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BUILDING MONTH. The biggest summer housing boom in the country's history was on. Nobody was sure just why and, more important, nobody was sure how long it would last. The boom could not be explained simply by the fact that supplies were now plentiful—although building material inventories double those of last year were mighty encouraging. It was more than the industry's complete freedom from controls—although a brisk market for the $20,000-$25,000 house was reported in many cities. It was certainly not to be attributed to a drop in house prices—for August brought the ominous news that the price of new houses, which had seemed to be stabilizing over recent months, is creeping up again. More than anything else, the boom seemed to be rising from one of those unpredictable shifts of market opinion. House buyers seemed to be deciding that building costs were simply not coming down again and that, with top-grade materials now plentiful, there was no reason to wait any longer.

The dimensions of the boom were impressive. Builders broke ground for 80,000 houses in July, more than had been started in any month in the last 22 years and 13,000 more than were started in July last year. Although the final figures were not yet in, the boom seemed to have mounted in August to as high as 85,000 starts. Measured against the usual seasonal sag of the late summer, the upturn was striking.

The boom was not showing up evenly over the U.S. A lot of it was in small cities and towns, who were building out of all proportion to the national pace. In the big cities, rental projects, started under liberalized FHA rules, were boosting the total of starts more than houses. There were, to be sure, some worries about just how long the housebuilding boom could last. A few lugubrious Washington observers predicted a big drop by fall. And in non-residential building no comparable upturn was in sight. (In New York City, for example, builders figured non-residential activity was 50 per cent under last year).

But Building, like the rest of the U.S., knew that so long as its house customers maintain their present high income levels (the average industrial worker, according to BLS figures, is earning more than double what he did in 1935-39) there will be plenty of housebuilding. Building could only hope that its big customers would wake up to the plain fact that to wait for a sharp drop in building costs is to flirt with economic disaster. Many a Building man last month echoed the blunt statement of the Turner Construction Co.: nothing short of depression will bring building costs down very much.

That the industry was highly aware of the need for holding the cost line against any further rises was apparent in many promising directions. The Producers' Council backed up its emphasis on product improvements by presenting the Industry Engineered House, which makes a careful study of modular construction available to the smallest house builder. While increased coal and steel prices were having their expected effect in upping building materials prices (especially brick and cement), Reynolds Metals announced 20 per cent price reductions on its aluminum building products. Westinghouse and Libby-Owens-Ford pledged no further price increases. New York City was hard at work on a long-term wage stabilization agreement, and here and there a trades union was voluntarily turning down a wage increase in the interest of market stability. Like the rest of the U.S., Building was hanging from the kite of inflation. About the best it could hope to do now was to guide the kite, firmly and gradually, to a safe plateau where everybody could settle down for a while.

WASHINGTON

PRELIMINARY SKIRMISH

Democrats and Republicans hope to blame each other for housing lack.

As everybody has known for some time, the Great Housing Shortage will be exploited for everything it is worth in the forthcoming political campaign. Last month, Gael Sullivan, executive director of the Democratic National Committee and a onetime FHA state director in Illinois, laid down a preliminary barrage. To the Duckworth Democratic Club of Cincinnati, Sullivan offered some samples of how campaign oratory is likely to sound: "The Republican Congress can see rich landlords, but it can't see the poor tenant. It subjected the tenants to a gun-point 15 per cent increase ... It gave big commercial builders the green light to hog building materials that had been earmarked for homes for veterans ... Senate-boss Taft scuttled the chances of the Taft-Ellender-Wagner bill's being considered on the legislating calendar."

So far, at least, the "gun-point" rent increase was showing up more like a water pistol. During the first five weeks operation of the new rent program, leases calling for rent increases were filed for only 3.3 per cent of all units under rent control. Tenants seemed to be gambling on continued controls—either at a state or federal level. They probably had the odds. The Republicans were showing increasing reluctance to take the lid off rents in an election year; House Banking Committee Chairman Wolcott had said that rent control would probably have to be continued.

Both Parties were contesting for the title of slaying the giant of Housing Inflation—but so far neither had laid hands on a weapon more formidable than a pop-gun. The Republicans were spearheading the joint House and Senate Committee probe of housing shortage (sprinted Representative Helen Gahagan Douglas: "The biggest laugh of the year!") and had already
treated the voters to some bitter intramural slugging. Senator Tobey (N. H.), who had given the W-E-T housing bill powerful support, had sought the Committee chairmanship, Senator McCarty (Wis.), who believes public housing is an open road to socialism, had opposed him. Finally, composing themselves around a conscientious middle-of-the-reader, Representative Gamble (N. Y.), the Republicans prepared to give the impression that they are single-handedly licking the Great Housing Shortage.

On its part, the Administration began beating the antitrust drums, promised a drive against price-fixing conspiracies in all phases of housebuilding. But Building men, unimpressed by the political gesturing of either party, were forced to conclude that, whatever else it might accomplish, the government's first suit would not likely to reduce house prices much (see below).

ELEPHANT'S FLEA

Realtors first tapped for government's drive on housing inflation.

Realtors' adroit Herbert U. Nelson was in New York, helping to persuade the American Legion that veterans need no public housing,* when a Federal Grand Jury indicted the National Association of Real Estate Boards and the Washington Real Estate Board for criminal violation of antitrust laws and when the government simultaneously filed a civil antitrust suit against the same defendants.

NAREBmen paced their handsome Washington offices until Nelson, the big boss and the brain that has kept this lobby rolling like a bulldozer for the last 22 years, could get back from New York. The mimeograph machine waited, and none of the office girls went home. Then Nelson walked jauntily in, with the cocky half-smile and unshatterable assurance that has swayed dozens of Congressional committees and made reality tycoons feel it a privilege to dig into their pockets to keep NAREB aloft.

"We are outraged,..." he dictated rapidly. "Real estate boards are old and well-known institutions in nearly every American community. The National Association has spoken out in what it believes to be the public interest in the matter of housing, at times in opposition to the Administration. Apparently the time has come when a citizen of this country cannot speak out without being served notice that he does so at the peril of criminal prosecution."

If, as Nelson hoped to convince the U. S., the antitrust suits were reprisals, the government had nevertheless been preparing them long before NAREB had played the

* He and other industry representatives succeeded. The Legion convention decided not to endorse the W-E-T general housing bill.

leading role in scuttling the Veterans' Emergency Housing Program, sidetracking the W-E-T general housing bill, and shooting some big holes in rent control. Nearly two years ago FBI men had fingered through the files of the Washington Real Estate Board, and gone away with a fat bunch of letters, most of them signed by boss Nelson.

But the antitrust suits were bigger than even big NAREB. The tip-off was Attorney-General Tom Clark's communications to the lawyers in charge of the antitrust drive in the housing field. The Department, he said, was investigating antitrust violations by "persons, firms, corporations, associations and their members, and others... engaged in the production, manufacture, distribution or use of materials... used in the construction and housing industries, or in performing work or rendering professional service in any branch of the construction or housing or allied industries, and in connection with the sale, exchange, financing or management of real property and the improvements thereon."

This was broad enough to include architects, mortgage lenders, title companies—everybody in Building, in fact, except labor, exempted by Congress from antitrust prosecution (according to a Supreme Court ruling). Nobody knew where the Department of Justice would prosecute next, but few thought that NAREB would stand alone in the antitrust spotlight.

NAREB: the public's view?

To many, the charge that realtors have increased the cost of housing by conspiring to fix fees (realty brokers customarily charge about 5 per cent on transactions under $50,000, 3 per cent on those above) seemed something like, as one columnist put it, "bickering a flea off the elephant of inflation." But the suit might be more important in spooking NAREB's influence in Congress and with such legislatively powerful groups as the American Legion. Because of the Great Housing Shortage, NAREB's prestige, as far as most newspaper readers were concerned, was already at an all-time low. What a number of people thought about NAREB's ringside crusade for "every American's right to own his own home" seemed to be reflected by a rash of cartoons over recent months, with the sharpest of which was Fitzpatrick's in the St. Louis Post-Dispatch.

PRICES

NEW PEAK

Building feels effect of higher coal and steel prices, boxcar shortages.

Building material prices, dropping for some months, last month turned up again. Mid-August BLS figures showed that wholesale price index for building materials had reached a new postwar high—7 to points higher on the chart than 19 months. Higher prices for coal and steel were speeding the rise.

Some thought the peak had not yet been reached. Lumber prices, which have jumped up and down at a dizzying rate over the last eight months, were climbing sharply again. Production was no longer lagging back of demand, but box car shortages were keeping lumber off the market, slowing lumber prices up.

BLS supplied another statistic back of climbing building costs: wages of union workers in the building trades rose 15 per cent in the year ending last July, the biggest jump in any 12-months since 1920.

CUTBACK

Vets' hospitals will sacrifice all extra space, General Bradley says.

The Veterans Administration reluctant to order architects at work on veteran hospitals to trim designs of all space absolutely necessary for medical and surgical care. The reason: "runaway construction costs."

Construction bids have been running from 15 to 35 per cent over VA estimates. This means that doctors' quarters, theaters, recreation rooms, other extras must be sacrificed if VA is to get 75 top-standard hospitals for the $772 million which Congress voted for the job.

The worst of it, VA's General Omar Bradley says, is that "we have no assurance that labor and material costs will not continue to rise." The General thinks the contractors are adding a 15 to 30 per cent "fear contingency cushion" to active construction bids.

Some government construction experts think that lack of wide competition is a reason for high construction costs on veterans' hospitals. Size of the projects a specialized construction required tends to restrict bidding to a small number of large contractors, they say. Just how high costs have risen over the last two years is plans in the government's estimate that it now costs $18,000 a bed to build a veterans' hospital—as against $6,000 during the war.
Building men alert to the sweeping influence of the heart-and-home magazines have recently detected a slight but alarming tremor in the hands that rock the cradle of consumer taste. A few editorial whispers have it that "modern" was, after all, only another style—already on the way out. Among cautious middle-of-the-roaders, flower-rusted Cape Cod cottages have recently won up with increasing frequency. And in the vanguard Ladies' Home Journal has nostalgically visiting over the inner quaint old Nantucket and romantic Monterey.

In the midst of this slight wavering in ranks of the faithful, Maxine Livingston, Parents' Magazine has maintained a rock-like consistency of attitude. This is partly because Mrs. Livingston has never really been concerned, and has never encouraged readers to be concerned, with the "style" of the house. She started ten years ago to talk about living on the inside and, with increasing fluency, has continued to talk about it ever since.

Last month Mrs. Livingston could point imphcatly to the impressive results of her consistent evangelism. A year ago Parents' presented the first of a series of expandable homes, all designed by leading architects, and offered readers a set of prints and specifications for $10. By summer, the Parents' houses were under construction in 35 communities in all parts of the U. S. Thousands of plans have been sold, and orders are steadily mounting. The house plans, which provide for structural additions as family size and income increase, seem to have sold themselves to the building industry as easily as to the mail-order market. In some cities, operative lenders have bought plans and are building the houses in volume. In Yakima, Wash., the Federal Savings & Loan Association is building one as a model house.

Mrs. Livingston attributes the rapidity with which Parents' houses have moved off and into construction to the highly eclectic attitude of the majority of U. S. families. She thinks that "most families with children are more concerned with the action or workability of a house than with style or tradition."

To the inevitable protests from those who feel that Parents' is putting architecture on a mail-order basis, Mrs. Livingston says that her $10 plans provide the kind of careful study not otherwise available to all-income families and, in some communities, not available at all.

Mrs. Livingston has so far commissioned expandable house plans from Ketchum, Gina & Sharp, L. Morgan Yost, George Fisk, Victorine Homsey, Pietro Belli, Perkins & Will, and intends to continue the series. Richard Bennett, Chicago, Parents' architectural adviser.
BUILDING MATERIAL PRODUCERS ANSWER TO CONGRESSIONAL INQUIRY: Industry competition is the only sure way to product improvement, lower prices, and a large and continuing housing market.

WHITLOCK: no better or quicker way.

Facing a Congressional investigation of all phases of housing, (see page 10) and enormous public dissatisfaction with the performance of the building industry as a whole, building material producers have a well-defined point of view about what course of action will be most effective in solving the U. S. housing problem. In an exclusive interview with the FORUM, Douglas Whitlock, chairman of the Building Products Institute and a past president of the Producers' Council, tells what stand the producers will take when the Congressmen start asking questions.

What is the correct appraisal of the housing job the building industry should properly be called upon to do, measured in terms of effective demand rather than general housing need?

Our information on the condition of housing is not sufficiently conclusive to tell us how much of the existing supply still has, or could be made to have, additional useful life, and our information on the composition of households gives very little clue as to how much of the so-called "doubling-up" represents hardship. Until our information is more complete, our data on the performance of the building industry, including the cooperatives of the Producers' Council, tells what stand the producers will take when the Congressmen start asking questions.

In spite of the absence of accurate information, industry knows that its job is a challenging one. One thing that makes the job so challenging is that the prospect of demand resulting from the net increase in families (after the present spur in the marriage rate is over) will be relatively small—about 450,000 a year, according to Census estimates. If the industry is to keep going and expanding, it must aim more and more at a replacement market. It must sell people out of their old houses into something more attractive, more convenient, more economical.

This can be done in the housing industry on the same principle as it has been done in other industries—of providing what people will buy and providing it in better quality and lower price year by year so that more and more people will be willing and able to buy. Operating on this principle, industry sees ahead the possibility of a large market of indefinite duration, and it is convinced that through the continuous process of improving the product and lowering its price, it can bring about the steady discarding of the worst of the housing supply and the raising of the standard of housing for all families. It sees no evidence that there is any better or quicker way of accomplishing these objectives.

Is the price factor preventing the industry from meeting the market demand for low-cost housing?

It seems safe to assume that prevailing costs and prices are preventing the industry from building as many low-cost homes as the market might absorb. The demand undoubtedly would be greater if prices were 10 or 15 or 20 per cent lower than they are. However, it must be recognized that the increase in the cost of housing is not out of line with the rise in the general price level.

Is there reasonable assurance that there will be enough materials and equipment available to permit the industry to do an adequate job?

There is general agreement that manufacturers will be able to produce all of the materials that the industry will be able to utilize during the next 10 years, although some shortages of a few items may continue for a few more months, largely because of freight car shortages. Inventories are fast being rebuilt to normal levels.

What are the functions that should be exercised by the federal government in the broad field of housing and construction?

The federal government can aid private industry greatly by providing more accurate statistics on building needs and economic trends. It also can cooperate with industry in needed technical research. It can help further by continuing to invest in loans on a sound financial basis; by continuing to coordinate the efforts of industry and labor in the field of apprenticeship training; and by stimulating local communities to modernize their building codes.

Otherwise, the federal government should confine its activities in the field of construction to its public works programs. Attempts to program housing will only confuse the picture and discourage private enterprise from making an all-out effort. The government will help furnish accurate facts so that industry can measure the size of the need for new building with greater accuracy; the industry will build more than could be handled under any form of government programming.

The factory-built housing fiasco is a glaring example of what happens when the government tries to direct the housing industry. Prefabricated or factory-built housing undoubtedly has a good future, but it faces manifolds problems which cannot be solved by time and private initiative will solve. The government hopes to program 700,000 such houses in two years using whole materials supply situation, with millions of dollars of taxpayers' money and throw the prefabricated industry into confusion.

No one questions the fact that the need of housing should come down. The existing building industry is working hard on this problem, as is evidenced by the Industry Engineered Housing program. Cost reduction is the one sure way to expand markets. But the government has nothing to offer in the way of a solution, except financial devices which only tend to underwrite high costs. Costs will come down when productivity returns to normal and as competitive forces come into full and unstrained play throughout the industry.

Should the federal government coordinate its own construction programs with the general building picture so as to return its construction when private building is active?

There unquestionably is a need for scheduling public works programs in accordance with the trend in private building. Deferrable public works should be given first priority. However, the government has failed in its efforts to coordinate. Its failures are not due to lack of vigor in the building industry which is continuing to coordinate the efforts of industry and labor in the field of apprenticeship training; and by stimulating local communities to modernize their building codes.

Under the reorganization plan recently approved by Congress, there will be...
The National Housing Council to coordinate the agencies concerned with housing is all that is needed. The FHA and FHLLB can function far more effectively as independent agencies. The government's public housing functions should be placed in the Federal Works Agency which is charged with the supervision of Federal non-military public works projects. There any way in which slums can be read and adequate housing provided for income families without large federal subsidies? Slum clearance and provision of housing for low-income families can be most effectively handled by state and local governments without federal aid or interference. The Indianapolis Plan appears to be one of many patterns for a community to follow. Other communities are working on plans of their own. The federal government has far too broad a hold on the governments and individual peoples of the country. Slum clearance and housing needs are local problems. They should be solved with local funds by people who are familiar with local needs.

PARIS HOUSING SHOW
New City Plans are Better than Houses Shown by Eleven Nations.

While many homeless Frenchmen were aghast at the thousands of francs and man-hours expended to mount the current International Urbanism and Housing Exhibit in Paris, the great show spread out along the banks of the Seine at least focused the eyes of all Europe on the need for technical improvements in housing and made it possible to compare the work so far done by nine European countries, Iceland and the Union of South Africa. In the great glass-domed hall of the Grand Palais, decorated with the flags of eleven countries, visitors saw exciting plans for the reconstruction of French towns and cities, all reflecting the new emphasis on "urbanism"—a term the French use to mean consideration of the community as a whole. Outside, model houses sent by the various countries were less inspiring. They did, however, show considerable ingenuity in the use of substitute materials and in improved methods of working old materials where they are still available.

BUILDING MONEY
HA hopes to start more money flowing for $3,000-and-under-house.

One of the unpleasant facts about housing, the Federal Housing Administration has finally decided to make things easier for families who have only $3,000 to spend for a house. Last month FHA eased construction standards for minimum dwellings built under the Title I insurance program. The risk of brickbats from housing inspectors, FHA said that houses with outside plumbing may now qualify for Title I insurance—-if they are built in neighborhoods where this is customary. The reluctant but realistic view is that standards for $3,000-and-under houses will at least move thousands of rural small-town families out of shacks and into weather-tight new construction.

Under the revised Title I plan, FHA will use only that a house meet standards characteristic in the neighborhood in which it is built. Except for this general rule, a few structural requirements will be set. Chief of these is that the house be at least 360 sq. ft. of space. Even this restriction has been waived for Good Wingfoot mobile house, which FHA says is all right for young families just starting out. FHA will inspect no houses, this up to lenders.
ENGINEERED HOUSES promise small builders lower costs via modular design and standardization.

Pat procedure today for reducing house building costs is simply to reduce the size of the house. Not so simple, but infinitely more promising, is the procedure advocated jointly by the Producers' Council and the National Retail Lumber Dealers Assn. after a two-year study of the economies of modular coordination. Launching what they call the "Industry Engineered House Program," these organizations of building material manufacturers and distributors last month unveiled a group of house plans which cut waste time, motion and materials to the bone. If the barrage of promotion prompts widespread acceptance of the program by housebuilders, the plan will mean further economies through the mass manufacture of standardized house parts and the simplification of manufacturers' stocks and dealers' inventories.

Intended not as a series of model houses but as a demonstration of the principles of modular coordination for the express benefit of the small builder, the Industry Engineered houses were designed by Architects Chapman & Evans and A. Gordon Lorimer with the dimensions of stock building materials as their principal guide. Since 4 inches has long been the building industry's basic dimension, the modular design of these houses is based on a three-dimensional 4 in. grid to which the entire house structure and each of its parts is coordinated. As indicated by the grid on these pages, floor plans are based on a 4 ft. module which, of course, is a multiple of 4 in. and a stock dimension of most sheet materials.

Dimensioning and framing of the houses illustrate the effect that standard material sizes have on their design. Selected by the program sponsors for intensive promotion, the four-room bungalow (below) from which most of the other houses are adapted, is comprised of two sections of identical size. Their inside dimensions of 16 x 24 ft. permit the use of standard 8 x 8 x 16 in. foundation block in half bond without cutting and 16 ft. 2 x 10 in. joists without cutting or intermediate girders and footings. However, since the usual practice of using a single header in conjunction with 16 ft. joists throws the exterior walls 4 in. out of balance as far as the interior application of standard board materials is concerned, the sill detail of the Engineered House (opposite page) includes extra headers or blocking to space the nominal inside faces of exterior walls 16 ft. apart. The same result may be obtained with single headers by cutting 16 ft. 4½ in. joists from 18 ft. lengths. (The scraps may be cut to 14½ in. and placed between joists to serve simultaneously as solid bridging, as accurate joist spacers and as nailers to facilitate the application of ceiling panels.)

