tube Institute, Gulf Bldg., Pittsburgh 19, Pa. HARDWARE. Stanley Builders' Hardware, Cata-loa Na 17 16 np. 82611. This wartime catalog

19, Pa. HARDWARE. Stanley Builders' Hardware, Catalog No. 17, 16 pp., 8½11. This wartime catalog presents information on available builders' hardware. Designed for quick reference, its six sections illustrate and describe butt hinges, cabinet hardware, window hardware, screen and storm sash hardware, bolts, latches, pulls, braces, hasps, staples, strap and T-hinges. Such general information as permitted finishes, butt hinge widths, screw hole and butt hinge locations, and factors determining the type of hinges, screws and bolts, are also included. The Stanley Works, New Britain, Conn.

New Britain, Conn. GYPSUM SHEATHING, LATH. So You're Building a New Home After the War. 18 pp., 8½x11. This booklet is designed to show a prospective home builder the many advantages and uses Gold Bond materials offer for postwar homes. Easy application of Gold Bond materials including, sheathing, gypsum lath, acoustical tile, foil lath, rock wool batts, wallboard and paint, are illus-trated and described. Non-combustibility, insula-tion value, sound retardation, crack resistance, and other features for the various materials are also covered. National Gypsum Co., Buffalo 2, N. Y.

N. Y. HEATING. High Altitude Heating for Buildings, 25 pp., $8/2 \times 11$. This illustrated brochure is an explanation of Dunham sub-atmospheric steam heating. Problems common to steam heated build-ings and the curves affected with the High Alti-tude heating system are discussed. Items of equipment comprising the system are illustrated and their functions explained. The method of automatic control is also shown and a section is devoted to installation of the system in large buildings. C. A. Dunham Co., 450 E. Ohio St., Chicago 11, III.

REQUESTS FOR LITERATURE

Miss Josephine Salzman, Readers' Ass't., Glen-dale Public Library, 319 E. Harvard St., Glen-dale 5, Cal., would like to receive catalogs and literature in the fields of architecture, design, building trades, landscape architecture and in-terior decoration for the Science and Arts Dept. of the Glendale Public Library.

Industrial Design Associates, 745 East Cali-fornia St., Pasedena 5, Calif., are interested in receiving samples and manufacturer's catalogs of products pertaining to industrial and architectural design.

Mr. F. E. Paice, Hume Pipe Co., P. O. Box 4534, Melbourne, C. 1, Australia, wishes to re-ceive catalogs and literature on building products. Mr. Robert F. Lamberger, Architectural Drafts-man, 1105 E. 28th St., Tacoma 4, Wash., would like to receive technical information and data on all products connected with the building industry. Mr. Benjamin A. Hoffman, Architect, 1327 Spruce St., Philadelphia, Pa., would like to re-ceive catalogs and literature for a complete A. I. A. file.

Mr. R. C. Kantz, Civil Engineer, Public Works Dept., U. S. Naval Air Station, Klamath Falls, Ore., would like to receive data, samples and catalogs for complete A. I. A. file.

***retort** insulation



High Thermal Efficiency FOR LIFE!



.. another job for METAL MESH FIBERGLAS BLANKETS

The high thermal efficiency of Fiberglas Insulating Wool is only one of its many advantages as blanket insulation for retorts, boilers, tanks, industrial ovens, large ducts and breechings.

Blankets of Fiberglas Insulating Wool may be had with mesh facing on one side only! The fine, long fibers, of which this material is made, interlace to form an insulation that has "body", that holds itself together. This unique and desirable feature is especially advantageous when vessels to be covered have laps, rivets and other projections.

Fiberglas Metal Mesh Blankets are light in weight. They do not disintegrate with handling. Their fluffy edges form a tight seal when the blankets are laced together. And they can be cut to any desired shape to provide a complete seal around valves, pipes and fittings. As a result, they are applied easily, quickly and economically. Many users have enjoyed further savings through re-use.

Fiberglas Metal Mesh Blankets are available with



three standard facing materials: hexagonal wire, expanded metal lath and rib lath. These facings provide a suitable base for any type of indoor or outdoor finish. And they are supplied in two types-No. 600 for temperatures up to 600° F.; No. 900 for tem-peratures up to 1000° F. For more information about this or other forms of Fiberglas Industrial Insulations,

In co-operation with the Government program to save critical fuel.

write for booklet, "Fiberglas Insulations for Industry". **Owens-Corning Fiberglas Corporation**, 1830P Nicholas Building, Toledo 1, Ohio. In Canada, Fiberglas Canada Ltd., Oshawa, Ontario.

OTHER FIBERGLAS INSULATIONS

1. PF Pipe Insulation-A light. I. FP Pipe Institution—A light-weight, pre-formed pipe covering with high insulating efficiency for temperatures up to 600° F. Made in 3-ft, sections or segments for all standard pipe sizes. Fibrous ends of the pipe sizes. ections intermesh to form tight joints.