In houses with wood floor construction, exterior wall and partition studs are uniformly standardized at 7 ft. 8½ in. (Where a 5 in. concrete slab floor is used, an 8 ft. stud is required for exterior walls.) The 16 ft. span suggests lightweight trussed rafters (2 x 6 in. rafters with 2 x 4 in. ceiling ties supported by a central drop hanger) spaced 2 ft. on centers, in which case the entire floor and ceiling of the house may be finished before partitions are installed. Partitions may be assembled on the floor and tilted into position without damaging the ceiling, for their height is 9½ in. less than the distance between finished floor and ceiling. (The partition is jacked up and secured in place by the insertion of ¾ in. wedges—possibly shingles—under the sole plate.)

If the program sponsors can convince builders of the on-site dollar-and-cents advantages of standardization and modular framing, they promise further saving in packaging, precutting and preassembly at the local dealer level. For instance, if demand warrants it, the lumber industry will concentrate on the production of 16 ft. 10 in. 2 x 10's, and dealers will bundle 2 ft. 8½ in. 2 x 4's like lath and will preassemble partition sections in jigs. Moreover, it is hoped that with increased standardization of dimensions and room arrangement, other manufacturers will tailor lower materials and equipment specifically to fit into the Industry Engineered Houses.

While the program sponsors intend to housebuilders to be merely demonstrators, builders realize that their designs will probably be cribbed by builders everywhere. There is a hope that their planning has been carefully studied even beyond the aspects of modular coordination. The basic bungalow is neither the smallest nor the cheapest house that can be built. Its shape is more expensive, but more attractive and livable than the smallest nor the cheapest house any other manufacturer will build. Its size is comparable in size to those being sold by big operative builders for about $800, excluding land. It remains to be seen whether this big builder figure can be or bettered by the small builder with the help of modular coordination and the program.

(Continued on page 16)
The first housing development of the New York Life Insurance Company, Stanworth at Princeton, New Jersey, is nearing completion, and many of the garden-type apartments have already been rented and occupied. In this carefully planned and competently engineered project it is significant that Formica kitchen cabinet tops were used.

Formica gives kitchen cabinet tops a new high in decorative value. The most popular finishes are plain black, pearlescent and line patterns. These latter are available in attractive pastel tints. They may be chosen to harmonize with the decorative scheme of the kitchen as a whole.

Formica does not chip, crack, or break, and is not injured by alcohol, fruit acids, or the alkalis that are ordinarily used in the home.

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3. Floor Plan Insert—shows the detailed floor plan of each of the 12 kitchens mentioned in item No. 2 plus detailed plans for other sections of the kitchen.

4. Kitchen Broadside shows 10 New Freedom Gas Kitchens in full color which affords excellent opportunity to study the full effects of contrasting colors in the kitchen.

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IMPROVED INTERIOR-TYPE DOUGLAS FIR PLYWOOD NOW MANUFACTURED IN THESE APPEARANCE GRADES

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- Plyform

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Booklets giving complete data on the new U. S. Commercial Standard (CS 45-47) for the types and grades of Douglas fir plywood are available. Single copies will be mailed without charge to any point in the United States. Address your request to: DOUGLAS FIR PLYWOOD ASSOCIATION, Tacoma 2, Washington.

For Permanent Exposure to Weather or Water, Specify EXTERIOR-TYPE DOUGLAS FIR PLYWOOD

Exterior-type Douglas fir plywood—identified by the "grade trade-mark" shown above—is made especially for permanent exposure to weather, water, and abnormal moisture conditions. This is the type to specify for the exterior of buildings, for outdoor signs, for marine construction, for railroad car siding—and for other applications requiring waterproof performance. Exterior-type—available in several appearance grades—is manufactured with completely waterproof phenolic resin adhesive and with higher performance inner plies as specified in the new U.S. Commercial Standard CS 45-47.

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LARGE, LIGHT, STRONG

Real Wood Panels
Pull any house apart... take a long look at those outside walls. That's the thin dividing line between comfort and hardship. That's where double service is appreciated!

Double-duty INSULITE performs just such a double service in house construction:

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Two services for the price of one! Your customer gets more for his money, and appreciates your interest in his welfare. More satisfied customers means more business for you.

Insulite insulates as it builds. One material — double service — two jobs in one operation.

Strength? It provides greater bracing strength than wood sheathing horizontally applied.

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When you Build or Remodel...

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The GENUINE INSULATES

"Insulite" is a registered trade mark, U.S. Pat. Off.

GOLD FROSTING
Forum:
So many times in recent years friends of mine, after having leafed through a copy of the Forum, have commented on the utter coldness of home interiors. That meant another would-be devotee of contemporary design was lost forever.

After an architect does a perfectly wonderful design and planning job on a building, the interior furnishings belie all that the building itself implies. Whatever the reason for this apparent slip-up, certainly the interiors do no justice to the building.

It is so rare to see intelligent interiors, period or contemporary, in the pictures of recently built homes, that I wonder if architects consider the finished result.

I put in a plea to architects to seek the services of an accomplished decorator who can do an intelligent job in a businesslike manner from the planning stage.

FRED B. SHRALOW
New York, N. Y.

Forum's architectural readership might be inclined to point an equally critical finger at certain lush decorator-designed interiors. —Ed.

ALL HAIL THE BEAUX ARTS
Forum:
I enjoyed your spicy article on The Arbiter of the Arts. It is apparent that the writer knows his subject pretty thoroughly, and that he could have filled many more columns had space permitted.

For this reason, it is all the more disappointing to realize that he has not done full justice, either to Dean Meeks or to the Beaux Arts tradition which the Dean so ably represents in this country.

The author chooses to perpetuate an old error, sired by jealousy out of ignorance in the days when the B-A boys were cropping all the good jobs—a foolish error, which confused the tradition of the Ecole with the style of pere Laloux.

Dean Meeks is portrayed as a sort of reluctant dragon; he is credited with enough shrewdness to foresee which way the wind will blow, and to change his course accordingly; but the inference is that he does so unwillingly.

I believe this is an unfair inference from the facts as set forth in the article.

That magnificent maverick, Frank Wright, to the contrary notwithstanding, Dean Meeks is correct in stating that organic architecture was taught in Paris. Of course, it wasn't "organic" under Mr. Wright's definition. I think Mr. Wright would be the first to admit that truly "organic" architecture existed nowhere in the world before his advent; and would sadly agree that it is unlikely to be seen ever again after he has passed on to his reward.

The tradition of the Beaux Arts is not static, but dynamic; and many of the changes inaugurated at Yale have been paralleled and often preceded by changes in the Paris ateliers. Anyone who observed the Ecole during the twenties, when the student body was engaged in the "education du jury," or who has followed its projets since that time, knows that the Paris School gave up the cartouche and bi-axial symmetry long before we did. What it has never given up is a great teaching tradition, based on the projet system . . .

Consider the names of the men who helped build up the Yale school; Fauchon, Morgan, Hood, Holabird, Howe, Harrison, Abramowitz, Stowe, Bennett. All these, and others, studied in Paris, and most of them were diplomes. What of Aalto, Saarinen, Le Corbusier? In the twenties, Le Corbusier was hailed as their guiding star by the students of the Ecole (though not yet by the faculty) . . .

Your article is sufficiently interesting, and contains enough good-natured malice, without such ungenerous phrases as "he bowed gracefully—to the inevitable"—"without relinquishing his Beaux Arts ideal"—"he could no more resist the tide of change"—.

Why not give Dean Meeks full credit for his accomplishments? Why not admit what seems so obvious—that precisely because he was so thoroughly steeped in the Beaux Arts tradition, the Dean was one step ahead of his contemporaries in the field of architectural education?

JOHN CROMELIN, Architect
Chicago, Ill.

Shaken but unchanged Forum still feels that Dean Meeks was given full credit. —Ed.

Forum:
I read with interest your article on Everett Meeks but see that you certainly skipped the period when he left Carrère & Hastings until the time he took over the Yale Deanship. If you will look up the facts you will find that he was associated with Cornell University. I think it only fair that you make this correction.

ROBERT L. PIoso
New York, N. Y.

Forum is well aware that Everett Meeks acted as visiting critic at Cornell University, omitted this fact with perhaps one hundred others to meet stringent space requirements. If Reader Pioso rechecks his facts he will discover that Meeks was still with Carrère & Hastings when commuting to Cornell. —Ed.

GLOBAL GRAB-BAG
Forum:
The problems of providing comfortable facilities in a land where the temperature goes above 110 degrees regularly in daylight hours, and humidity near saturation in the dark ones, and where there are blinding sandstorms and blinding fogs are all very interesting. It is possible, particularly if one keeps a weather eye on what the Arabs have been doing for many centuries.

I hope you are experiencing milder climate at Fifth and 34th Street.

CHAUNCEY RILEY, Architect
Bahrain Islands, Persian Gulf

The only thing we haven't got is sandstorms. —Ed.

Forum:
Now the building professionals and businessmen in China are facing some difficulties for its economical problem in this country. After war the housing problems in the great city in China are also very serious like other countries do. I am very hopeful to get some idea in the Forum which may afford stimulating factors to my job.

Both of our countries are situated at different foundations, and so it is that we may have separate interest and demand. I hope the Forum may give me good reference in architectural engineering world. I am waiting for the recent volume of the Forum with kindness. If I can catch any good idea to contribute to the Forum later on, I will write and let you know.

TANG SHU KWANG
S'hai, China

Forum:
No architectural journal has found its way to any of us Austrian architects for (Continued on page 22)
Back this up by the fact that the largest office building in Canada, the largest in the South and the largest all-metal commercial group in the world also have Q-Floors.

This is why:

Q-Floors save an enormous amount of drafting room changes. The steel cells of Q-Floor are crossed over by headers carrying wires for telephone, power and every type of electrical service. An electrician can drill a hole in any six-inch area of the exposed floor and—a matter of minutes—establish an outlet, without trenches, fuss or muss.

This means that outlets and partitions need not be located until the building is occupied. Floor layouts are permanently flexible.

On the construction side, Q-Floor enables you to quote pre-known costs. Q-Floor is steel and reduces to a minimum the variable elements of construction in the field. It comes to the job pre-cut and two men can lay 32 sq. ft. in 30 seconds. This speed reduces building time 20 to 30%. It is dry, clean, noncombustible, free from forms and shoring. Construction time as well as cost is more nearly predictable.

Many of the prevalent griefs of construction are eased with Q-Floor and all the grief of predetermining electrical outlets is eliminated. You can see Q-Floor fittings at any General Electric construction materials distributor's. For literature please write:

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The Sparkler W-8 water filter (illustrated) is new in the plumbing field for home use, but is a time tested proven product used successfully for years in industry for filtering and purifying water. Sparkler filters are built of cast bronze with a rugged strength that insures continuous efficient operation; are water tight under pressures in excess of 75 lbs.

Sparkler filters completely remove all chlorine and other off-tastes and odors, all sediment, color, pipe rust, algae, etc., and deliver clear, sparkling pure water for drinking and cooking.

Sparkler filters are easily installed by tapping the cold water line at the kitchen or utility sink, and deliver pure water through an auxiliary faucet. With this in-line installation only the water used for drinking and cooking is filtered, insuring a longer period between renewal of the filter element. Sparkler filter pads are easily renewed by loosening several wing nuts and replacing with a new inexpensive pad, for average family a filter pad will last from four to six weeks.

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Larger size filters with capacities up to 10,000 gal. per hr. are available for institutions, hospitals, or commercial requirements.

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Air view and typical floor plan

All these past years, you know, I should be very much obliged to you, therefore, if you would kindly let me have such journals or sheets, no matter of what contents or what date they may be. I could forward them to some of my Tyrolese colleagues as well...

Enclosed are some designs... means for restoration of destroyed quarters of a big city (Montage - System - Prefabricated)—twelve or thirteen storied houses with about 1,000 flats. The scheme of tall houses is not is this a strange thing? Why do not these traditionalist constructors enlarge the windows of their houses for answering modern necessity?

This fact already struck me when I visited the exhibition “Techniques Américaines” in Paris two years ago. Some models of prefabricated houses had very small windows indeed.

Once more, why?

G. VITT

Paris, France

According to Builder William Levitt, two factors influence his window sizes: 1) Owners of small homes have small budgets and cannot afford the higher fuel bills which result from large glazed areas. 2) His customers prefer placing furniture against the wall to look out of it. Forum wistfully agrees with Read Vittet, cites the reduced fuel bills which come with solar heating, the added convenience and built-in furniture.—Ed.

LITERARY FORUM

Forum:

I should like to see a far better journalistic and literary quality in the Forum comparable with the Architectural Review of this country. Both magazines could learn a lot from one another even though their policies may differ. Less money spent on lavish display, and more on opinion and architectural trend reviews, would add much to the prestige of your magazine.

N. SANFORD

London, England

But then the Architectural Review would lose its uniqueness.—Ed.

STRIKEN SICILIANS

Forum:

We take the liberty to express our criticisms regarding the building of the seat of the U.N.O., and we respectfully beg you to make them known.

We have given attention to the development of the events through your interesting magazine and feel a moral obligation to protest in the name of art and justice.

In your issue of March 1946 (page 10) rightly criticising the building of the League of Nations in Geneva, you have tried to give a warning to public opinion to avoid a repetition of the once-incurable mistake. Unfortunately, errors are too multiplying themselves, we believe, for several reasons:

1) The chosen site... damaged the whole project; the excessive narrowness of the lack of... to the ground between 1st Avenue, 42nd and 48th Streets and the river do not allow the necessary development.

2) There should have been an international competition proclaimed in order

(Continued on page 24)
ever spill red ink

on your building blueprints?

That frequently happens... though blots may not show up for months, or even years. Then they are revealed in increased maintenance costs, or damage to valuable equipment. These costs can be prevented at the blueprint stage. Many companies do it by specifying Careystone Corrugated Asbestos-Cement Roofing and Siding for construction of factories, foundries, warehouses and other industrial buildings. HERE'S WHY:

Careystone speeds construction
—It comes in large easy-to-handle sheets that can be applied 35-square-feet at a time. That cuts labor and time expenditure to the bone... gives you another bonus on the low cost of the material.

Careystone is fireproof
—It won't rot, rust or corrode. Salt air or ordinary industrial fumes don't affect it... it's ideal where atmospheric conditions are unusually severe.

Careystone cuts maintenance
—It's made of Asbestos and Portland Cement. Maintenance is built-in; no painting or other protective treatment required.

Write for your free copy
... of the Careystone Corrugated catalog... contains technical data on the product and its application. Describes the complete estimating and engineering service available from Carey. For a free copy write Dept. AF-9

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LETTERS

The Hallmark of Tomorrow's Home

**SOSS INVISIBLE HINGES**

The Modern... Different "out of sight" Hinge

"This house has personality! There is something different and distinctive about it!" Many times people make just such remarks when looking at a home equipped with SOSS INVISIBLE HINGES—for these hinges when installed are completely concealed.

It is obvious why SOSS hinges impart a distinguished personality to any home. For one thing they permit the use of flush surfaces for doors, panels and cupboards which are a feature of modern streamlined design. Furthermore they eliminate surfaces marred by unsightly protruding butts. Your clients will commend you for suggesting these modern hinges.

Write for SOSS "Blue-Print Catalog" giving full details of the many applications of this modern hinge. Free on request.

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permit architects, engineers and artists of the whole world to contribute to such an important theme of building.

3) Puorri is the justification—if it can be so called—that the competition had not been proclaimed for want of time, wishing the U.S.A. to inaugurate the seat of U.N.O. within 1948...

4) The question brought forth, that such a seat must necessarily be a complex of functional architecture in the form of vertical structures, is inconsistent, since a different structure could be better adapted in a larger space.

In the architse article (Nov.'46), a group of architects, authors of the project, asbly interpreting the value of the function of the seat of the U.N.O., affirmed rightly that such a realization ought not to have been a monopoly of local interests.

In the building of the seat of the U.N.O., such as it appears today, only economic factors and individual opinions are taken into account.

We, having faith in the high ideals to which American people conform, had begun long since to prepare a plan for the competition which ought to have been proclaimed.

We have been strongly stricken and bitterly deceived by the resolution taken, about which we still hope they may alter their minds.

For a group of architects, engineers and artists,

**MARIO URBANI**
Director of the Institute of Arts
Palermo (Sicily)

**CREDIT CORRECTION**

Forum:

Your last February number publishes the scheme of the Avenida 9 de Julio in Buenos Aires, an elevated eight-lane highway with parking garage and shops underneath . . . . .

We see an error has been committed in attributing this work to the Buenos Aires City Plan Commission. This project is the personal work of Jorge P. Cazenave, Luis E. Bianchetti, Jorge J. de Mattos, architects. As this error attempts against our interests, we shall appreciate your publishing this note.

**CAZENAVE, BIANCHETTI Y DE MATTOS**
Buenos Aires, Argentina

The Forum's apologies to contributors Cazenave, Bianchetti and De Mattos.—En.

**LEGAL RACKET**

Forum:

My high regard for your publication has been severely shaken, to say the least, since reading the article entitled "Five Dollar Heating Comfort". (Continued on page 28)

This is the 20th year of Webster heating service at Hecht Brothers Department Store in Baltimore where management has long recognized that heating comfort is an important factor in successful department store operation.

In 1927, when the present home of the Hecht Brothers Department Store was built, a Webster Vacuum System of Steam Heating was specified by Abbott, Merkt & Co., Inc., New York, Architects and Engineers. Riggs, Distler & Co., Inc., Baltimore, were the heating contractors.

In 1941, Hecht Brothers decided to discontinue their coal-burning boiler plant and purchase street steam from the Consolidated Gas Electric Light & Power Co. On the recommendation of the Gas and Electric Company, they decided to convert the installation to a Webster Moderator System, then as now recognized for comfort at low cost.

Sam Hecht, President of Hecht Brothers, and William P. Calhou, Store Manager, look upon the Webster Heating System as an investment in customer satisfaction.

If you are interested in heating comfort at low cost backed by the experience of long-service Webster Representatives, write us.

WARREN WEBSTER & CO., Camden, N.J.
Representatives in principal U.S. Cities & British Empire; Representatives in Canada: Dering Brothers, Limited, Montreal.
Koylon Foam keeps cool—even on the hottest days! No wonder, for Koylon is porous. It “breathes” fresh air with every contact and release of pressure. What a comfort this is when it’s “too hot to move”! It’s a welcome feature wherever people sit or sleep.

Koylon is sagproof, clean, odorless and verminproof. 12 years of testing on major railroads prove that Koylon takes constant hard wear. Providing Koylon comfort is easy and economical as well as permanent. In every way, it pays to specify Koylon Foam.

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U. S. Koylon Foam Division, Mishawaka, Indiana
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Production is picking up. We hope it won't be long before you can give your clients the added quality of General Electric Heating. And, remember, General Electric equipment is priced competitively in the better grade heating field.

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OIL-FIRED
- G-E Boiler for steam or hot water heat
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Silbraz joints are leakproof, vibration-proof, and corrosion-resistant. They make the ideal connection for all piping systems where "B" copper tubing or brass pipe is used.

Threadless, Silbraz joints are permanent . . . will not creep or pull apart . . . save trouble and cost by eliminating leaks . . . literally join with the pipe to form a "one-piece pipe line." No properly made Silbraz joint has ever been known to fail under any condition which the pipe itself can withstand. If you are looking for maintenance-free pipe lines — for either new construction or remodeling — specify Silbraz joints.

Walseal* Valves and Fittings for Making Silbraz Joints

Walseal Company manufactures a complete line of Walseal Valves, Fittings, and Flanges for making Silbraz joints — the modern method of joining brass or copper piping. For further information, see your nearest Walworth distributor, or write for Circular 841.


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Make it a "one-piece pipe line" with Walseal

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD
Plays," in the May issue. It is, to me, a bad thought to convey to the public that "architects skim off only the cream of the design market and do not even try to serve the family of average means."

My office, as well as many others in New Jersey, does low cost house jobs on a full fee basis with complete satisfaction to both the client and myself.

This article merely increases the original sales resistance or keeps the prospective client away entirely. If contact is once made with a proposed client, it is rare that we are not able to prove the value of a local architect and also that the complete service rendered under the accepted A.I.A. fee schedule does not pay for itself at least twice over.

It would seem, in sponsoring this article, that you prefer the good will of a possible advertiser rather than that of the profession which you serve.

The statement: "Some states require that registered architects prepare all house plans—but a small fee will usually get a local registrant's signature on the firm's plans"—that is against the law in New Jersey and any architect signing plans prepared outside of his own office would have his license revoked, regardless of the size of the fee. This is, I believe, true in forty-five other states.

The above is not only misleading but tends to place the services of an architect in the category of a legal racket from the point of view of the layman.

This certainly was the reaction voiced in the case of the Kresge store in Newark, in selling Better Homes And Gardens plans across the counter at five dollars.

M. Munn Pattison, Architect

Rahway, N. J.

To a similar letter from C. Godfrey Poggi published in the July issue, Forus explained its position, has not yet shifted its stand: "Forus reported facts, has never sponsored mail order plans. But let's drop the fiction that architects have served the small home buyer. In any normal decade, individual architecturally designed houses are found only in the upper brackets. In any year the percentage of houses constructed with architectural service is miniscule. Newly elected President Kenneth A. Hedrich of the American Institute of Architects has recently announced a study to explore means of bringing architect and small house builder together."—Ed.

**LETTERS**

BLOOD, SWEAT AND LOVE

Forum:

After all of our blood, sweat and tears in following through on the Lustron house (Forum June '47) we find no Hedrich-Blessing credit line.

It's a grand story and I don't know why but we still love you.

Kenneth A. Hedrich

Hedrich-Blessing

Chicago, Ill.

(Continued on page 32)
IF giraffes were your customers your worries would be over, because they have no vocal cords. But home buyers do have, and they're likely to raise their voices loudly unless the houses you build today are modern and will stay modern for years to come. One way to be sure is to wire your houses for modern Electric Ranges!

Survey after survey proves that's what Mr. & Mrs. America want—homes that are up to date—homes with Electric Ranges!

An Electric Range requires only: 3-wire service entrance no smaller than two #6 and one #8 wires from the point of termination of the power supply company's wires to the distribution panel; a 60-amp. switch with overload protection and a three-wire circuit from the distribution panel to a range outlet in the kitchen. Make this your minimum wiring specification.

TO KEEP THEM MODERN...
wire your houses
FOR ELECTRIC RANGES
only

BRIGGS Beautyware offers a

SAFETY BOTTOM BATH TUB

For you—the future can be profit-making. Start now to capitalize on these exclusive safety and comfort features—patented safety bottom • maximum area of level bottom • wide rim seat • low sides • safety hand grip • stainproof porcelain enamel. This is another example of how Briggs engineers really work for Beautyware dealers—by giving Mr. and Mrs. Public more for less. Briggs Beautyware is the finest in plumbing ware.

THE REPUBLIC "TRUART" SHOWER and BATH FITTING

with Automatic Diverter Valve in Spout

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Briggs Beautyware is telling its exclusive safety-bottom bath tub story to over 5,000,000 readers each month. Featured is the most recent of a dramatic series of four-color advertisements appearing every month in Better Homes & Gardens and American Home.

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MORE ON CENSORSHIP

The Publisher's Letter of last May scoring a possible Board of Experts to pass on Fifth Avenue's building design, has produced a flood of varying opinions featured over the past months. In this issue, pros and cons are still at it.

Forum:

...I don't believe in Architects Boards of Aesthetics (partly because I don't like architects these days for working against public housing), but I should think they could make a few rules calculated to insure a degree of honesty or integrity. I can mention two of my particular hatreds that may be characteristic only of Chicago—blank brick walls twenty stories high, with tall Gothic windows outlined in colored brick; knobs, cupolas, gazebos, or something ornate, concealing the smokestack.

Probably the answer is that one can't regulate honesty any more than beauty.

Elizabeth Wood, Executive Secretary
Chicago Housing Authority
Chicago, Ill.

Forum:

The editorial and the comment on architectural censorship reminded me most unpleasantly that, although I am not entirely unenlightened in my home community, I am effectively prevented from building any commercial building here by a law which limits such structures to Elizabethan English.

I, Morgan Yost, Architect
Kenilworth, Ill.

Forum:

I agree with your point of view without reservation. It is possible, as you say, to collect a group of discriminating experts in any large community, and it is even possible to get them to agree on a matter of taste, but their collective judgment, although indicative of what might be termed "the best" today, is after all only today's pattern. What of the next generation—will they look back on our best and think it good?

It is quite possible they will abhor it, just as we do some of the work that was done no more than forty—or even twenty-five years ago. Yet that very work, had it been judged by an expert jury of the time, might have received its blessing and praise. On the other hand, we know of several buildings that we have come to admire, yet they were condemned by the experts in those days as being too radical, if not downright ugly.

Therein, it seems to me, lies the great argument against any kind of art commission that sets itself up as a judge of "good

(Continued on page 36)
Specify the screening that’s feather-light

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mentor has not elevated design but has merely
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Many attractive and practical bathrooms-kitchens have been designed with wall wainscots of Carrara Structural Glass, reflective polished glass is impervious to moisture and chemicals and is very easy to clean.

The bath above has Carrara shelves and a large built-in mirror, as well as Carrara walls. Carrara is available in 10 smart colors. Architects: Walter T. Karcher & Livingston Smith.
Mirrors can be used in countless ways to enhance the attractiveness of any interior. A large wall mirror over the dining room buffet, as shown here, is one of the most popular applications. Attractive and practical uses of mirrors over Tub: on bedroon and dressing room doors; back walls of the tub recess in the bathroom; from blue, flesh-toned or green Plate Glass. F1 Plate Glass and with silver, gold or gun metal. Blocks offer numerous interesting possibilities—recesses of both traditional and modern flavor—above work surfaces in kitchens, in stairwell walls, and for cisions as shown here. These blocks transmit light generously yet provide privacy. They look brighter, smarter, more cheerful. Their insulating properties cut heating costs.

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LETTERS

LETTER FROM FRANCE

Forum:

Some of the best architects and town planners in France have been at work since 1940 preparing plans for the rebuilding of the city of Rouen. The ancient capital of Normandy lost many architectural treasures during the battle of France. It suffered severely from explosions and fires caused by the bombs from American and British planes.

The fighting between the French and Germans in the summer of 1940 led to destruction, mainly by fire, of scores of houses and offices which justified each other between the Cathedral and the River Seine. Though we must lament the loss of these quaint survivals of the Middle Ages, in the long run the clearance will mean healthier conditions of life for local residents—some of the most wretched slums to be found in France have been destroyed. In addition there are wonderful new vistas of the beautiful Cathedral, which now can be seen to full advantage.

When I was in Rouen recently, I found a good deal of division between two schools of thought. The idealists would like these acres of land, on which today piles of

(Continued on page 44)
Points of Distinction
OF THE MODEL M
PENBERTHY AUTOMATIC ELECTRIC SUMP PUMP

MOTOR—\( \frac{1}{4} \) hp capacitor type special vertical motor designed expressly for sump pump operation has maximum resistance to moisture and corrosion, and is practically free from radio interference.

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What keeps the weather clement for a clam

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is so workable, so plastic, that when the bricklayer pushes the brick into place, he does not have to force it home. The excess mortar "flows" readily into every part of the joint, thus providing good, full joints without requiring extra work or effort on the part of the bricklayer.

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bombed stones have been neatly stacked, left as open space, laid out with public gardens leading to embankments along the River Seine. The opponents of this scheme point out first that the cost to the city, which already has had to bear such heavy finan-

Back view of bombed houses which boasted picturesque Elizabethan exteriors, but were often hovels of squalor within.

M. Greber, the architect and town planner, has prepared plans for the reconstruction of this area. Rebuilding will be permitted only to limited heights, so that the views of the Cathedral will not be blocked. The famous Arts Theater, which was completely demolished, will be rebuilt on another site, further away from the Cathedral, so that the height of such a building may not obscure the view. The original theater,

(Continued on page 49)
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where Taglioni danced in the romantic era, was reconstructed in 1882 according to the plans of the architect, Sauvegeot. M. Greber proposes that the theater site will be used for a lower building that will not compete in mass with the Cathedral. He also plans new streets to give a better view of the historic building known as Le Bureau de Finances, designed by Leroux in the sixteenth century and, fortunately, still intact.

The famous old clock on the bridge across the Rue de Gros Horloge is also untouched and the new plans provide for various views from there, and the opening out of some of the charming little squares and Renaissance buildings which in the past have been hidden.

It must be remembered, however, that Rouen is a city famous not only for Gothic churches, fifteenth century houses and art collections, but is also one of the busiest ports in France. It is one of the centers of French cotton manufacture and the chief town, with over 121,000 inhabitants, of the Department of the Seine Inférieure. Its replanning is therefore being thought out with a view to its industrial future.

Every visitor to Rouen must have been impressed by the contrast between the architectural treasures on the Right Bank of the River Seine and the ugly confusion of many of the industrial buildings on the Left Bank. All along the river side, the burning of the port has led to widespread destruction. This is providing an excellent opportunity for replanning. There will be better zoning of industrial and commercial buildings and residential flats, and the provision of more playgrounds and open spaces. When these plans are carried out, the Seine at Rouen will become, as at Paris, the axis of a balanced city.

In short, out of the bombed ruins of a martyred city, the museum of such historic architecture as has survived the bombs is being preserved, a busy port is being rebuilt on a long-term plan and the regional capital of Normandy restored and enhanced in administrative convenience, beauty of layout and modern design.

B. S. Townroe, Hon. A.R.I.B.A.
Camberley, Surrey, England

(Publisher's Letter on page 52)
This Improved Construction Assures a Permanent

DRY WALL
at Minimum Material and Labor Cost!

VAPOR SEALS FROM THE INSIDE!
Reflective Sisalation prevents passage through sidewalls of harmful moisture-vapor. Provides adequate insulation at no extra cost!

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Tough Sisalkraft building paper over sheathing prevents passage of wind-driven rain into walls.

See for Yourself: New wall construction, utilizing the prime features of Sisalkraft and Sisalation, now enables you to stop the passage of harmful moisture into walls easily and economically. This simple method provides a permanent dry wall in homes PLUS all the advantages of adequate insulation at no extra cost!
Write today for further information about these two products.

The SISALKRAFT Co., Dept. AF, 205 W. Wacker Drive, Chicago, Ill.
EXTENDING for over 190 feet along 49th Street, opposite the RCA Building, is the plate glass front of RCA Exhibition Hall, shown above. Here are exhibited the products, facilities and services of the Radio Corporation of America, combining a display of technical achievements with entertainment, to appeal to both the communications industry and the public.

This 30-foot-high glass front serves as a huge show window, filled with novel and scientific detail. The entrance was designed to present an unobstructed view of the interior. Floor layout was planned to accommodate the tremendous flow of traffic expected. The many fascinating but loosely-allied departments of the Hall are subtly held together by a lighting scheme too vast to be disturbed by individual exhibits.

Included in the Pratt & Lambert Paint and Varnish products used in the decoration of the Hall were Lyt-all Flowing Flat, Solidex, and "61" Enamel. The decoration required colors that were rich, harmonious and restrained, to conform to the high quality of products displayed.

The Pratt & Lambert Architectural Service Department whole-heartedly assists architects in securing appropriate decoration for any type of structure.
Designed by Architects Holabird and Root, this 11-story unit of Illinois Bell Telephone Co.'s long distance switching center (already the world's largest) will house intricate, costly equipment. Insulux will provide daylight, the insulation necessary for economical air conditioning, and help block out dust and dirt in this structure planned to be built at Clark and Congress Streets, Chicago, Illinois.

OWENS - ILLINOIS
INSULUX
GLASS BLOCK

Glass block daylights unique building

With an ease approaching magic, myriad calls from all parts of the world will pass through this unit of Illinois Bell Telephone Co.'s long distance switching center.

The building and its equipment—representing ten million dollars—have been carefully designed for smooth operation and economical maintenance. One noteworthy bit of planning by Architects Holabird and Root was the selection of Insulux Glass Block.

Insulux panels will not only bring in light, but provide good insulation. The result is lower cost air conditioning and heating operations.

Maintenance, too, is less costly with Insulux. The panels are not subject to rust, rot or corrosion. Infrequent washing keeps them sparkling. No painting is required.

Frequently Insulux Glass Block can make important contributions to efficiency while protecting processes and equipment in industrial and commercial buildings. For complete information write Insulux Products Division, Owens-Illinois Glass Company, Dept. D-20, Toledo 1, Ohio.
Dear Reader:

Because of the universal interest in the building situation in Germany, we present this report by a recently returned member of the Forum's staff, Peter Blake.

96.7 per cent of the City of Kassel on the northernmost tip of the U.S. Zone of Germany, was destroyed in 1943 in a couple of half-hour, 1,500 bomber raids. The City of Nuremberg, some distance to the south, was similarly blasted during those same months. Frankfurt on the Main, Headquarters City for the European Command (EUCOM), U.S. Army, is in pretty good shape: 40 per cent of it is still standing. Heidelberg is almost undamaged—one of the very few German cities in that condition. Its population, needless to say, has just about tripled with the influx of people from less fortunate cities.

The answer is simply that they aren't paying for food imports, which M.G. considers an even greater need than shelter. To the Germans, U.S. Army Engineers have shown that, given modern equipment, a contractor can clear the rubble almost overnight. Still, many Germans feel that the current "peace" may produce some more rubble even before the existing wreckage is taken care of, a feeling which has contributed to much lethargy on the part of potential German rebuilders.

So if you find yourself doing any German rebuilding in the near future, be sure to bring your own equipment, and bring along a good book for those weeks while you wait for "construction permits" and "Treasury licenses" that give you the right to pay a German carpenter without illegally trading with the enemy. . . .

P.B.
Will the roof last?

Of course!
You’ve read what they say in their ads in the Post!
NOW STANDARD EQUIPMENT IN EVERY STATLER HOTEL

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JAMES J. CHIARELLI graduated from the University of Washington in 1934, just three years before Partner PAUL KIRK. Before formation of the partnership, Chiarelli worked for various architectural offices in Seattle and was field architect for a large housing project in Vancouver, Washington. Kirk was associated with Stuart and Durham on Federal Housing work, including community and school layouts. Design philosophy of the partnership: "To complement in architectural form how we live and think today" (p. 78).

RALPH S. TWITCHELL'S designs dot the eastern landscape from New England to Florida (p. 85). He studied at Rollins, McGill and Columbia for eight years, followed up with two years in Europe and practical experience with Cross & Cross, Carrere & Hastings and Raymond Hood. He was a test pilot in World War I, a retired Colonel after No. II. After winning the Reimer Prize and graduating from Auburn in 1940, Associate PAUL M. RUDOLPH entered Twitchell's office, won a scholarship to Harvard. Rudolph's three years in the Navy preceded their association in 1946.

Dynamic, German-born, Swedish-influenced CARL KOCH studied under Walter Gropius at Harvard, received the Bacon Fellowship in 1938-39, established his own practice near Boston in 1939. In 1941 he became senior research technician for NHA, then did a tour in the Navy during the war. His diverse talents have produced numerous modern houses (p. 90), including the Snake Hill group near Belmont, Mass, where he now lives, large housing projects, museums, office buildings, laboratories, and even a Finnish bath.

A Texan born and bred, whimsical O'NEIL FORD studied architecture via a correspondence course while working as a carpenter and house painter after three years at North Texas State College. He spent six years in the office of David R. Williams, then did several years of government housing work. His 2000-hour flying stint as a flight instructor during the war led to use of a plane by himself, Partner JERRY ROGERS and the personnel of their bucolic office near San Antonio in supervising projects (p. 96) abuilding throughout their rooky state. Rogers, an alumnus of Texas A&M, Ford's office, and the Army Engineers, became a partner in the firm in 1941.

The work of genial EDWARD D. STONE needs no introduction to Forum readers. Born in Arkansas, he attended the University of that state, Harvard and M.I.T. He started practice in 1923, has designed countless modern residences (p. 102) and buildings, including World's Fair structures, homes for various publishing houses, government housing projects and, with an associate, the Museum of Modern Art. After two years as a Major in the Army Air Corps, he resumed private practice in New York in 1944.

GEORGE FRED KECK, pioneer in radiant and solar heating, has culminated his designing talents largely to single-family homes (p. 107). A staunch modernist, he was educated at the Universities of Wisconsin and Illinois, returned to the latter as professor of architecture in 1923 after a year overseas in World War I and employment by William Pryor and D. H. Burnham. He was associated with Schmidt, Garden & Ernesen in Chicago, opened his own office there in 1926, is now in partnership with his brother, WILLIAM KECK. One of his best-known designs is his prefabricated solar house for Green's Ready-Built Homes.

The gloomy future predicted by conservatives for personable, 30-year-old GORDON DRAKE after construction of his first house in 1937 has turned into a bright progression of modern houses, the latest of which is the Presley residence (p. 110). After attending the Universities of California and Hawaii, he worked as a draftsman for Harwell Hamilton Harris, spent five years with Marine engineer troops in the South Pacific. He established his own office in April 1946, promptly won a national award, now has a thriving practice in Southern California.
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Conventions

The Illuminating Engineering Society will hold a National Technical Conference in New Orleans, September 15-19. The program will include discussion of "Fluorescent Fixture Development" and "Correlation of Brightness Ratios and Decorations." (Continued on page 70)
The Planing Board

The Truscon Planning Board says, "Normal delivery on many of our Steel Building Products is now possible. In fact, we suggest you contact the nearest Truscon office for the latest information. However, since production and delivery schedules change from week to week, we suggest you contact the nearest Truscon office for the latest information.

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THE NATIONAL HOTEL EXPOSITION will be on view at the Grand Central Palace, New York November 10-14.

APPOINTMENTS

ARTHUR DEAM, Professor of Design at University of Pennsylvania, has been appointed Chairman of the Department of Architecture.

MARION ROSS and THEODORE REYNOLDS have recently been named members of the staff of the University of Oregon School of Architecture.

ELI CONSTANTINE is now a member of the architectural firm of O'Hara, Hedland & Edson, Greenwich, Conn.

WILLIAM EDIE AIA announces that he is associated with Bamberger & Reid, 417 Market St., San Francisco 5, Calif.

O. D. PECK has been named Account Executive of the Store Department Unit of Ken White Associates, Industrial Designers, New York City.

BERNARD MCKINNELL is now General Sales Manager for Kurt Versen Co., lighting equipment firm, Englewood, N. J.

NEW OFFICES

W. W. MEYER RA and R. A. KRIDER RA with F. D. ELLENBERGER are associated in architectural practice at 407 Commerce Bldg., Erie, Pa.

(Continued on page 74)
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CHANGES OF ADDRESS

CELOTHEIL WOODARD SMITH AIA is resuming practice at 814 Seventeenth St., NW, Washington 6, D. C.

ALFRED PARKER, architect, has opened an office at 2921 SW 27th Avenue, Miami 33, Fla.

LLOYD KNUTSEN, architect, until recently Colonel in the U.S. Army, has resumed practice at 527 Hoeschler Bldg., La Crosse, Wis.

JOSEPH BARROW, announces that he is practicing architecture at 713 West Illinois St., Urbana, Ill.

LILLIAN GARRETT has opened a studio for the design and handlooming of contemporary textiles at 5630 Blackstone, Chicago 37, Ill.

CORTLAND ENGINEERING Co. is now in offices at 5 Beeckman St., New York 7, N. Y.

THE WALTZON CONSTRUCTION CORP., general contractors, have opened a new office at 124 W. 30th St., New York, N. Y.

WILLIAM Raffen, builder of scale models and dioramas, is now at 55 E. 9th St., New York 3, N. Y.

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SEVEN POSTWAR HOUSES

THIS issue is devoted almost entirely to seven houses, all completed since the war, all in the owner-built, individually-designed, medium-price category, and all the work of mature exponents of the contemporary school of architecture which has grown and flourished in the U. S in the past fifteen years. As a group, they are undoubtedly the best houses of their kind this country has ever produced. They are more comfortable, more thoughtfully planned, more compact, better lighted, more open and attractive, easier to care for. They are honest houses, designed to satisfy real needs simply and without sham. They cater to no picture-postcard nostalgia for the outward symbols of an earlier and—at least in retrospect—more secure time. They follow no momentary literary flights to Spain or medieval England. They seek no escape from the realities of family living in a U. S. suburban neighborhood in the year 1947. That they have been built at all in the past two years is something of an achievement. That they are so excellent is striking evidence of the validity of an approach to building which The Forum is proud to have championed—and, to a considerable extent, influenced from the beginning.

We are aware, of course, that there are still many people, a good many architects and builders, and some Forum readers, who think such houses seem somewhat outlandish. To adherents of this side of the “cowboy” argument, we recommend particularly careful study of this issue. Where, we would like to know, are the “amplified orange crates with innovations,” the “super colossal ultra-modern designs,” the “corn crib and chicken coop patterns” which readers have complained of? Which of these houses is “barren in livableness,” which shows a “preference for the freakish and fantastic?” And in what respect do these designs evidence a tendency to be “different for the sake of being different?” We would like to know.

One threadbare contention which is finally ripped to shreds by the work shown here is the notion that big windows, low-pitch roofs and open planning are all right for California but out of place in other parts of the U. S. It is no accident that the designs chosen for this issue are all evenly distributed across the map. Even more significant is the fact that each of the houses represents the work of not just one architect, but of a regional group of designers all working in much the same local climate, and that each such group contains not one but several outstanding firms.

The architectural statements accompanying the presentations show that they have been giving a great deal of attention to the peculiarities of their local climates, and that this study has not only produced significant local variations in room arrangements, window treatment, roof overhangs, and so on, but has also revealed glaring practical shortcomings in the stereotypes that have so long passed as “traditional” architecture.