2. Blanket Type Pipe Insulation — With mesh wire on outer side to wrap around pipe and secure with wire through special edging. Manufactured in 2-ft. sections for pipes over 3" O.D. Will withstand temperatures up to 1000° F.

3. No. 600 PF Block-Same materials as in PF Pipe Covering-in blocks 6" x 36" and 12" x 36", standard thicknesses.

4. OC-1800 High Temperature 4. OC-1800 High Temperature Block-A highly efficient and rug-ged molded block in sizes 6" x 36" and 12" x 36"—in standard thick-nesses. Will withstand surface tem-peratures up to 1800° F.

5. Insulating Cement-For insu-

lating fittings, valves and all irregu-lar surfaces. Highly efficient . . . withstands temperatures up to 1200° Fahrenheit.

6. OC Mastic - An asphalt emul-sion cement for insulated pipe and equipment exposed to outdoor or high moisture conditions.

7. TW-F Wool-Fabricated in bats, rolls and bulk. Used for dry-ing-ovens, heaters, etc., for filling irregular spaces and for fireproofing.

8. PF Board -- Manufactured in 5 densities from 2½ to 9 lbs. per cu. ft.—standard sizes 24" x 38", 1" to 4" in thickness. For insulated panels, sound absorption and vari-ous structural applications.

9. PF Roof Deck Insulation -9 b, density with facing to facili-tate mopping. Highly efficient, fire-proof, rotproof and moisture-resist-ant board, for application under industrial built-up roofings. Sizes 24" x 48". Thicknesses from 3/16" to 2".

To help you make the proper selection, a "Fuel Sav-ings Calculator" is available for determining heat loss, fuel savings and other factors. Write us for one.



Modernfold SPECIFIED BY ARCHITECTS SINCE 1936

MODERNFOLD DOORS met with immediate success. This accordion-type door is being used in homes, hotels, clubs, offices, funeral parlors, churches, etc., for all types of openings, small or large.

In your postwar planning—plan for Modernfold . . . with its elimination of swing area . . . easy room division. This beautiful fabric-covered door makes any room irresistibly attractive. The wide range of colors and fabrics will make harmony with any general color scheme possible. Send for helpful literature.

NEW CASTLE PRODUCTS

1613 I Street, New Castle, Indiana Modernfold Doors, 424 Madison Avenue, New York City Export Dept.: Utility Bldg., Fort Wayne 2, Indiana



4 MUSTS in ALL POST-WAR HOMES-I K-Venience Clothes



Closet Fixtures—over 40 chrome shoe, tie, hat, towel racks, clothing carriers, trouser-skirt hangers, etc. Double hanging capacity of any closet, keep everything neat and orderly,

in handy reach. A sure answer to the need for more closet space.

2 Ball bearing glides for sliding glass and wood wardrobe and cabinet doors.

3 Extension drawer slides that permit even large or heavily loaded drawers to pull out at a touch. No sticking or sagging.

4 Space-saving adjustable metal shelf supports for quick, easy $\frac{1}{2}$ " adjustment to any level. For library, storage cabinets, closets.

All of the above available again right after the war. But include them in your plans now! Folder on request.

KNAPE & VOGT MFG. CO. Department M-6 Grand Rapids 4, Michigan





LIQUIDOMETER Tank Gauges

100% automatic.

No pumps, valves, or auxiliary units needed to read them.

Models available for either remote or direct readings.

Accuracy unaffected by specific gravity of tank liquid.

Approved by Underwriters' Laboratories for gauging hazardous liquids. Write for complete details.









The simplicity, rapidity and ease of installation of the Grand Rapids Invizible Sash Balance are among its more commendable features, and are important factors in post-war planning. But, the smooth, dependable performance of this sash balance must be emphasized. The ease of tension adjustment, absence of tapes or cables, and the actual invisibility of the entire working mechanism are of primary importance.



So, planning begins now! When the war is over and building materials are released to a hungry public, time will be doubly valuable, and contractors will be forced to take advantage of every item whereby time can be saved without sacrifice of performance, satisfaction or profits.

Grand Rapids Invizible Sash Balance, now serving in thousands of war housing projects, has demonstrated its practical service. Its place in peacetime building is now assured. Write for information concerning our engineering service.

Note	: Sa	sh	pu	leys
will	be a	vai	lab	e as
soon	as	m	ate	rials
are	releas	sed		

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SPECIFICATION A

The advertising pages of FORUM are the recognized market place for those engaged in building. A house or any building could be built completely of products advertised in THE FORUM. While it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This FORUM does.

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You don't have to dig deeply into the subject of Lumarith Plastics to appreciate the tremendous possibilities of these tough, colorful materials in the fluorescent lighting field. A check of physical characteristics reveals how perfectly Lumarith fits the needs of the fixture designer.

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Celanese Celluloid Corporation, a division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y. Deliveries of Lumarith Plastics are subject to WPB allocation.

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