In fact, if there is one thing that pleases us more than anything else about the design trend the issue reveals, it is that the houses are so different in execution, and so alike in spirit. The Forum carries no torch for regionalism as an end in itself, but we are glad to see that the logic of a rational design approach produces a visibly different house in the hot, humid climate of Florida, the hot, dry climate of Texas, and the temperate, moist atmosphere of the Pacific Northwest. At the very least, this indicates a breaking away from cliché that is more than welcome. Owner-built, individually-designed houses are, of course, only the yeast in the housing bread, but we are happy to report that a healthy new culture has been established.

* All quotes are from readers' letters.
Our weather, moderate in most respects, gives us freedom to use large glass areas without excessive cold or excessive heat making them a problem. On the other hand, our rainfall does demand certain protection such as sufficient overhangs. It is also desirable to have sheltered terrace areas to protect summer furniture in case of a sudden rain. As we do have a great deal of gray weather, we feel that we can use even stronger, clearer colors than in sunny southern climates. This was done on the Schueler house by staining the exterior siding red to match the Madrona trunks, and painting the soffits yellow to blend with field grasses around the house.

We have always felt that the terraces are better situated off a dining area than a living room. Because terraces in general have constant circulation, they should be located off rooms that have floor surfaces withstanding either the wet or the dirt tracked in and out repeatedly. In the Schueler house the terraces all serve into the central dining hall-kitchen area surfaced with concrete, and the living room, which is surfaced with a heavy textured rug, is isolated from this circulation. Also, this prevents the porch furniture from blocking the view from the living room windows.

With our abundance of wood, we have always felt that a northwestern house should accent this to the utmost: the Schueler house is a good example, with all the walls and ceilings of fir plywood produced in Port Angeles. Exteriors are of native western cedar.

James J. Chiarelli & Paul H. Kirk, Architects
TO THE HOUSE IS FROM THE CARPORT, AN EXTENSION OF THE SERVICE WING. CURVED WALL SCREENS OUTDOOR LIVING AREA

CARPORT PAST WINDOWLESS WALL OF UTILITY ROOMS TO ENTRY HALL AT CENTER OF THE HOUSE. BEDROOM WING IS IN FOREGROUND
We are particularly pleased with the way the living, cooking and sleeping areas are zoned and still tie together smoothly, and the way the views are brought out to so great an advantage and such dramatic fashion.

Lawrence A. Schuler, M.D.

Chronic splendor of the northwestern landscape notwithstanding, a site like this is an unusually fortunate one. Approach is from the south across a 20-acre, hay-covered plateau to a dominant knoll rising to the north end of the meadow. The knoll is fringed with windswept firs, drops in a precipitous 300 ft. bank to the Straits of Juan de Fuca on the north and Morse Creek on the east. The top of the knoll is level so that building the house on a slab was a natural solution and one that conformed with the owners' desire to avoid changes in floor level. The radiant plan was worked out to incorporate a 360-degree view, which takes in the magnificent Olympic Mountain range and the small town of Port Angeles as well the dramatic seascape.

The house was designed for a doctor, his wife and two daughters, and consists of a living room, dining room, breakfast room and bar, a combined kitchen and laundry, greenhouse, storage and furnace room complete with a cold storage plant.

Rough-sawn vertical cedar siding, stained a red brown, is used on the exterior in combination with tawny yellow split brick. The soffit and most of the trim is painted chrome yellow. Living room sash is painted rust color. All windows are fixed with louver panels beneath for ventilation.

Two types of roof construction are used. On the living-dining wing the roof slopes mildly up from the center of the house giving almost a story and a half at the chimney end. The bedroom and service wings have mildly pitched valley roofs.

IN-LINE BEDROOMS FACE WEST, OPEN ON A LAWN SHARED BY LIVING AND DINING ROOMS. EXTERIOR FINISH IS OF MASONRY AND RED CEDAR.
The unique plan which offers an unlimited visual scope divides the three areas of the house more definitely and dramatically than would be possible with a more conventional layout. The entrance hall is the heel of the plan. Both the living and sleeping wings enjoy three exposures.

One of the factors in the owner's decision to settle in this part of the country was the splendid opportunity for hunting and salt water fishing, at which both he and his wife are experts. This interest accounts for the rather unusual combination of a gun-dressing room in the owner’s suite. It was designed with access from the outdoors to avoid tracking wet gear through the rest of the house. Natural fir plywood, characteristic of the region, is used as interior finish in the living room, hall, kitchen and bedrooms. The long, narrow kitchen contains a laundry unit at one end. Predominant colors are greens, rust and yellow. Furniture was designed by Paul Laszlo.
MAIN LIVING-TERRACE IS ON THE SOUTH SIDE. LIVING AND DINING ROOMS, TREATED AS A UNIT, FORM A CUL-DE-SAC IN CIRCULATION.
The Architectural FORUM September 1947

CONSTRUCTION OUTLINE

Small house in Southeast is designed for hot humid climate, built with breathing concrete walls.

This is a climate of high humidity and soft sun, of sea breeze by day and land breeze by night, with rainy summers and dry, sunny winters. True “modern” architecture fits the climate in every way.

Sliding glass walls with wide overhangs, ventilated masonry walls that breathe and do not hold moisture, insulated roofs that do not hang down over windows to darken them, masonry floors that are on the ground, dry and termite-free, permitting the out-of-doors and sunshine to be one with the protection and personal conveniences of a dry, well-arranged interior—these are the “musts” of a “House for Florida Living.”

RALPH S. TITCHHELL, Architect
PAUL M. REIDOLPH, Associate
STUDY WITH BUILT-IN FURNITURE DOUBLES AS GUEST ROOM, HAS SAME EXPOSURE AS LIVING ROOM

SCREENED PORCH ACTS AS LIVING ROOM SUN SHADE, ELIMINATES NECESSITY FOR SLIDING SCREENS
PLANNED on filled land between one of Sarasota's salt water inlets and a cedar grove, this small, economical house was tailored to the site's amenities, Florida's warm, humid climate and last year's aerial shortage.

The plan includes a large screened porch which shields the living room from the western sun and adds immensely to its apparent size. During most of the year the sliding glass doors are left open day and night to capitalize on Gulf breezes. The office-study is conveniently placed for private outside access and for use as a guest room. At the rear of the house, the master bedroom faces the cedar grove, the morning sun and the prevailing night breezes. Similarly oriented, the den enjoys easy access to hall, dining space and garage.

To foil Florida's notorious termites, a concrete slab was poured on grade. Selected for its coolness, durability and cleanliness, the terrazzo floor finish contains white and coral colored marble chips which produce the warm gray appearance of native beaches, an effect is enhanced by the natural color of the concrete block. The warm gray tone of the sand-finished ceilings, obtained by the use of red plaster sand, is repeated on the plywood soffits of the overhang, painted a soft gray tinted with red lead. Plywood panels are painted to match the concrete and then surfaced with a varnish. Even the gravel on the built-up roof and the curtains are selected to carry out the soft gray color scheme. This careful attention to color creates an effect of spaciousness and complements exterior and interior use of unfinished concrete block—a material noted for its economy and availability.

OWNER'S STATEMENT:
I have lived in apartments all my life, have never owned a home of my own. I wanted a house that would be different from what I was accustomed to see in Florida—one with plenty of light (because my hobby is painting), roomy, cool and compact. That is just what I got. The house is always cool—I never know the outside temperature until I go out. As it is right on the water and all glass is on that side, I have a beautiful picture facing me all the time.

The natural concrete block inside, tinted just the least bit, and the light, almost-natural plywood together with the terrazzo floors give the house a cool feeling throughout. All my friends who contemplate building make sketches of various parts that they want to incorporate in their new homes.

ALEXANDER S. HARKAVY

BEDROOM OPENS TO WOODS AND NIGHT BREEZE

CHIMNEY WALL OF LIVING ROOM HAS WOOD BIN
ROOF OVERHANG, SHIELDING PORCH FROM SUN, SLOPES UP TO ADMIT MAXIMUM LIGHT TO LIVING ROOM.
create a decorative tiled effect, concrete block walls were laid with\nal joints aligned. Claimed to be hurricane-proof, they are\nreinforced by 3/16-in. steel rods laid horizontally in every third course.\nCorners are poured full of concrete and reinforced with\n3/16-in. rods tied to the floor slab and the reinforced concrete wall\nare ventilated to prevent moisture penetration and the forma\nmold and mildew, a common Florida scourge. This was accom\ndonished by keeping the center web sections of the block free from\nwater and by venting the walls top and bottom.

**CONSTRUCTION OUTLINE**

- **Exterior walls**—concrete block, Anti-Hydro Waterproofing Co.'s\n  plenix waterproofing. Floors—reinforced concrete with terrazzo finish.\n- **Paint**—plaster on metal lath, National Gypsum Co. **Roof**—felt, tar and\n  -coat, Allied Chemical & Dye Corp. **Insulation**—Rockwool, Johns-Manville. **Windows**—Seashore and screen—aluminum\n  Alum Steel Equipment Co., Inc. **Glass**—double strength and plate,\n  Pittsburgh Plate Glass Co. **Paint**—O'Brien Varnish Co. and Pittsburgh\n  Glass Co., **Doors**—Paine Lumber Co., Ltd. **Hardware**—Schiage\n  Co. **Electrical Installation**—Wiring system—conduit and\n  cable, National Electric Products Corp. **Switches**—toggle, Hart &\n  Co. **Fixtures**—Kurt Verzen and General Lighting Co. **Range**—electric, Hotpoint, Inc. **Refrigerator**—\n  Products, Inc. **Sink**—stainless steel, Tracy Mfg. Co. **Cabinets**—Mullins\n  Corp. and Palley Mfg. Co. **Fan**—Ilg Electric Ventilating Co. **Shower**—Speakman Co. **Cabinets**—Hoegger,\n  **Heating**—Electric wall-type space heaters with fan in each room,\n  Mfg. Co.
Northeastern solar house is compact and economical, relies on architectural restraint to conform to its location.
ew England has probably the best building traditions in the country. The existence of many old houses is least partially due to their being so well built. Construction has been mainly wood and despite expensive maintenance and the presence of termites throughout the region, a prejudice in favor continues. Masonry construction is in general use, too, but the severe climate prevents its being entirely satisfactory. A New England house must gather a wide range of temperatures—very rain and snowfalls, frequent series storms. The land's rocky subsurface presents difficulties in building but, despite its obvious economy, many people still dislike the idea of basementless houses.

The uneven landscape makes standardization of plans very difficult—the Nichols house is one of the few we have one on one level.

CARL KOCH, Architect

Indicative of the wide appeal of this house is the fact that McCall's magazine has adopted it as a pet project, will publicize it extensively in a forthcoming issue. Like many other people, the owners were not particularly enthusiastic about contemporary architecture but at the same time realized they could not build a Cape Cod cottage that would supply all the light and air they wanted, nor provide a comparable amount of space for the money. After living in the house they are extremely pleased with the large windows which make the most of a pleasant country view, give them sun in winter, protection in summer.

Despite the relatively conservative character of the design, in plan and execution the house is up to the minute. Indoor-outdoor living has been stressed as much as is feasible for the climate, while compact planning of the balance of the house permitted the generous dimensions of the living-dining area within a limited budget. Further increasing the spaciousness of this room is a ceiling which follows the contours of the gently sloping roof. Two of the three large panes of glass are fixed. However, for the region, one sliding panel provides an ample opening and cross ventilation is furnished by two small windows flanking the kitchen door. The living room, located on the opposite side of the house from the approach, is oriented to the south and east.
of the neatest features of the house is the dining table which slides into the kitchen for setting and can also serve as additional space or for eating in the kitchen. In clearing the table, this procedure is reversed. The stones for the fireplace and foundation came from the site—were lovingly hauled to the mason by the owner himself. With the exception of the storage cabinets and bookshelves to the left of the fireplace, living room walls are plastered. The roof of the room, located a few feet forward of the hearth, creates a little spatial division, works admirably in the foyer and entrance to the bedroom wing. Slate used at the entrance and carried a few feet into the living room from the terrace is combined with painted concrete flooring which holds the radiant heating coils. Except for the large kitchen window, the north side of the house is well closed off from the approach. It is lit by high strip glazing. Dotted lines on the plan indicate how the house can be divided. Although only one additional toilet is anticipated, the two bedrooms will be equipped with washbowls. The entry will be extended and a coat closet installed in the existing storage room.

**KITCHEN** is laid out in a rectangle with the movable dining table occupying the center of the room. Both stove and sink are located under large picture windows. Storage and utility room is accessible only through the kitchen. Master bedroom (right) has built-in storage facilities.

**CONSTRUCTION OUTLINE**
OWNER'S STATEMENT:
The radiant heating worked very well once we got it properly adjusted. At first the living room became too warm when we had enough heat to warm the bedrooms and give us hot water but this was remedied by installing valves which regulated the living room temperature. We like the living room window panels as they are —two fixed and one movable. But if we had it to do over I think we'd have all fixed panels and a conventional-type door. The movable panel was expensive and the required weatherstripping makes it a little hard to move.

One of the things that worked out surprisingly well is the flooring. We were afraid it would be uncomfortably hard and that the dark green rubber paint would wear off—but neither happened. It's very good-looking and comfortable.

We're very fond of having ceilings that follow the roof lines—the rooms are airier and look larger. It is an economical idea, too.

L. V. B. Nichols

SERVICE DOOR IS AT EAST END OF HOUSE. KITCHEN HAS TWO LARGE WINDOWS—ONE ON THIS SIDE, ONE FACING NORTH
In the tradition of the Southwest, the San Antonio house offers maximum comfort despite hot, dazzling summers and sharp winter cold.

Our section of Texas is extremely conservative. There is hardly a person who, if he thinks of houses at all, doesn’t have a head full of “Spanish Colonial,” “Texas Ranch Style,” “Greek Revival,” etc. This is understandable when one sees such fine examples of these traditions in the missions, the early urban mansions and in the old German towns near San Antonio. But few architects have made any effort to move toward a comparably progressive architecture of and for today, and our speculators do just what is done in Kansas City and Jersey City. As a matter of fact, I know of no section of the U.S. where there is such a hodge-podge of nondescript and unsuitable habitation. Not even the local tradition of simple houses of stone or caliche blocks has been regarded. Instead, there has arisen a new tradition that is generally characterized by “peanut-brittle rock work”—angular and pointed flat stones laid up flat against sheathing. During the twenties and thirties almost no houses were built with the very necessary wide overhangs; most were big and square and porchless—and pompous. The good reason for shutters on the old houses was forgotten.

This has happened everywhere, but somehow it seems more ludicrous in Texas where the climate is such a real challenge—where even casual analysis demands certain fundamental approaches and solutions—where traditional architecture was not “Spanish” but simple, straightforward small houses that were built to stand against intense heat, bright sun, torrential rain (on occasion) and bitter cold that comes quickly. We look with envy and amazement at the very arbitrary placing of rooms as regards orientation in the California houses. Our latitude is the same as the northern Sahara and the sun is very bright. The wide-brimmed cowboy’s hat is not an accident—likewise, roof overhang is essential. The great cumulus clouds bring heavy blowing showers on hot days when windows must remain open—another good reason for roof overhang.

If there is any breeze at all, one can be pretty comfortable in hundred-degree weather, provided the house has adequate openings. However, they must not be finished with great sheets of fixed glass on the southeast breeze side. Nor can we indulge in unprotected glass or openings on the west—we must shut out the hot afternoon sun as completely as possible.

Solar heating—or solar assistance to heating—is quite difficult, and very fine points must be drawn in the design of openings and overhangs. While the Texas sun has not yet reached a safe high angle in March, temperatures sometimes exceed 80 degrees during that month. In September, the sun is again getting down to a low angle, but it is still quite hot—with the temperature often as high as 95 degrees. Therefore, the early morning sun that cuts the early chill and adds cheer to the “far side” of rooms is about all of the direct sun we can allow in the house. Although several days this past winter found San Antonio and South Dakota reading the same 18 degrees, “cold spells” are short and hardly justify the expense of movable slatted overhangs that will accommodate our violently variable winters and very long summers.

Without air conditioning, Texas house planning is difficult. Every effort must be made to get the precious southeast breeze into all rooms. The use of large exhaust fans is a splendid supplement when there isn’t any breeze. This, however, permits only selective breezes, and free movement of the people from room to room becomes a problem. The attic fan is most useful on hot nights or during an evening of entertainment when all openings are closed except those in the occupied rooms.

O’NEIL FORD & GERALD R. ROGERS, Architects

ENTRANCE HALL has latticed ceiling above which is a louvered ventilating fan. Beyond solid entrance doors—only in cold weather—are heavy, louvered summer doors screened on the inner face. They give privacy, admit breezes.
ARDEN FRONT, THE HUGE SCREENED PORCH ACTS AS FUNNEL TO TRAP COOL SOUTHEAST BREEZE, HAS HEATED FLOOR FOR COOL DAYS.

FOUNDATION FRAMING consists of concrete piers and grade beams which are poured integrally into monolithic frame. This frame carries all load-bearing cavity brick walls. Concrete floor slabs are poured separately.

STREET FRONT, OPEN CARPORT BLOCKS HOT WESTERN SUN, SHIELDS BOTH FRONT AND SERVICE ENTRANCES.
Although engaged to design this South Texas house when it was nothing more than a gleam in the clients’ eyes, Architects Ford and Rogers firmly refused to put pencil to tracing paper until the McNeels had bought a lot. “You can’t design a hypothetical house,” is the way Ford puts it. “All that does is create a lot of preconceptions which later have to be unravelled.” A definite piece of land was thus acquired, an inside lot which was level, faced north, and had no particular outlook. It was 75 ft. wide, 135 ft. deep, and zoning required a 30 ft. setback along the street front. On this plot the architects were to build a house whose controlling factors were to be year-round comfort and easy housekeeping. Both have been neatly accomplished. The siting and floor plan of the house are such that all rooms are exposed to the prevailing summer breeze from the southeast—of critical importance in this land of low humidities but high temperatures—and to early morning sunshine. The screened living porch and terrace at the rear of the house achieve both breeze and privacy, while the service areas along the west act as buffer against the blistering western sun and cold winter winds.

Housekeeping is facilitated in many ways. All surfaces were selected for ease of cleaning: floors are of waxed cork tile, concrete and clay tile; walls are brick, plaster or waxed wood. There are no baseboards, little trim and doors are flush. This same determination to reduce details to the minimum led to replacing furniture as much as possible with built-in storage units. Kitchen counter tops and all table tops are surfaced with laminated plastic. The draperies and upholstery fabrics are rough-textured dye-fast cottons which wash or clean easily.

No effort has been spared to make the house comfortable the year around. Its fenestration is designed to let in as much of the prevailing breeze and to exclude as much of the light as possible. Its plan is designed for natural ventilation. This is supplemented by a large 42-in. fan above the entrance hall ceiling which can evaporate air from any or all of the principal living rooms. A smaller exhaust fan for utility room and kitchen is provided for winter heating, the McNeel house employs an oil system working through hot-water coils embedded in the concrete floor slab.

Structurally, the house is straightforward and efficient. It rests on a monolithic system of concrete piers and beams which carries 9 in. cavity brick bearing walls and heated floor slab rests on gravel fill. Ceiling lines follow the roof framing throughout, except in entry where the bedroom clerestory is continued to house main ventilating...
EIL FORD & JERRY ROGERS, Architects
CHELL CONSTRUCTION COMPANY, General Contractors

IN HOT WEATHER almost the entire living area of the house can be thrown together by means of jack-knife doors which fold up onto porch ceiling. Designed by the architects, these doors employ an ingenious counter-balanced suspension system which makes for easy, safe operation. (See below.)

CROSS-VENTILATION THROUGH LIVING ROOM (LEFT) AND MAIN BEDROOM (RIGHT) IS AIDED BY OVERHEAD DOORS

RESTORY GIVES LIVING ROOM ADDED LIGHT, VENTILATION

SECTION THROUGH JACK-KNIFE DOORS
AMPLE STORAGE SPACE is a feature of every room in the house. Mrs. McNeel finds that this saves floor space, facilitates cleaning, contributes to neatness.

OWNER'S STATEMENT:
My husband always had a yen for a sort of Southern Colonialness; I was intrigued by ranch style because I had lived for a while on a ranch. Along with about ninety-nine per cent of the American public, we were concerned with deciding on a house type. Then we saw Tomorrow's House in a bookstore, read it to each other and anyone else who would listen, dropped our widely diverse ideas like hot rocks and knew modern was the best for both of us.

We knew there were certain things we wanted the house to do for us, but hadn't the vaguest idea what it should look like— which was a good thing, as we had to overcome no preconceived Ideas of appearance. We wanted a lot on the south side of the street so we could live at the rear in privacy—the only thing in a part of the country where so many months a year are spent outside. We wanted clerestory windows; so did Mr. Ford, and there are many more such examples of agreement. In every case of a decision on materials, the one easiest to mop, clean or dust was the one selected. We have no servant, and there are many things I would rather do than dust bric-a-brac or clean woodwork.

Bill's favorite room is the workroom where his workbench is, although his inhabiting it is a matter of mood. My favorite is the kitchen, which was tailor-made to fit my working requirements. Mr. Ford endeared himself to me by saying on our first consultation, "Let's put the kitchen in the nicest place in the house," which he did. It has windows on the south, on the porch, a double-action door into the living room and a sliding door to the utility room near the back. With good ventilation, a view, an electric stove that reduces heat, a place, and the built-in sofa cabinet, the kitchen is the most constantly used, visited and appreciated room in the house. From June to September, the screened-in porch is a close second.

MRS. WILLIAM D. McNEEL

ARCHITECTS' SELF-CRITIC
We made certain mistakes, of course, because of immediate problems, but they were, well, just mistakes. We especially dislike the mantels in the windows but couldn't get large panes at the time. Some details, such as window frames and outside trim, seem coarse; and I wish we might have held the window sill in east basement at the same level as bedrooms. The low sills and slides of jack-knife doors, needlessly wide and bulky bars, didn't know what warping stress would be exerted in lifting them. I don't like the lowered hearth of the living room fireplace. It uses a lot of room, is a romantic idea suitable to a weekend lodge. No, I don't like the arched opening in the living room. It doesn't exist.
HEART OF THE HOUSE IS THE KITCHEN. Designed to reduce drudgery of cooking to a minimum, it has many special features, including an electric stove and oven built into cabinets at counter height, counters 3 in. higher than usual and a dining alcove with raised fireplace for broiling.

INSTRUCTION OUTLINE

Year round house for middle Atlantic region shows skillful use of available materials, built-in features.

By locating this house at the edge of a steep bluff which commands a peaceful meadow view, the architect was able to provide a really open plan, arranged so that all principal rooms face in one direction. Since the majority of his clients prefers a one-story house, he and his associates* have found, through experience, that only a certain number of room arrangements are practical. As this house demonstrates, one criterion for convenience and efficiency is a center entrance with the kitchen and bedroom units on opposite sides.

At the time of construction, lack of materials prevented anything but the most conventional method of building. Dry wall construction was out, as were metal sash and finishes such as plywood, oak floors, etc. Nevertheless, the owner obtained a 60 per cent mortgage from the Suffolk County Federal Savings & Loan Assn., who were enthusiastic about the house. Stock doors and windows and standard finishes were used for economy's sake. The handsome brick flooring in the living room and hall was found to cost more than wood. In the bedroom wing, cork flooring is used throughout. Interior color scheme is predominantly blue and green, complementing the warm color of the brick.

The covered entry holds the driveway away from the house, economizes on the amount of roadway needed for service since the kitchen is accessible through the adjacent drying yard. A curved wall to the left of the entrance way is planned for future construction. This will create a pleasant little garden on the approach side, overlooked by the playroom-study and dressing room. It will be noted that no stress has been put on cross ventilation in the bedroom wing, but the general circulation of air in the house has proved this unnecessary.

* Stanley C. Reese, Alexander Knowlton, J. Graham Stewart and Karl J. Holzinger, Jr.

TERRAIN IS LEVEL ON APPROACH SIDE OF HOUSE, DROPS PRECIPITously ON THE SOUTH
DRYING YARD

GARAGE 25'-0"x 21'-0"

BED RM 12'-0"x 10'-0"

KITCHEN 9'-0"x 12'-0"

PLAY RM 9'-0"x 10'-0"

BATH DRES-AM

STOR 4'-0"x 5'-0"

LIVING ROOM 20'-0"x 16'-0"

STORE RM 8'-0"x 10'-0"

ENTRACE TO BED RM

CHILD RM 10'-0"x 10'-0"

CHILD RM 10'-0"x 10'-0"

LIVING ROOM 15'-0"x 16'-0"

PORCH 6'-0"x 9'-0"

DINING 10'-0"x 10'-0"

SCALE: 1=10'

TERRACE OUTSIDE DINING AND LIVING ROOMS. EXTERIOR FINISH IS BRICK VENEER AND STAINED CYPRESS WITH TERRA COTTA TRIM
CONSTRUCTION OUTLINE

SECTION THROUGH LIVING ROOM, kitchen and heater room (the only excavated portion of the house), above. Detail of south window of living room, left.

CLERESTORY ON NORTH SIDE OF LIVING ROOM DRAMATIZES CEILING PITCH

LIVING AND DINING ROOMS ARE FULLY OPEN TO EACH OTHER BUT PINPOINT LIGHTING IN THE LATTER LENDS IT INDIVIDUALITY BY NIGHT
OWNER'S STATEMENT:

We wanted a house that would be roomy but still not too large to keep easily. We were thinking ahead, too, to fifteen or twenty years from now when the children would be grown up and off on their own. For this reason we decided on a large living-room and just comfortable sized bedrooms.

The built-in furniture and cabinets are wonderful—they not only make the rooms very easy to take care of but give a feeling of spaciousness. They're especially good when there are children around. They can't knock over the furniture or hide things behind it.

There were a number of changes which came up during the planning process. We intended to have the garage beside the entrance but it would be too near the road (a local ordinance says that the building must be 40 ft. back). However, we still kept the covered entry and used the left wall to conceal the drying yard—when you have two small children you must have a drying yard.

One thing we were worried about has worked out very well—the soundproofing of the children's bedroom which is right next to the living-room. The bookshelves and closets between the bedroom and the hall augment conventional sound insulation on the living room wall and are completely effective. The outside fin also insures visual privacy too.

MRS. WALTER JANNEY
This Midwest house, with solar windows, water-cooled roof, cavity walls and cellular floors, masters a difficult climate in the Midwest, temperatures of minus sixty and plus one hundred are often encountered. These are the temperatures that Midwest houses must be designed for, and they impose certain limitations on design and costs. It is my thought that such factors ultimately will develop regional types of architecture for the States.

The Davies house was built in the spring and fall of 1946. All materials were difficult to obtain, and workmen were difficult to obtain. It was difficult to get special window frames made, mention one item. It is difficult to build anywhere today. There are forces in this country that held the construction industry to prewar techniques, which were obsolete then. The conditions still obtain. We cannot expect too much from an industry that has been dormant since 1945. New talent was not attracted to the industry because there were no commissions. It takes time for new industries to develop; it does not happen in a week or a month or two, or in a couple of years. On top of all this, a product better than any that has come before must be developed. Such experimentation has been going on for years, and certain matters have proved themselves, many have not.

The Davies house was not cheap in terms of prewar costs, which many of us have not forgotten. It contains many features that prewar houses do not. An ordinary house with prewar specifications might have cost a little less, but much.

The house is a solar house with all important rooms facing south. Construction is simple and substantial, as is necessary in this climate. Upkeep on the house will be low; materials chosen available at the time of construction; craftsmanship not perfect, but as available at the time of construction.

As the building industry changes over years, this house will not be as obsolete as others that do not meet contemporary needs and ideas. This fact should satisfy the difficulties encountered in construction.

GEORGE FRED KECK, Architect
For some years George Fred Keck has developed, with thoroughness and consistency, a characteristic approach to domestic architecture. In his latest house, for Mr. and Mrs. Sydney Davies near Chicago, this attitude is restated. Here again is the unequivocally rectilinear plan of whose principal rooms are disposed so as to face south, while circulation and service areas occupy the northern face. Here, too, is the all-glass wall across the southern facade, with continuous bands of louvered vents along top and bottom. Divided into approximately even bays, this solar wall is protected by wide eaves and projecting wing walls. And the rooms, like the exterior, reflect Keck's insistence on order and simplicity.

In structure, as in general appearance, many familiar details of Keck's work appear in this house. Typical is his structural response to a rigorous climate. Floors, walls and ceilings have each been designed for maximum resistance to heat in summer, cold in winter. The built-up roof is dead level, designed to carry a one-inch sheet of water as summer insulation; and air spaces between joists are open for cross ventilation, with mineral wool blanket and plaster ceiling suspended below. The masonry walls are of cavity brick construction with a mineral wool filler. The radiantly-heated floors employ hot air forced through a cellular tile whose upper surface is only cleaned and waxed to form the finish floor.

CONSTRUCTION OUTLINE
FLOOR HEATING SYSTEM consists of cellular clay tile blocks laid on concrete subfloor. Before grouting, metal sleeves are slipped between tiles to connect cells to form continuous tubes across floor. Supply and return ducts, also clay tile, have perforated tops, are laid below floor tile. Originally designed by Architect Keck, this system is now in commercial production.

OWNER'S STATEMENT:

Sydney Davies and I have always been interested in modern design. Prior to the war, when living in Puerto Rico where I was working on the construction of an air base, we became accustomed to living in open spaces that afforded lots of light, sunshine and beautiful vistas. We noticed the great lack of these things when we came back to conventional houses in Chicago.

On my return I was commissioned by the Navy and served two years in the South Pacific, again enjoying the feeling of living out of doors. Through correspondence Mrs. Davies and I decided that modern design is for us because it tried to obtain a tropical atmosphere in our colder climate. We probably get more enjoyment out of the one glass tile in each room than from any other feature in which the house differs from the conventional type.

Sydney H. Davies
The dominant factor in the development of California's domestic architecture has been the existence of a growing native tradition, or, rather, the lack of a stifling formal tradition. The resulting freedom of thought has given the architect an untrammeled concept that does not exist in other parts of the country.

Geographically, many California cities are located upon land so mountainous that they defy the usual gridiron plan; thus, sites have the grace of vista, sun, wind and privacy. Climatically, a season of heavy rains followed by months of hot sun permits a freedom in breaking down the outside wall to a degree not possible elsewhere. Even in the months of intense heat, the constant breeze from the sea affords coolness. Materially, the availability of wood as an inexpensive building material and the appreciation of its beauty and strength has brought about a refinement in structure and detailing that is almost oriental in its sparing simplicity. Finally, the concentration of wealth—wealth available for immediate use—has been of great importance.

Initially, development took place in the flat valleys that lie between the foothills, a development based upon ease and economy of construction. Today, new residential building is forced to the surrounding hills or to satellite cities miles away. Site considerations, then, are most interesting. From almost any height, a view is given of a sprawling city—particularly magnificent at night—the ranges of mountains, or the sea to the west.

Assuming the basic needs of the client, the plan is freed and yet limited by the climate. Portions of the house may be directed to the breathtaking views, but there also must be the completely sheltered garden that becomes part of the living area, and finally the protected shelter where one may withdraw completely from the outside. Other considerations that affect the form of the roof and the disposition of wall and mass are the extremes reached by both sun and rain in their major seasons.

Perhaps the use of light itself is the great influence upon planning. The quality of light of each part of the day must be used or limited as the use of the particular living area requires. This is accomplished by clerestory venting windows, sheltering walls of the sleeping rooms, translucent screens that turn sun into coolness, and glass walls that allow the full measure of sunlight to play in the general living spaces.

Green planting to relieve the harsh dryness of the summer months is used to interpenetrate the living space and thus relate the garden to the house. Conversely, by the use of an overhead screened trellis that is a continuation of the roof plane, the actual living area flows out and embraces the garden.

For the first time, natural wood is enjoying the greater use in contemporary work than plaster, for economy nods toward the use of wood as an exterior wall covering. Rough-sawn boards on exterior walls for form and texture may be used as a foil for the magnificent sophistication of waxed plywoods on the interior.

Youth has learned to recognize that contemporary architecture represents a way of living that transforms the home from its role as mere shelter to the center of an existence. Architects capable of making this possible must work toward this end as one phase of their practice. This, of course, can be economically possible only when it is approached through industrialized mass production or when the field of speculative building is entered with the force of outstanding design. The time has now come when decent living no longer should be the exclusive right of the wealthy or the intellectual, but, rather, must be shared with the great mass of America that cannot afford the luxury of the architect. Realizing the social needs of his time, the architect must accept the responsibility of leadership in this field regardless of a minimum schedule of fees or any other consideration which has heretofore acted as a moral barrier.

GORDON DRAKE, Designer

Modular house on Pacific coast capitalizes on the area's famous topography, climate and materials.

Julius Shulman Photos
Hugging the north side of one of Los Angeles' steepest hills, this house is a compromise in design between the free planning suggested by the ruggedness of the site and the rigidity of an eminently simple construction system. Although its design was also influenced by the rather lush requirements of a well-to-do client, the house is a mock-up of a modular, panelized building which may eventually be prefabricated for the average family and the average site.

The construction system demanded that the house be on one level, but otherwise the plan was dictated by the requirements of site and client. Thus, the house opens mainly to the north because there was no alternative; the steep slope of the site allowed only one possible garage location; the city view to the north, the sheltered vista to the east and the garden area and hillside to the south controlled the location of glass and plywood panels. To retain as much garden area as possible, the entry was located next to the garage, screened from the garden terrace by a wood wall and from the living room by a huge built-in sofa. Occupying the least desirable portion of the site's leveled area, the kitchen and baths look directly into the hill.

In addition to many large windows, a clerestory benefits all living and sleeping areas by admitting the morning sun, achieves an eye-comforting balance of light and gives the rooms a pleasant feeling of vertical spaciousness. The dominant design feature of the south front, this clerestory also adds interest to the birdseye view of the house which is seen by the approaching visitor. Its delicate tracery is set against a roof finish of crushed brick, whose color creates a subtle transition between entourage and house.

Although this quasi-experimental project clearly demonstrates the attractive possibilities of prefabricated panel construction in the hands of an expert designer, the designer himself has noted several modifications in plan which would make the house more suitable for mass production and universal application. Embodied in the sketch plan (right), they include a rectangular two-car garage, a central entrance, casements instead of sliding glass doors, and one instead of two baths.
OWNER'S STATEMENT:

Even with the extensive use of glass, the position of the house gives us utmost privacy from all directions. Moreover, the clerestory windows, all of which open, make for marvelous ventilation so that even on the hottest days we have a lovely breeze circulating through the entire house. The lightness and airiness of the house are actually what we appreciate most; also the fact that the light is so well-balanced that there is never glare.

The many built-in cabinets are excellent because of their simple lines, the ease of cleaning them, and the ample storage space they provide. By their use, the kitchen, which actually is small in area, is so well planned that there is more cupboard and closet space than in some kitchens much larger in size. The position of the kitchen is fine, for it is equally easy to serve meals outside in the patio and indoors.

The only thing which displeased us, of course, is the cost. Had we known at the outset that the final figures were to be so much greater than the preliminary estimates, we probably would have built a smaller home. However, having lived in the house, we find it hard to think of any feature we could have eliminated.

Considering that the completed building was not far short of a completely furnished house, and comparing it with other houses for the same cost which offer far less, we are confident that we got our money's worth even in this inflated market. And, being the type of house it is, it can hardly depreciate in commercial value, or in intrinsic value to us.

DAVID PRESCLEY
Designed to a 4 ft. module, the 15,560 cu. ft. house is comprised mainly of 4 x 8 ft. stressed skin plywood panels. When they fitted the design, the stock panels of an established prefabricator were used; otherwise, panels were locally fabricated. The diagram above indicates the extent to which the house is panelized, while the detail drawings to the right show how the various elements go together.

So pleased are the architect and prefabricator with this combination of contemporary design and panelized construction that they are negotiating for the mass production of panels from which this and similar houses may be built. If and when mass production is effected, unit costs will be cut below the $1.38 per cu. ft. cost of the experimental mock-up.

CONSTRUCTION OUTLINE

CEILING OF FROSTED GLASS DIFFUSES CLERESTORY LIGHT

VIEWED FROM ENTRY, STUDY-BEDROOM OPENS TO LIVING AREA

GE BEDROOM FEATURES BUILT-IN CABINETS, CLERESTORY LIGHTING AND EAST WALL OF GLASS OPENING ON INTIMATE GARDEN TERRACE
OF OVERHANG PROTECTS THE MASTER BEDROOM FROM DIRECT MORNING SUN

WED FROM TERRACE, BEDROOM IS BRIGHTENED BY LIGHT WALLS AND TWO-SIDED CLERESTORY

Julius Shulman Photos
FABRICATED FACTORY, born of war-time shortage in steel, is built entirely of wood products and boasts many interesting structural features in laminated wood. Ervay Baker, architect.

One-half of hinged arch is swung into place.

Foot of arch is fixed in steel hinge anchored to concrete foundation.

Half arch is in place, ready for joining to other half.

HALVES are bolted together at apex (right) to form striking arches with cantilever arms along either side (below).

Typical of the many interesting experiments in wood and timber construction produced by wartime steel shortages is the Hammondsport (N. Y.) plant for Mercury Aircraft, Inc. Designed by Architect Ervay J. Baker at a time when steel was all but unobtainable, the Mercury plant is perhaps the largest all-wood, all-prefabricated structure of its kind. Every element in it—columns, trusses, hinged arches; floor, wall and roof panels—is of wood, and all of them are prefabricated. Moreover, all the more complex units were "home made." Since there were no nearby facilities for fabricating, Architect Baker set up a circus tent (see next page) and successfully produced the units right on the site.

Handsomest of all the elements employed in the Hammondsport factory are the composite hinged arches in the main assembly building. In this unit, a span of 60 ft. and a clearance of 20 ft. was required down the center aisle, with sub-assembly mezzanines along either side. Baker solved the problem with a series of eight giant arches whose 17 ft. cantilever arms carry the mezzanines.

The arches proper are of laminated wood, designed for eccentric loading. After fabrication in the shop, each half arch was swung into place, fixed to prepared foundations and bolted to its partner at the apex hinge. When the whole series was in place, connection was by wood trusses using timber connectors instead of by nails or glue. Acting as purlins, these trusses received the prefabricated wood and plywood roof panels. After panels were in place a standard built-up roof was laid on their upper surface. Side walls were composed of similar panels, supported at main floor and mezzanine.

Despite the fact that both fabrication and erection took place during cold weather, and despite the utter lack of equipment normally considered essential to production of complex laminated forms, Architect Baker found the system both moderately priced, simple and rapid to erect.
STEAM-HEATED TEMPLATES speed site fabrication of hinged arches during cold weather. Using a waterproof resin and engineered nailing pattern, lower chord of arches was built up to 15 plies.

NAILING PATTERN was controlled by this ingenious marker. Rolled along outer surface of each ply, it spaced all nails so that they were evenly distributed through chord's cross-section.

CLAMPS hold each nailed and glued ply in place until resin has set. Composed of 15 plies, these chords depend upon nailing for a large portion of their total strength.

SANDING of completed lower chords was done with a portable sanding machine. Chords were then placed on jig tables for final assembly with rectilinear members to complete the arch.

Webbed truss of novel design also laminated on site by Architect Baker.

Among the many laminated elements used by Ervay Baker in the Hammondsport plant were these webbed trusses of his own design. Employed only on the second floor of the office wing, the trusses span 36 ft. and are bolted directly to the tops of two-story timber columns. Like the hinged arches above, they were fabricated on templates and jigs built on the site. The webs are of plywood, stiffened with laminated ribs, and glued into the truss proper under heat and pressure.

ABHESIVE was spread on inside of each successful plank. Then, working from one end of template, plank was bent into place, pre-set nails driven home. Another ply had been added.

NINETY-SIX FOOT LAMINATED ARCHES SUCCESSFULLY FABRICATED IN TENT.

Ingenuity marked the fabrication of the eighteen hinged arches used in the Mercury factory. Although structurally quite advanced, the arches were successfully fabricated with simple tools under almost primitive conditions. Under a circus tent, Architect Baker built his templates for the curved members of the arches. He built them waist high to make fabrication easier, then ran a steam pipe around the outside of each template. This served the double purpose of warming the work and drying the glue. The rest of the process was largely a matter of carpentry.

SWUNG INTO PLACE by cranes after floor framing was complete, these laminated trusses were bolted directly to tops of two-story timber columns. Prefabricated roof panels were then fixed to upper chord of truss and prefab wall panels fitted in place.
Graphic proof of the merits of prefabrication is available in Montreal these days, where 1,100 neatly-packaged factory-built bathrooms are being swung into place in the new 22-story Laurentian Hotel. And Montreal citizens who might have doubted their eyes had found the fact confirmed by newspaper ads (top, left) offering packaged bathrooms to all comers for as little as $430, f.o.b. the factory. Prime movers behind this long-awaited development are St. Catherines Steel Products Ltd. (producer) and Canadian Comstock (distributor) who last year pioneered with a mechanical core (FORUM, Jan., '46). Together they have produced, sold and, in some cases, installed some 2,100 units of their factory-built "Unitility" bathrooms.

Newsworthy as is the actual commercial availability of a bathroom which can be installed and ready for use in a couple of hours, there is nothing extraordinary about either the process or the product. The manufacturers of Unitility have only done what everyone has been talking about for a decade. The designs themselves are merely rationalizations of the typical, site-assembled bathroom. The fixtures are identical, the plumbing harness similar. Major innovation is, of course, the metal structural shell. This consists of rigid, welded steel frame; aluminum walls and ceilings with baked enamel finish; linoleum floors and integral base cemented to rigid, steel plate floors. All joints are sealed by extruded rubber trim, and the exteriors of all floor, wall and ceiling surfaces are covered with heat- and sound-insulating mastic.

Each bathroom is completely equipped when it leaves the factory, includes towel racks, shelving, mirrors, light, etc. Each unit has wood or metal door, complete with hardware, metal trim and threshold. Thus, the Unitility requires only four connections to complete installation: ventilation, water, sewer and electricity. Moreover, these are all made from the outside, so that the bath need not be unlocked until building is finished.

Exterior of the Unitility walls is designed to take any type of finish—plaster on metal lath, hardboard, plywood—and the metal door jamb is detailed to receive and cover it (left).
PRODUCTION LINE USES COMMON-SENSE RATIONALIZATION TO PRODUCE 300 BATHROOM UNITS PER MONTH

Utility production employs standard trades, materials, equipment.

Using a converted war plant at St. Catharines, Ont., the Utility people have set up a 100 per cent-unionized production line currently turning out 300 units per month. The working force of 126 men works an 8-hour day, 5-day week and is drawn almost exclusively from the building trades. Floor space is available for tripling this production if conditions warrant. As the pictures indicate, there is nothing radically new about the operation. On the contrary, the manufacturers are only exploiting the inherent advantages of shop fabrication: controlled working conditions, precision, cleanliness, access to power tools, etc.

Three basic models (with tub, with shower stall, with lavatory and w.c. only) are produced in both left and right-hand versions. All component parts are standard brands—most of them from American companies. The standard unit, weighing about 1,500 lbs., is shipped without crating, seven to a freight car or five to a trailer.

Easily and safely handled by crane or derrick, the Utility installation in the Laurentian Hotel (right) is a typical multi-story one. As precast floor slabs were laid floor by floor, units were hoisted up, rolled across floor, slipped into slots exactly sized to receive them. Units' floor channels were then bolted to structural steel from below (above, right). When finish floor was poured, bathroom floor thus was on same level. In the Laurentian, the units were set back-to-back and hooked up to vertical ventilation and plumbing stacks (right).
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Here's an important section of the production line in the Apex Electrical Mfg. Co. plant in Cleveland, Ohio. It's the spray booth where DUST-STOPS Air Filters (behind the operators and in the air intake areas at the doorway) prevent dust, dirt and foreign matter from causing costly damage. DUST-STOPS also protect electrical controls and other equipment from air-borne paint.

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DUST-STOPS Air Filters are used in commercial and industrial heating, ventilating and air conditioning systems of all sizes. They may be installed in custom-built or the complete, ready-to-assemble, steel frame cells—to handle any cfm of air required. And DUST-STOPS are readily available from suppliers in nearly every community.

See Sweet's Files for complete information or write for booklet—"Air Filtration in Central Systems" (A 5.2.1), Owens-Corning Fiberglas Corporation, Dept. 890, Toledo 1, Ohio. Branches in principal cities.

In Canada: Fiberglas Canada Ltd., Toronto, Ontario.
New composition found effective for use in radiantly-heated floors.

1. After scratch coat of bark and magnesite is poured and screeded, resistance coils are laid out and tacked in place.

2. Finish coat, using same one-to-four formula but integrally colored, is then troweled over coils.

3. When floor has set properly, finish coat is polished with ordinary sander. Photo at right shows five sizes in which bark "aggregate" is produced.

The new composition floor shown above is one of several recently installed by the Raecolith Flooring Company in Seattle. Composed of powdered tree bark and magnesium oxychloride cement, the floor is laid like concrete, polished like terrazzo and yields a surface almost as quiet and resilient as linoleum or rubber. Moreover, the composition is "exceptionally economical" when used with heating coils—either electrical or pipe, according to the firm.

The aggregate used in these floors is Silvacon, new Weyerhauser product made of powdered treebark. Designed primarily for use as a filler for industrial plastics, Silvacon comes in five particle-sizes (right above) and a color range of yellow and brown. The Raecolith company used type #412, in proportions of about 1 to 4, with a standard oxychloride cement. Highly resistant to oils and acids, the new floor may be integrally colored and polished to any desired finish. Its light weight and comparatively high strength permits its use for resurfacing old floors as well as new. It can be applied in continuous sheets, without dividers or expansion joints. Although this cement cannot stand continuous exposure to water, its long use on ships and railroad cars indicates its resistance to frequent washing, traffic and vibration.

Surface characteristics of the flooring can be varied with the mix, but tests indicate that best workability and highest strength are achieved when Silvacon aggregate is held to 15 or 20 per cent by volume. A 1-to-4 mix was used on the Seattle jobs, a 1-to-4 mix was used as a base or scratch coat (although the composition is said to bond equally well to standard concrete, wood or even steel plates). After the scratch coat had set, the electric coils were laid out and tacked in place. A finish coat with color added was then poured and screeded. After the floor had thoroughly set, it was sanded and waxed.

(Continued on page 126)
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- Insul-Vent Two-in-One Screens and Storm Windows enhance the beauty of any home. The outer permanent frame molds itself into the window opening giving a modern appearance of sturdiness and symmetry. Sash sections are formed by roller dies. Ribs at strategic points give added strength. Between all walls on both screen and glass panels, string solder is inserted and melted for added sash rigidity. An average Insul-Vent sash, less glass or wire, can be suspended from any corner and sustain without collapse weights up to 100 pounds.

- Both glass and screen inserts are internally reinforced and welded. A quality product in every respect, the steel in Insul-Vents is triple-treated for lifetime protection; first it is electro-zinc coated; next, chemically treated with Iridite to form a base for paint and as a protective finish; finally it is heavily coated with Frescote Enamel baked at 350° F. Glass is best commercial grade. Screens 16 mesh, .0113 diameter bronze wire cloth.

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ALCOHOL AND ALKALI RESISTANT: Unharmed by hot, soapy water, alcoholic liquids, or mild acids such as fruit juices.

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Another contender for the permanent housing market in Britain is the Cussins House—a semi-detached, two-story prefab which costs approximately $5,200 per dwelling unit. The house is framed of steel and surfaced with a precast, brick-faced concrete panel. Although the roof is tile, applied at site, and all interior walls are finished in plaster, the manufacturers have been able to erect complete unit in seven days. (Continued on page 130)
A Distinctive New Product... for A Widespread Need!

Here it is . . . the sink that most satisfactorily meets the need for unusual capacity and convenience—a product of the combined experience, research, and know-how that has made “American Kitchens” the pride of the homemaker and the envy of competition.

This double bowl, double drainboard sink—66 inches wide—provides utmost working comfort, convenience and beauty. Its outstanding features—such as larger bowls, front to rear, due to exclusive American design, wide drainboards, extended front and recessed bases, rounded drawer interiors—give architects and builders reason for pride in their part in its development—and provide important reasons for recommending its installation in new homes or remodeled kitchens.

Note the numerous and unusual advantages of this new sink...designed to make kitchen tasks easier for any woman.

AMERICAN CENTRAL Division—Avco Manufacturing Corporation
Connersville, Indiana

Total width... 66 inches
Depth, front to back... 25 inches
Height, incl. backsplash... 40 inches
Drainboards... 14 3/4 x 19 3/4 inches
Each bowl... 15 x 19 3/8 x 7 inches
Three storage compartments
Two regular drawers
Two concealed drawers
ENGINEERED AIR CONDITIONING

by the Men Who Wrote the Book

The "bible" of the air conditioning industry is a 376-page book, entirely devoid of commercialism. In it are clearly explained the terms, workings, and applications of all phases of air conditioning. So helpful and complete is this book—written by Trane Engineers at Trane expense—that it has worldwide use as a standard reference by architects, engineers, and contractors, and also as a text by students of air conditioning.

The same men whose experience made the Trane Air Conditioning Manual possible produce Engineered Air Conditioning. It is these men who engineer and build the most complete line of products for air conditioning and heating in the industry—products that are designed and built together for use together, and that reflect the high standards of Trane product engineering.

Because Trane manufactures a complete line, architects, engineers and contractors can plan entire Trane systems, obtaining all the necessary elements from one source with one responsibility. Trane Field Offices in 85 principal cities offer these men the entire cooperation.

The Convector-radiator—modern successor to the old-fashioned cast iron radiator—has been engineered by Trane for universal application to steam and hot water heating systems, and is being produced in quantity so you can now secure it from local distributors' stocks.

TRANE
Manufacturing Engineers of Equipment for HEATING AND AIR CONDITIONING

THE TRANE COMPANY, LA CROSSE, WISCONSIN • Also TRANE COMPANY OF CANADA, LTD., TORONTO, ONTARIO
For well-planned kitchens:

The KOHLER Wellwin sink

THE Kohler Wellwin sink has advantages that can easily be recognized and appreciated by the average home owner. It carries immediate assurance of first quality, of which the name Kohler is a well known symbol. Its two roomy compartments make it ideal for working comfort, and it fits readily into convenient kitchen arrangements of various types.

The Wellwin has a time-tested, solid base of cast iron to which is fused the lustrous, pure white Kohler enamel. Housewives appreciate the easy-to-clean surfaces which are acid resisting and give long wear. The Edgewater fitting with swing spout is made of durable, chromium plated brass, and mounted on a 3\(\frac{3}{4}\)-inch ledge. The spray operates conveniently by pressure of a lever on the nozzle. Write for further information.

Kohler Co., Dept. M, Kohler, Wis. Established 1873.

An example of how the Kohler Wellwin can be adapted to a modern floor plan that provides for economy of both space and effort. Size, 42 x 25 inches.
Only Sloan can say this:

92.5% OF ALL HOSPITALS® ARE SLOAN EQUIPPED—
61.3% OF ALL HOSPITALS ARE EXCLUSIVELY SLOAN!

There are several reasons for Sloan's preeminence. For one thing, maintenance costs are reported as low as 3/4 of 1c per valve per year. Then, too, Sloan Flush Valves save water; they protect public health by preventing back syphonage; they can now be whisper quiet; they have unlimited life—yet cost no more. That is why more Sloan Flush Valves are sold than all other makes combined.

SLOAN VALVE COMPANY • 4300 W. Lake St., Chicago, Ill.

*Hospitals of 100 beds or more.
**BURNHAM BOILERS SPELL**

**Dependability and Efficiency**

**FOR EVERY TYPE OF**

- residential
- institutional
- and commercial

**INSTALLATION**

**BURNHAM DE LUXE**
*For Oil Only*—Designed for highest efficiency at minimum operating cost. A vertical fire-travel boiler with combustion chamber completely surrounded by water. Heat absorbing fins avoid heat waste.

**BURNHAM SQUARE**
*SECTIONAL—37"-21"-27" Series*
For All Fuels—Designed for medium and large homes and buildings. Tube type construction establishes higher operating efficiencies on hand-fired coal or automatically fired boilers. Famous “three times back and forth fire-travel—the big fuel saver!”

**BURNHAM SQUARE**
*SECTIONAL—50" TWIN*
For All Fuels—A husky boiler built in twin sections. For apartment houses, hotels and other public buildings. Twin grate assembly. A superior boiler that will deliver maximum heat at lowest cost. 80 inches high overall; 71 inches wide.

**BURNHAM YELLO-JACKET**
*For Automatic Firing—Oil, Gas, Stoker.* Famous for its low-cost operation and dependability. Large combustion space to assure rapid heat absorption. Sections with heat grabbing fins. Built-in heaters for year round automatic hot water.

**BURNHAM SQUARE**
*SECTIONAL—36"*
For All Fuels—A larger version of boiler at left—for large dwellings and buildings. Same extended fire-travel—same fuel saving efficiency—same heat absorbing design. Unjacketed. A popular and highly satisfactory heating unit.

**BURNHAM WELDED STEEL**
*(Compact Series)*
For Coal, Oil, Gas and Stoker—Famous Burnham extended fire-travel—3 times length of boiler. High boiler efficiency—low fluid temperatures. There’s no better designed boiler of this type construction. Conforms with ASME Code and SBI Code for low pressure boilers.

Steadily increasing production has placed us in a position to make reasonably prompt deliveries on most styles and sizes. Let us know your requirements.

**Burnham Corporation**

**BOILERS and RADIATORS**

**IRVINGTON, N. Y., Dept. AF97**

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Conveniences are important in small homes as well as large. Certainly a raceway for concealing telephone wires belongs in every plan.

The builder can easily install telephone raceways while construction is going on. A few pieces of pipe or electrical tubing are often enough to provide a clear passage for telephone wires through outside and interior walls to convenient telephone outlet locations.

Your Bell Telephone Company will be glad to help you plan modern telephone arrangements for small as well as large homes. Just call your Telephone Business Office and ask for “Architects and Builders Service.”

**BELL TELEPHONE SYSTEM**
"above thy fruited plains"

This, too, is America. For true character is no better symbolized than by the fundamental goodness of the soil . . .

And the more than six million fertile farmsteads, peopled with the earthy, land-wise sons and daughters of the country, who multiply the talents of nature to feed and clothe their fellow men. Nowhere does the "nobility of man" find kinder expression!

On the farm, as in industry and commerce, imagination and determination have always mixed freely to achieve our highest aims. But the painful transition from tilling earth with sharpened sticks to rolling the furrows of soil with multiple plows was no harder for the farmer to affect than the change from the sweep well to the automatic water system.

Only the invention and mass production of steel pipe finally banished the old oaken bucket and made fresh, pure water under pressure available at the turn of a tap in the house, the barn or the "north forty."

Today America is the "bread basket of the world" largely because steel pipe . . . for irrigation, stock watering, spraying, labor saving, sanitation and just plain convenience . . . has made farming a modern industry. It is the medium by which and through which the energies of water, gas, steam, oil and other resources of America are made the servants of Americans. Yes, steel pipe makes it possible!

The interesting story of "Pipe in American Life" will be sent upon request.

Committee on Steel Pipe Research
OF AMERICAN IRON AND STEEL INSTITUTE

350 Fifth Avenue, New York 1, N. Y.

STEEL PIPE MAKES IT POSSIBLE!

. . . better living through pipes of steel for plumbing and heating purposes.
VISION IN MOTION. By László Moholy-Nagy. Paul Theobald, 5 North Wabash Avenue, Chicago 2, Ill. 361 pp. Illustrated. 8 full color plates. 8 1/2 in. x 11 in. $10.50.

As an extension of his previous work, The New Vision, which attempted to explain the educational methods of the old Bauhaus, this posthumous book by Moholy-Nagy expounds the philosophy underlying the educational program of the Art Institute, Chicago—successor organization founded by the author. While the second work is more ambitious and extensive in coverage, it is also a shade less esoteric. However, it's still no intellectual cinch, despite the fact that it was written "for the artist and the layman, for everyone interested in his relationship to our existing civilization."

Whether or not Moholy-Nagy was, in his own right, a creative artist of great significance is, in the light of this book, secondary to his life-long attempt to effect a complete integration of contemporary art, technology and science and a resulting liberation of modern creative ability along constructive lines. His influence as teacher and artist has been one of the strongest of our generation but, in order to realize its full scope, it must be made comprehensible to laymen as well as to students. Unfortunately, although Vision in Motion does not entirely accomplish this end, it is a step in the right direction, tending to offset the deep aura of mysticism with which his more fanatical apostles have surrounded the name of Moholy-Nagy.

Appreciation of the author's cultural efforts lies in understanding his philosophy. Their realization lies in mass re-education, the embryo of which is to be found in the old Bauhaus program.

Speaking of this re-education, Moholy says: "The public is eager to learn; but without having been taught to think analytically, it succumbs to the influence of quick-flash commentators hired by, or unconsciously servile to, pressure groups..." Not given the tools of integration, the individual is not able to relate all this casual and scattered information into a meaningful synthesis. He sees everything in cliches. Every sensibility dulled, he loses the organic desire for self-expression even on a modest level. His natural longing for direct contact with the vital, creative forces of existence becomes transformed into the status of being well informed and well entertained. Not that the ills of our civilization is new or particularly commendable—it is the author's faith in the potentiality of mankind and his formula for its ultimate social and cultural fruition that is important. He says: "Every human being is individual as well as social waste to have eyes and not see; ears and not hear; to destroy the endowment of instinct to create. The result is an atrophy of capabilities, a step-by-step deterioration... Everyone has a creative nature. Everyone is naturally equipped to receive and assimilate sensory experiences; to think and feel... The sincere expression of the layman in any medium can be the start for 'art'. This is why the amateur is one of the hopeful promises of a future society. He is an authentic testimonial of the manifold abilities of the human being to act and react purposefully if emotionally stimulated... Today, lacking the patterning and refinement of emotional impulses through the arts, uncontrolled, inculcated and brutally destructive ways of release have become commonplace. Unused energies, subconscious frustrations create the psychopathic borderline cases of neurosis. Art is that expression of the individual can be a remedy by sublimation of aggressive impulses. Art educates the receptive facilities as it revitalizes the creative abilities. In his way art is rehabilitation therapy through which confidence in one's own creative power can be restored."

This emphasis on individual expression may seem no more than a spark in infinity when related to the ultimate integration and perfection of the human intellect. However, Moholy's educational concept is a basic way of thinking which can help but penetrate and effect all phases of life and human relationships. Because it is primarily a sensory education it is drawn forth and nurtured rather than applied like a static imprint of academic learning and, for this reason, envisages a limitless scope. But, while recognizing an individual's urge in every human, Moholy is completely objective in his evaluation of individual limitations. As he puts it, "only the person who is able to rise beyond private sensations and translate his intuitive grasp of the unadulterated problem of his own time into imagery...that is, into visible, audible and tactile forms can be a 'true'—or an artist of consequence. Even in the 'poor,' 'good' and 'better' the creative impulse is not to be ignored since the keystone to Moholy's philosophy is his belief that design is not a profession but an attitude that exists in all human endeavor requiring nothing more than education and release to emerge as a tangible quality. As he says in his explanation he says: "There is design in organization of emotional experiences, in family life, in labor relations, in planning, in working together as civilized human beings. Ultimately, all problems of design merge into one great problem: 'design for life.' In a healthy society this design for life will encourage every profession and vocation to play its part since the degree of relatedness in all their work gives to a civilization its quality. This implies that it is desirable for everyone to solve his special task with the wide scope of a true 'designer,' with the new urge to integrate relationship. It further implies that there is no hierarchy of the arts, painting, photography, music, poetry, sculpture, architecture, or any of other fields such as industrial design. They are equal valid departures toward the fusion of function and 'design."

(Continued on page 1)
THE SATURDAY EVENING POST

As seen in Color in...

You'll build or remodel better with Gold Bond

You can start building sooner if you start planning now. See your local Gold Bond Dealer!

We call it "Outside Inn"

What? Build an open ranch house in cold Vermont? It seemed crazy until our architect suggested this clever idea. Now we just sketch a panel and paint! We have a living room open to the summer house. Yet in winter we have a house as snug and easy to heat as any home in all New England, ...

There are a host of good ideas for you here if you're planning to build or remodel. But some of the best ones aren't visible in this picture. For example, under the outside finish are wide panels of fire-proof Gold Bond Gypsum Sheathing. They give the house greater structural strength and weather protection because there are fewer joints. And thanks to modern building research, this better Gold Bond sheathing costs even less than old-style inflammable sheathing!

Inside the sheathing, between the wall studs, is another big idea for you. It's insulated Gold Bond Rock Wool insulation that keeps the house warmer in winter and cooler in summer. Cuts heating bills by as much as 40%. Can be "blown" right into the walls and top ceiling of the house you're living in now.

Whether you're building a ranch house or a Cape Cod cottage, the inside walls will be stronger and better-looking if they're built of Gold Bond Gypsum Lath and Plaster, and painted with Gold Bond Paints. This wonderful new one-hour wall paint comes in eleven fresh new colors that help to make any home bright and gay all year round.

Your Gold Bond lumber and building material dealer can now offer you over 150 Gold Bond building products all designed and engineered to help you build or remodel better. Each product is the best you can buy ... and it will cost you no more than other materials. The secret was to have these fine, long-lasting materials used in your new house ... to ask your architect to specify Gold Bond by name. Your local Gold Bond dealer will be glad to discuss your plans with you. See him first!

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

Over 150 brand Gold Bond Building Products for new construction or remodeling: add greater permanence, beauty and fire protection. These include wallboard, bath, plastic, fire, ceiling, wall paint, insulation, metal and wood control products.

DEMAND THESE SIX GOLD BOND FEATURES IN YOUR NEW HOUSE

Gold Bond Gypsum Lath. Breaks the need for Win- ter insulation. Adds the surest bond for the home wall and ceiling construction.


Gold Bond Insulation. A Wonder of modern building materials. No set on contact. Adds the beauty of smooth surfaces for greatest wall and ceiling construction.

Gold Bond Wall Paint. A Wonder of modern building materials. No set on contact. Adds the beauty of smooth surfaces for greatest wall and ceiling construction.

Demand a Demonstration from your local Gold Bond dealer, and see how each of these six features can help you build or remodel better. For a complete line of Gold Bond products, see your local Gold Bond dealer today.

Gold Bond Gypsum. A Wonder of modern building materials. No set on contact. Adds the beauty of smooth surfaces for greatest wall and ceiling construction.

GOLD BOND WALL BOARD

GOLD BOND GYPSUM SHEATHING

GOLD BOND GYPSUM LATH

GOLD BOND PLASTER

GOLD BOND INSULATION

GOLD BOND WALL PAINTS

GOLD BOND NEUTRAL

GOLD BOND FINISH PAINTS

GOLD BOND DRYWALL

GOLD BOND FIBERBOARD

GOLD BOND SHEETROCK
In metropolitan New York, for example, there are 26,188 Otis elevators—more than all other makes combined. So it goes in all the cities of America, and many abroad. Creator of skylines? It would certainly seem so!

**Fitted for Kings** — East meets West and new meets old in an unusual elevator recently delivered to a Middle East potentate. As oriental in its satin and silk appointments as it is modern in its smooth operation and automatic control, this job is just another example of Otis ability to supply vertical transportation for any requirement.

**Long Waits and Short Tempers** — How long do you wait after pressing the "down" button before you hit it again? Seventeen seconds is average, according to Otis experts. Yes, cutting down waiting time is a big concern of Otis design engineers. They've been responsible for every major step in the development of safe and speedy elevator operation.

**The Light Tells Him When** — Did you know that modern big-building elevators have a light which automatically signals the operator when to start? It's the visible part of an ingenious system developed by Otis to dispatch cars on a scientific basis, timed to the needs of the building and the hour. During rush hours it helps get heavy one-way traffic up or down without annoying delays. During off-peak hours it eliminates excessive waits caused by car movements getting out of balance due to hit-or-miss scheduling.

Have you a vertical transportation problem — in an office building, a factory, an apartment house, a store? If so, there is an Otis man in your city who will be glad to give you the benefit of our 94 years' experience.
INSTALLATION TIME
REDUCED 50% to 80%

With Douglas Fir

PRE-FIT

Stock Doors

Save Time—Save Labor—and
Get a Better Job . . . with
These Improved Fir Doors!

ONE BUILDER reports as many as seven installa­tions in the time previously required for a single door! Savings of from 50% to 80% are common.

That’s because Douglas fir stock doors are pre-fit to exact size at the factory. They reach the job trimmed and squared, ready to hang. No sawing or planing is re­quired. Precious time is saved—and there’s far less danger of on-the-job marring, “butchering” and poor alignment due to unskilled help or improper tools. Corners are clean, trim, true — scuff-striped for protec­tion. The result: a better, as well as a faster, job!

and PRE-SEALED, too,
for Protection and Better Finish

Douglas fir stock doors—featured in definite, plainly marked grades and a wide range of designs, including mod­ern 3-panel layouts adaptable to all types of building—are also pre-sealed at the factory. They reach the job fully prepared for a better finish. They’re protected against moisture and checking, with resulting improve­ment in dimensional stability.

MORE FIR DOORS SOON!

It is a fact that Douglas fir doors may con­tinue in short supply for a number of months. Two factors make this true: the present overwhelming demand—and the shortage of essential raw materials. But pro­duction IS stepping up. Warehouse and dealer stock should soon reflect this in­creased production. We suggest that you keep in touch with your regular source of supply.

For Even Greater On-the-Job
Economies, Specify Fir Doors

“FACTRI-FIT”

Durable, attractive Douglas fir doors may also be or­dered completely precision-machined—not only pre-fit and pre-sealed, but gained for hinges and mortised or bored for locks as well. Here again, cleaner, trim­mer jobs are assured, be­cause all work is done at the factory by high-speed precision tools. Time sav­ings more than offset the slight additional cost.

For Better, Faster Installations, Specify:

Douglas Fir
DOORS

FIR DOOR INSTITUTE
Tacoma 2, Washington
To the average person, the most baffling facets of Moholy-Nagy’s career were his own “non-objective” works—paintings, photographs, etc. An important clue to his personal standards of design, and one which is too seldom emphasized, is the enormous value he set upon intuition. However, *Vision in Motion* attempts to clarify this element: “The truth is that standards of design, and one which is too seldom emphasized, in spite of the best of these elements [a thorough knowledge of technique, scientific, psychological and sociological developments] there remain imponderables which cannot be easily defined.

“After the execution of a design, we may rationalize many of these imponderables since some of them may be traced back to facts which are the subject of conscious argument. The real difficulty arises before the design is made... Practice proves that there is always a possibility of alternative design solutions with greater or less ‘objective’ quality... Among the multitude of scientific and technological alternatives, the answer concerning trends as well as the matter of basic visual and plastic shapes, and their essential psychological physical role, mainly comes from intuition. The choice is not based upon considerations of the single element per se but upon the relationships with the whole... The vividness of inner visualization is a measure of the designer’s ingenuity. Intuitive assurances are often infinitely better expressed by him directly in the work than in verbalization. The intuitive process has a speed and certainty that the conscious cannot match... Conscious insight tends to be hampered by the verbal limitation, tends to be too conformist to the syllabistic world of cause and effect. The intuitive is the fluid world of all the senses whose movements throw up ever new forms and meanings.”

By far the greatest portion of the book is taken up with the application of Moholy-Nagy’s philosophy to a specific educational program which includes painting, photography, sculpture, space-time problems, motion pictures, literature and group poetry. It ends with a proposal for an international parliament on social design to “restore the basic unity of human experience” and to prepare new, collective forms of cultural and social life for a coming generation. Whether or not such a proposal is feasible one cannot doubt the author’s utter sincerity and profound feeling in the human struggle. The word “visionary” has often been applied to Moholy-Nagy. It may be a shade too strong. However, as his book testifies he was one of the deepest thinkers of the twentieth century artistic world and probably a greater philosopher than painter. Unlike most of his eminent contemporaries, he never considered himself The Master but remained always the scholar and researcher, feeling new humility when confronted by the terrific potential of mankind’s creative power. Unfortunately, the influence of his own compositions can be seen in the gruesome travesty in ateliers and art galleries the world over, simply because the philosophical basis of his artistic concept has not been fully understood. Facile doodling was not what Moholy-Nagy had to give to the world. It can only be hoped that this book will have a wide enough readership to offset more cheap mimicry.—M.S.


Bothered by western civilization as he sees it today, Herbert Read is still no Spenglerian—although having been bitten at one point by Burchhardt, In a series of lectures delivered last year at Yale University and now printed in this paper-back book, gloom is interspersed with hope: “Our particular trouble,” he laments, “in this air-conditioned nightmare which we call a civilization, is that we have lost the very notion of...”

“...permission,” says Author Read, “I would like to be a purist...”
Our Manufacturers' File—an up-to-the-minute collection of illustrated booklets published by manufacturers—is directly available to the public through Better Homes & Gardens' 52 Home Planning Centers, located in S2 leading stores across the country.

Making information like this accessible and easily usable, and helping people adapt it to their own uses, is just one aspect of Better Homes & Gardens' job—to help put across, in the volume market, the best and soundest of new trends in planning and equipping homes.
Architectural porcelain enamel lends color and glistening beauty to round columns in the Bank of
The Manhattan Company, Rockefeller Plaza, New York. Reinhard & Hofmeister were the architects.

The gleaming beauty of porcelain enamel is ideally suited to the demands of imaginative modern design. Outdoors or in, it is readily adapted to curves, angles, broad, flat surfaces... any treatment that gives a modern building distinction.

A wide range of attractive colors, a variety of surface finishes, and strength with light weight explain why porcelain enamel is so often specified as facing material for shop and theater exteriors, bank and restaurant interiors, and for many other types of commercial buildings.

Porcelain enamel stays bright and appealing for years. The hard, durable surface resists denting, scratching and weather staining. Simple cleaning quickly restores its luster.

As soon as the supply of building products more nearly equals demand, you will want to investigate the many possibilities of porcelain enamel. When you do, remember to specify ARMCO Enameling Iron as the metal base. This is the original enameling iron and the most widely used for this exacting purpose. Other special-purpose steels for building construction are described in the Sweet's File reprint pictured at the right. Ask for a copy.


**The American Rolling Mill Company**
- SPECIAL-PURPOSE SHEET STEELS
- STAINLESS STEEL SHEETS, STRIP, BARS AND WIRE

SEE SWEET'S FILE for uses, advantages and specifications of these and other Armco special-purpose steels:
- Galvanized ARMCO Ingot Iron
- ARMCO Galvanized PAINTGRIP Steel (also available with ARMCO Ingot Iron or Copper Steel base).
- ARMCO Stainless Steel
The modern material for modern buildings

PC GLASS BLOCKS

Modern appearance, modern efficiency, modern economy—these are the main advantages your clients get when you specify PC Glass Blocks.

Panels of gleaming glass blocks make any plant a thing of beauty. Spacious interiors, with plenty of cheery clear daylight, are pleasant places to turn out good work. And the light can be directed to where it is needed most, even to areas remote from light openings.

PC Glass Blocks are hollow, have definite insulating properties. Heat losses through light transmitting areas are reduced to the minimum. Desired temperatures are easier to maintain and condensation is minimized. Infiltration of destructive dust and grit is prevented.

These are some of the reasons why many architects are specifying PC Glass Blocks for new construction and for modernizing projects. You will want to know all the advantages your clients get with PC Glass Blocks. Send the convenient coupon today for our authoritative booklet. The Pittsburgh Corning Corporation also makes PC Foamglas Insulation.

PC GLASS BLOCKS . . . the mark of a modern building

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Please send along my free copy of your new booklet on the use of PC Glass Blocks for Industrial Buildings. It is understood that I incur no obligation.

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FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS
I am frankly a pluralist. Somewhere in the complex strand of human development there is a pure strain of aesthetic sensibility; perhaps, under laboratory conditions, it can be isolated. But usually it is intertwined with other threads, of magic, religion, science or politics; and according to the number and twist of these threads, the aesthetic sense is distorted and transfigured . . . The question artists must therefore ask themselves is whether, recognizing the transitional nature of our period, they should wait for a cultural pattern to be determined by economic factors, and then more or less consciously conform to it, or whether they should adopt the only alternative policy and be content to make their art an expression of their separate and unique personalities.”

In four lectures: Society and Culture; the Social Basis of Great Architecture; the Aesthetic Method of Education; and Towards a Duplex Civilization (of appeal to students, professors and the public as well)—Read “accepts the theses of both Marx and Ruskin and attempts to reconcile them.”

Culture he holds to be spontaneous: “A great period of artistic creation is never planned; it grows out of the grass roots of a civilization and is largely unconscious in its origins and development. For that reason any grandiose schemes for rebuilding our monstrous cities, for replanning the countryside, redistributing populations and industries—all these will have but a negative effect on the general standard of taste unless accompanied by the rebirth of a basic or native aesthetic sensibility.”

And to develop that sensibility, education is needed, “based on the acquisition of physical skills—skills which may be either practical and utilitarian, or ritualistic and recreational, but which always involve, as the price of efficiency, the cultivation of harmony and grace . . .”

(Continued on page 146)
United by a wall of glass, living room and terrace seem to be one big room.

This close relation between outdoors and indoors expresses the way American families want to live... in houses planned for all of the family’s activities. Large areas of glass make rooms seem as "big as all outdoors". For example, the outdoor terrace above becomes an integral part of the living quarters.

When glazed with Thermopane, a wall of glass is more practical. This glass insulating unit keeps rooms warmer in winter and more comfortable the rest of the year. Actual use from Iceland to Mexico has proved Thermopane’s insulating efficiency in all climates.

Over 60 standard sizes of Thermopane units meet most architectural requirements... for Picture Windows, window walls, double-hung wood windows and residential steel casements. For data on sizes and installation, see your nearest L-O-F Glass Distributor. Write for our Thermopane books. Libbey-Owens-Ford Glass Company, 2197 Nicholas Building, Toledo 3, Ohio.


ONLY LIBBEY-OWENS-FORD MAKES Thermopane

LIBBEY-OWENS-FORD a Great Name in GLASS
Radiant heat gets my vote!

Convection heat gets my vote!

Modine gives you BOTH of these great heating principles blended into one!

Notice those arrows? That’s radiant heat... mild radiant heat coming from that Modine Convector Panel in just enough quantity to offset heat loss from window areas. But we don’t stop with just radiant heating. To it we add—

Convection heating. The hot water or steam circulates through the copper heating unit, draws the cooler, floor-line air into the bottom of the convector where it’s warmed, rises, and is then gently circulated throughout the room.

Result: Dependable new heating comfort for moderate cost homes and apartments... distinctive room charm and cleanliness without unsightly radiators! Yes, Modine Convector Radiation provides a modern, blended heating system for modern living — a heating system that makes possible individual room control — that responds almost instantly to sensitive automatic controls — that gives you gentle air circulation without the use of moving parts that wear out. If you’re planning to build or modernize, think of Modine Convector Radiation... look for Modine’s representative in the “Where-to-Buy-it” section of your phone book... or send in coupon below for new, free Convector Booklet! MODINE MANUFACTURING CO., 1736 Dekoven Street, Racine, Wisconsin.

Modine CONVECTOR RADIATION

The Modern “proved by use” heating method
What things do you think of when we say "aluminum"?

When asked that question in a recent survey, 2% of the people interviewed replied: "Pots and pans." In the other hand, less than 4% mentioned such aluminum "naturals" as roofing and siding, eating and ventilating equipment, gutters and down-spouts, buses, garage doors, garden tools, camp-trailers.

What does this mean? It implies that while aluminum has proved itself the successor of other metals in hundreds of applications... public awareness has largely remained at the pot-and-pan level.

And without awareness, how can there be demand? To increase consumer awareness of aluminum products... to interpret them in terms of better living and thus create demand... is the objective of the above advertisement and the many that will follow.

They will appear, in full color, in such top-read magazines as Saturday Evening Post, Newsweek, Collier's, Time, Sunset, and will reach a total audience of over 30 million every month! Such advertising, we believe, is bound to influence the buying habits of a big share of this audience.

Which will mean a lot more business for the makers of aluminum products.

Ready to serve you...today...

Kaiser Aluminum
a Permanente Metals product
Walk with Safety on Norton Floors

Non-Slip . . . Wet or Dry

The same characteristics of hardness and toughness which make Alundum abrasive so useful in grinding wheels, also give it valuable properties as a wear-resistant and non-slip flooring material.

Stores

Restaurants

Office buildings

Industrial plants

Hospitals

Schools

Railroad and bus stations

Airport terminals

You will find Norton Floors providing safe walk-ways in thousands of buildings the country over. Catalog 1935-C gives the full story including sizes and colors. Write for a copy—no obligation.

Norton Company
Worcester 6, Mass.

Behr-Manning, Troy, N. Y., is a Norton Division

See this catalog in Sweet's.

"The greatness of great architecture is not to be explained by national greatness: its secret is not to be found in race, not in blood, not in soil, not even in religion, but in a certain social structure animated by a spirit which may be religious or may be political, but which essentially owes its efficacy to its integrity—its wholeness and smallness, its all-over-ness and intimacy...

"The most we can venture to assert is that when the individual will is in unison with the general will, when the personal consciousness merges into group consciousness, then a transformation takes place... We must create the social structure which will ensure the interplay of individual freedom and mutual aid." — E.B.


Eleven English industrial designers have written a chapter each, dealing with their special fields of textiles, pottery, architecture, product design, etc., to produce this very handsome report on what is being done to create new design standards. Herbert Read has written an excellent introduction, while Hans Schleger, designer of the book, was allowed the last word on the manner in which the volume was put together. Despite its pale, vegetable-colored exterior, the book's contents are rather meaty. The writers of The Practice of Design obviously know what they are talking about, and, more important, seem to know as much about the manufacture as about the design of their products.

In a book produced in the years of British "austerity," it is interesting to note a trend away from the nakedly functional (Continued on page 152)
It’s always fair weather for all tenants

A particular office may get cool morning shade, hot afternoon sun. But tenants in the Durham Life Insurance Building, Raleigh, N. C., can be comfortable all day long every day in the year. Carrier’s remarkable Conduit Weathermaster System of air conditioning permits any office to have the kind of “weather” the occupants like.

This year-round Carrier system has proved its worth in many leading office buildings, hotels, hospitals and other multi-story structures. Using small-diameter vertical conduit instead of bulky ducts, it often saves enough space on a floor for an extra rentable room. And, since normally no ceiling ducts are needed, it is sometimes possible to plan an extra floor without increasing the new building’s over-all height.

The Conduit Weathermaster System can be applied to both old and new building installations. Its many other advantages are described in the booklet, “Carrier Conduit Weathermaster System.” Write for your free copy today.

Carrier engineers—who created the Conduit Weathermaster System—have worked closely with architects and their consulting engineers for years. Their world-wide experience is your assurance of efficient, dependable air conditioning. Carrier Corporation, Syracuse, New York.
For more Privacy, Economy, Convenience...

With "Twin-Duty" bathrooms, Case helps you answer the demand that every foot of space be made to count. These smart new bathrooms add livability and salability to a home. They provide the convenience and privacy of two bathrooms at approximately the economy in space and installation cost of one. The sketch shows the famous one-piece Case T/N* water-closet, a quiet, free-standing fixture with positive non-everflow, and the Winston, one of the most popular Case vitreous china lavatories. Case plumbing fixtures are distributed nationally—see your Classified Telephone Directory.

In the Institute of the University City of Caracas, Venezuela

Milcor Steel Building Products

help protect plaster beauty . . . contribute to ease and economy of maintenance . . .

For plaster surfaces that are permanently beautiful — and for practical utility — it pays to incorporate Milcor Steel Building Products in your designs and specifications.

The Milcor organization has the experience and "know how" to help you attain especially satisfactory results with fireproof construction — on large projects like the one illustrated or on smaller structures.

In metal lath, corner beads, metal trim, casings, and window stools, Milcor leads the field.

Consult the catalog of Milcor Steel Building Products in Sweet's, or write today for the Milcor Manual.

MILCOR STEEL COMPANY

Inland Steel Products
MILWAUKEE 1, WISCONSIN
Baltimore 24, Md.
Chicago 9, Ill.
Cincinnati 25, Ohio
Cleveland 14, Ohio
Detroit 2, Mich.
Kansas City 8, Mo.
Los Angeles 23, Calif.
Rochester 9, N. Y.

Illustrated are models of the Institute of the University City of Caracas, Venezuela. Architect: Egbert & Higgins, New York, N. Y. Contractor: Geo. A. Fuller — Merritt, Chapman & Scott Assoc., New York, N. Y.

Super-Ex Corner Bead

Milcor Expansion Corner Beads
Give plaster corners the double reinforcement of a metal bead and expanded metal wings; vulnerable points are protected against unsightly cracks, chipping, or cleavage.

Style K — with expansion wings

Milcor Metal Access Doors
Ready to install flush with finished wall or ceiling surface. Require no special framing. Permit key points in plumbing, heating, electrical, and refrigeration systems to be reached conveniently. Styles are available for use with all modern materials, such as plaster, masonry, brick, stone, tile, acoustical material, wallboard, etc.

Milcor Expansion Base Screeds —
Provide permanent separation between plaster and flush cement base. Expansion wings of strong mesh lath reinforce against cracks at juncture.
No, he's not washing the floor... he's hardening it with Lapidolith

to save it from concrete dusting and disintegration

LAPIDOLITH Liquid (patented) thoroughly hardens concrete floors for heavy-duty service without interrupting work schedules. Saves the cost and inconvenience of patching and retopping.

10 TIMES HARDER

LAPIDOLITH penetrates quickly and deeply, reacting with the lime in the cement to form a close-grained, granite-like surface 10 times harder than untreated concrete. Dusting is eliminated, danger from alternate freezing and thawing minimized, floor protected against action of oils and many chemicals. Excellent for terrazzo floors, too.

EASY TO APPLY

Lapidolizing is just as easy as washing a floor. The first treatment is the only treatment—the first cost is the only cost. In fact, the results gained with LAPIDOLITH cost less than any other known method of dustproofing and wearproofing floors!

More facts in SWEET'S, or write Dept A8, for illustrated brochure packed with floor-saving information.

REVIEWs

toward a new consciousness of "beauty" and "style"—two very real and human needs. This trend is most noticeable in the gay patterns that illustrate Alastair Morton's article on textiles and Victor Skellern's expert piece on pottery. Mr. Read says, in part: "... the man in the bus ... (is) not interested in ... Museum or Art Gallery ... beauty ..." Instead, Mr. Read thinks, he needs a new aesthetic more closely related to the realities of his life. Of this he says, later on: "... simplicity is, after all, an aesthetic prejudice. It appeals to some sensibilities, but not necessarily to all ... there must be some less obvious quality involved—some appeal to our senses as well as to our reason ..."

That this appeal to our senses must not again take the form of "the latest antiques" goes without saying. But in the U. S., unlike England, where the demand for consumer goods is virtually filled, industrial designers are called in, more often than not, to merchandise a drug on the market, rather than design it for use. For such U. S. designers this book should be a useful propaganda weapon to point out that the potential consumer's sense of beauty will lead him to a really well-designed product and may make him bypass the shoddy, the pretentious and the chromium-frilled. Although this rather prosaic lesson is occasionally nullified by poor illustrations that fail to add "punch" to a good contention—and is also occasionally confused by the current political prejudices of a few of the writers—this book might well serve as a textbook for a detailed and competent course on contemporary design.

Incidentally, eight and a half symbolic drawings of a cross section and slightly hyperthyroid human eye will haunt you across the pages of The Practice of Design and, unless you happen to be an ophthalmologist, you may find yourself able to do without them.—P.B.
Q. What is an effective way of preventing heat loss through the stairsway to an attic?
A. See Balsam-Wool Application Data Sheet, Section D, No. 3.

Q. Which is the more practical of the two ways of calculating heat transmission coefficient in wall construction?
A. See Balsam-Wool Application Data Sheet, Section A, No. 3.

Q. How does one calculate the amount of insulation needed to prevent condensation moisture on inside surface of walls and roofs?
A. See Balsam-Wool Application Data Sheet, Section A, No. 7.

HARD-TO-GET FACTS

... now easily available

Balsam-Wool Data Sheets

Quick, easy, authoritative answers to tough insulation application problems—you'll find them in Balsam-Wool Application Data Sheets! These sheets combine the results of laboratory and field research—place hard-to-get facts at your finger tips. Sheets are conveniently assembled in an A.I.A. file folder. Mail the coupon today for your set of Balsam-Wool Data Sheets—they are yours for the asking without obligation.

WOOD CONVERSION COMPANY
Dept. 147-97 First National Bank Building
St. Paul 1, Minnesota

Please send me set of Balsam-Wool Application Data Sheets.

Name

Address

City State
Swimming pools stay water-tight when painted with Bondex. This dramatically proves the ability of Bondex to cope with moisture. It bonds with the wall surface and seals up the tiny cracks and pores through which dampness penetrates.

Because of its performance, reputation and economy, Bondex outsells all other cement paints combined. For full information and new Bondex color chart, write nearest branch.

THE REARDON COMPANY  ST. LOUIS 6
CHICAGO 9, NEW YORK 6, LOS ANGELES 21, MONTREAL 1

Wherever DAMPNESS threatens walls...protect and decorate the surface with BonDEX FOR EXTERIORS FOR BASEMENTS FOR FOUNDATIONS

STUCCO BUILDING TILE CONCRETE BLOCK

BRICK AND MASONRY ASBESTOS SIDING STONE

CINDER BLOCK
MEET THE HUGE DEMAND
for
FINE WELDWOOD
HARDWOOD
PLYWOODS

For the first time since before the war, Weldwood Plywood is available in large supply... in a wide variety of fine cabinet hardwoods!

And you’ll find eager acceptance for Weldwood all through your clientele.

Why? Because... even in the face of serious shortages... we’ve carried on a vigorous national advertising campaign to sell Weldwood to home-minded Americans. As a direct result of this advertising, almost half-a-million prospective users have written for more complete information.

We’ve told them all the entire Weldwood story. They know, for instance, that Weldwood has striking decorative beauty plus high structural strength. They know, too, that Weldwood can be installed easily and economically... either for remodeling or new construction.

And your clients know this: Weldwood’s first cost is the last. It’s guaranteed against splitting, cracking or warping for the life of the building in which it’s installed.

Take advantage of this knowledge... and the acceptance that comes with it. Specify Weldwood. It’s a modern material of proved quality and demand.

You can get detailed information on the wide variety of sizes and veneers now available from your nearest USP office or representative.

WELDWOOD Plywood
Weldwood Plywood and Mengel Flush Doors are products of
UNITED STATES PLYWOOD CORPORATION
New York 18, N. Y.


Weldwood* Hardwood Plywood
Douglas Fir Weldwood
Mengel Flush Doors
Douglas Fir Doors
Overhead Garage Doors
Molded Plywood
Armorply* (metal-faced plywood)

Tekwood* (paper-faced plywood)
Flywood*
Weldwood Glue* and other adhesives
Weldwood* (exterior plywood)
Decorative Micarta
Flywood*
Firclad*

Firclad* *Reg. U. S. Pat. Off.

Plastics and Wood
Welded for Good

Waterproof Weldwood for exterior use is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood for interior applications are manufactured with extended urea resins and other approved bonding agents.
These windows that are walls... these walls that are windows... are a perfect expression of a design trend that has been accepted universally by progressive architects and designers.

Here Andersen Wood Casement Units are arranged on either side of an expansive picture window—and, beyond, a corner installation is formed by a combination of the same out-swinging casements.

Note the emphasis placed on operating sash—providing ample ventilation for this lakeside home. This is the way to combine view, sunshine, ventilation and weather-tight comfort. It's the Andersen Windowall way.

McEnary and Krafft, architects, designed this installation, and specified Andersen Complete Window Units to bring their inspiration into reality.

See details in Sweet's—or write Andersen directly.

Andersen Corporation
BAYPORT, MINNESOTA
MORE ROOM—MORE RENT
WITH 2-INCH SOLID
ROCKLATH AND PLASTER PARTITIONS

Planning buildings that produce more rentable space—
that’s the way today. This can be done with 2-Inch Solid
Partitions of ROCKLATH® plaster base and Red Top Plaster.

With 2-Inch Solid ROCKLATH and Red Top® Plaster
partitions, an additional three inches of space is obtained
along the full length of the partition, compared to a four
inch masonry non-bearing partition approximately five
inches in thickness when plastered. In an average 20 ft.
by 20 ft. office this means 5 square feet of additional office

space. Thus your clients obtain a greater rentable floor space.
Truly, 2-Inch Solid ROCKLATH and Red Top Plaster parti-
tions result in More Room—More Rent.

This advantage, plus a saving in weight, accounts for
the modern trend toward this new method of partition
construction. Write United States Gypsum, Dept. 122,
Chicago 6, for your copy of the new technical information
booklet “2-Inch Solid ROCKLATH and Plaster Partitions,
AIA File No. 20-B-3.”

WARM AIR FURNACE, lightweight and efficient, builds directly into chimney.

A fully-automatic warm air furnace weighing only 98 lbs., the new Mortemp is designed to build directly into a 25 x 25 in. square flue in the chimney. The furnace proper consists of 30-in. high firebox, with oil- or gas-fired burner and controls. This is topped by a porcelain steel stack, 14 in. in diameter, and of variable height. Centered in the 25-in. square "furnace room," this stack acts as a heat exchanger to returned air forced down and around it by a blower located above the ceiling line. Heated air is delivered at the bottom of the unit to either ducts or grilles. These takeoffs may be either above or below the floor line and on any or all sides. Pollution of circulating air by combustion fumes of furnace is prevented by a steel collar around top of heat exchanger which seals off plenum chamber below from upper part of flue. The Mortemp, which delivers 60,000 BTU, is now available in oil-fired version; gas-fired model is scheduled for production shortly.

The new design. It features a single automatic control, new efficient air movement, easy installation and maintenance. One control opens and closes the outside (and above or below the floor line and on any or all sides) of radiating heating systems reduces installation costs.

Radiantrol valve comes in 1\(\frac{1}{4}\) in. size, is adaptable to 1 in. and 1\(\frac{1}{4}\) in. pipes. Another model, designed for operation and installation in a valve pit or cupboard, is being manufactured.


VENTILATOR for use in kitchens, laundries, etc., featuring efficient air movement, easy installation and maintenance.

For use in kitchens, laundries and bathrooms of homes, offices, reception rooms, dressing and rest rooms of commercial buildings, the Fasco ventilator is an exhaust-type unit of new design. It features a single automatic control, new efficient air movement, and quick, easy installation maintenance. One control opens and closes the outside of the fan, motor and telescoping tubular duct makes possible efficient straight line air movement of 405 cu. ft. per min., complete air change every three minutes in an average kitchen. Simple, open design of both duct and grille facilitates cleaning. According to the manufacturer, the new ventilator can be quickly and easily installed in new or existing homes at low cost. It fits walls from 5 in. to 9\(\frac{1}{2}\) in. thick, and is 13\(\frac{1}{8}\) in. thick with an extra sleeve. Powered by a long-shafted pole motor with self-aligning bearings and extruded reservoir for a minimum of care, standard unit operates at 115 v., 60 cycle, A.C. Units for operation on 230 v., 60 cycle, A.C. will also be available, Fasco ventilator is approved by Underwriters' Laboratories, retails for $24.95, including exhaust tax.

Manufacturer: F. A. Smith Manufacturing Co., Inc., 25 Union St., Rochester, N. Y.

HOME FREEZER of 7.5 cu. ft. capacity incorporates space-saving features.

The Orley Super-Seven Home Freezer, with a capacity of 7.5 cu. ft., for storing up to 300 lbs. of food, is said to require less floor space than any freezer of its capacity. Compared with the Orley 5 cu. ft. model it measures only 1 in. wider (33 in.), retaining the same 36 in. height and 28 in. depth, yet provides 50 per cent more freezing and storing area. This is due, according to the manufacturer, to the use of Monsanto Chemical's Santocel insulation in freezer construction, The Super-Seven incorporates Orley's "Speed Flo" principal of coolant action for freezing and cooling in a single unit and the patented "Handeez-Tray," a tray, which swings into position as the lid is raised, is suited for freezing and storing desserts, (Continued on page 159)

for easy welding into coils; a brass floor plate; control stem and a fiber, cylinder-shaped container. Extending from valve to a 3\(\frac{1}{2}\) in. diameter, brass floor plate is a hollow control stem which can be cut to appropriate length. The plate fits flush with the concrete floor, is marked to indicate open and closed position. The fiber shipping container becomes the concrete pouring form. It fits snugly over the pipe so the concrete will not flow around the valve itself. When a radiant heating system with this valve, the floor and stem are removed and a small cap screw on the top of the valve bonnet, factory-drilled to permit escape of air from the piping system, is turned. According to the manufacturer, the use of the valve is expected to reduce materially the installation cost of radiant heating systems because additional piping and fittings and welding required for air vents are eliminated.

This is lopped by a porcelain steel stack, 14 in. in diameter, 30-in. high firebox, with oil- or gas-fired burner and controls. Raising the "furnace" room to any or all sides of the building becomes the concrete pouring form. It fits snugly over the pipe so the concrete will not flow around the valve itself. When a radiant heating system with this valve, the floor and stem are removed and a small cap screw on the top of the valve bonnet, factory-drilled to permit escape of air from the piping system, is turned. According to the manufacturer, the use of the valve is expected to reduce materially the installation cost of radiant heating systems because additional piping and fittings and welding required for air vents are eliminated.

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Another smart builder who knows "BENDIX" means sales!

Texas is a big state—they do things in a big way. Proof? The Frank W. Sharp Construction Company and its subsidiary, Oak Forest Corporation, of Houston, under big-thinking President Frank W. Sharp, is engaged in building 4800 homes—no two alike—on 1132 wooded acres—and at a cost of $82,000,000—America's largest privately-financed home development project!

Every home will be equipped—from the start—with a Bendix automatic Washer!

Mr. Sharp knows that the day of the automatic home is here: that the more complete the home, the easier to sell—even in a coming buyer's market! He knows that Bendix Washers—America's most-wanted washers—add tremendously to the desirability of his homes. For whether the housewife is present or not, the Bendix automatically does the wash! It occupies only four square feet of precious space—uses only half the soap, lots less hot water than ordinary washers require. Unquestionably Bendix makes one home, or 4800, more desirable.

"The sign of a smart builder" tells women what they want to know!

Let people know your project is Bendix-equipped! Display this sign, available thru your local Bendix dealer or distributor. It means to the housewife, that the house is planned for her convenience, planned for electrical easy living, worth a premium price!

In most states, the Bendix washer may be bought with the house on a packaged FHA mortgage. See your Bendix dealer.
Here they are...

KIMSUL insulation resists fire, moisture, fungi and vermin — is termite-proof. Packaged in easily handled rolls and cut to fit standard stud and rafter widths, it can be installed without expensive machinery or skilled labor. It's light in weight, clean, and odorless... no irritating dust or sharp particles to injure workmen's skin.

For complete details on how to insulate with easy-to-use KIMSUL, send for this informative Application Data File. Simply forward the request on your letterhead.

KIMBERLY-CLARK CORPORATION
KIMSUL DIVISION • Neenah, Wisconsin

6 exclusive advantages make KIMSUL* the choice of architects and builders

1 Many-Layer Construction. KIMSUL* insulation is a prefabricated blanket made on the many-layer principle. The many layers create millions of tiny air-cells to give KIMSUL its remarkable insulating efficiency ("k" factor 0.27). And many-layer construction provides dependable, uniform thickness over every square inch of insulated area.

2 PYROGARD® Cover. Only KIMSUL insulation has the PYROGARD cover — chemically treated, just as the inner layers of KIMSUL are treated, to resist fire.

3 Compressed Package. Delivered compressed to 1/5th installed length, KIMSUL saves labor, space, and time.

4 Extra Width. The KIMSUL blanket is made extra wide to provide fully insulated fastening edges... and to fill extra wide framing spaces.

5 Use For Caulking. Trimmed pieces of KIMSUL are efficient for caulking around windows and door frames.

6 Flexible Blanket. Many-layer KIMSUL insulation can be easily tucked around obstructions, fitted into non-standard openings, pulled around corners.

As members of the Producers' Council, Inc., we are cooperating in the Industry-Engineered Housing Program sponsored by the Producers' Council and the National Retail Lumber Dealers' Association.
DARE: To 10,000 "Confirmed Skeptics"

to write on, walk on, smear beautiful Stainproof VARLAR
—and prove it's the most amazing wall covering ever known!

VARLAR is so enduring it can be washed 25,000 times—and still look new! Not a claim—but fact, proved by critical tests in the laboratory and actual usage. Proved, too, that oil, ink, grease, mercuriochrome, jam, crayon, syrup, candy, vinegar, pencil, lipstick, hot kitchen grease, dirt accumulation—STAINS OF ALL KINDS—easily, quickly wash off VARLAR with ordinary soap and water.

Not a plastic-coated paper, VARLAR has no coatings to crack, peel or discolor. Its stainproofness goes clear through, lasts for life...resists water, fire, vermin, bacteria, too!

Skeptical? Then send handy coupon for FREE VARLAR sample. Make your own tests with any of the staining agents above, watch VARLAR come clean with soap and water. 90 breathtakingly beautiful styles...plaits, florals, weaves, stripes, pictorials, solid tones...go up easily as wallpaper. Send coupon today.

A scientific triumph after 9 years research! Now ready to begin a new era of low-cost wall beauty and maintenance in hospitals, schools, theaters, hotels, restaurants, buildings of all kinds.

World-famed artists and wallpaper designers styled VARLAR. New use of plastics achieves dramatic, full-dimensional designs...true-to-life colors never before possible.

MAKE THIS FREE TEST NOW!

VARLAR INC., Dept. B-97
Merchandise Mart, Chicago 54, Illinois

I'm skeptical, but willing to be shown. So send my free VARLAR sample and I'll make my own tests.

Name:

Address:

City: Zone: State:

Available in Canada through Trimm Co., of Canada, Ltd., Toronto
Compartments for Fine Buildings

Designed and engineered to harmonize with new trends in finest buildings, WEISART Flush Compartments are thoroughly field tested, and have won wide acceptance. The rigid, flush style construction eliminates posts and head rails. Weis cut-out type top gravity hinge permits doors and stiles to line up at top.

Doors, stiles and partitions are of highest class flush construction of bonderized, zinc-coated steel, with edges locked and sealed. Synthetic baked enamel finish is easily cleaned, available in any solid colors selected for desired color treatment. Partitions and stiles are supported clear of walls, eliminating dirt-catching corners.

Write today for your copy of Catalog No. 19 containing detailed information on WEISART and WEISTEEL compartments.

The “Dutch Boy” takes a step in the bright direction ... with his new Blended Paint.

And a colorful step it is ... bringing the famous “Dutch Boy” quality in lovely, sparkling Tints and gay, glossy Trim Colors, as well as dazzling Bright White.

Each is specially blended by the Boy in the Blue Overalls to stay beauty-bright... to keep homes looking right.

Blended to Protect Beauty 3 Ways . . .

As every architect knows, house paint has 3 different jobs to do. So, the new “Dutch Boy” Paint comes in 3 different blends. Each blend does a special job especially well. 1) Blended White stays White. 2) Blended Tints stay Right. 3) Blended Trim Colors stay Bright.

The “Dutch Boy” has never dipped his brush into higher quality paint. It is the result of over 30 years of continuous, outdoor paint tests... the longest research project of its kind.

So remember, when it’s a question of weather, it isn’t a question of which. Now as always ... in the new blended colors and white . . . “Dutch Boy” is Good Paint’s Other Name.

MADE BY THE MAKERS OF THE FAMOUS “DUTCH BOY” WHITE LEAD
Today's home is tops in architectural refinements... tops because of advanced design and new conveniences like the AVCO Automatic Garage Door Operator. No home will be really new without the AVCO "Doorman." This efficient, electronic device opens or closes any standard-type garage doors, turns house and garage lights on or off, if desired—all by touch of a button inside the car, garage or home. Already installed on thousands of garage doors, the AVCO "Doorman" is setting records for trouble-free operation, and adding value, safety and comfort to the home. The cost is nominal. Available for immediate delivery.

**Horton**

Division—AVCO Manufacturing Corp.

Dept. AA-12 • Circleville, Ohio

WRITE TODAY FOR COMPLETE DETAILS ON THE AVCO AUTOMATIC DOOR OPERATOR
A trim trio of American-Standard products makes this combination kitchen and utility room for small homes unusually convenient, attractive, and sanitary. The ROYAL HOSTESS Sink is of rigid cast iron with a heavy coating of acid-resisting enamel. The ALPINE Laundry Tray, also made of sturdy cast iron enamelware, is of one-piece construction. The gas fired BUDGET Water Heater in its gleaming white enameled jacket completes the picture and provides plenty of hot water.

The streamlined Placid Two-Tone Blue jacket of the SENECA Winter Air Conditioner harmonizes perfectly with the attractive setting of this basement playroom and protects valves and controls. The Seneca, with its durable copper bearing steel heating element, provides the dual benefits of clean, conditioned air, and carefree, automatic heating. Burns natural, manufactured, mixed, or liquefied petroleum gas. In five sizes for small to medium sized homes.

You have the widest latitude in room arrangement when you use American-Standard products. Designed, engineered and styled to meet practically any need, they permit you to make the most of whatever space is available . . . enhancing any setting with their trim, smart lines and eye-catching beauty. And their efficient, economical operation over the years assures lasting customer satisfaction. For complete information, contact your Heating and Plumbing Contractor. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.

LOOK FOR THIS MARK OF MERIT—It identifies the world's largest line of Heating and Plumbing Products for every use . . . including Boilers, Warm Air Furnaces, Winter Air Conditioners, Water Heaters, for all fuels—Radiators, ConvectorS, Enclosures—Gas and Oil Burners—Heating Accessories—Bathtubs, Water Closets, Lavatories, Kitchen Sinks, Laundry Trays, Brass Trim—and specialized products for Hospitals, Hotels, Schools, Ships, and Railroads.
EMERSON ELECTRIC Kitchen Ventilator

Easy to Install... AND HOW IT PLEASES CLIENTS!

You're bound to be pleased, and your clients, too, when you specify Emerson-Electric Kitchen Ventilating Fans in your homebuilding or modernization plans.

Priced surprisingly low, these sturdy fans whisk out kitchen cooking heat and odors, prevent spread of greasy vapors to living room furnishings, woodwork, walls and curtains.

Square, weather-tight outer door frame is easy to brick or frame around. Telescoping sleeve is adjustable to any wall thickness up to 13 inches. Ten-inch quiet-type fan blades move 570 CFM in free air.

For installation data, refer to the Emerson-Electric Catalog in 1947 Sweets Architectural File, or write for free Folder No. 204 today!

THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Missouri

PATHWAY LIGHT for use along paths, walks, driveways.

The Cannon Pathfinder Light is designed to illuminate drives, pathways in gardens or grounds, steps, and other places where illumination is required in moderate volume for safety, convenience or decoration. Consisting of a lighting unit, riser conduit and canopy base with outlet box and 7 in. spike, it is furnished for low voltage or standard 100 v. circuits. The lamp section, cylindrical in shape and measuring 3 x 3 in., consists of an aluminum cap, lens socket, and yoke section over a socket tube. Crystal polystyrene lens of 7 prisms is standard although various combinations may be made with amber, green, red and blue for directional lighting. The lamp section mounts on the conduit pipe which has a canopy base meeting the ground level. Under this base is the outlet box and a spike for anchoring into the ground. Knockouts are provided in the outlet box for conduit.

Manufacturer: Cannon Electric Development Co., 3209 Folsom St., Los Angeles 31, Calif.

STAINLESS STEEL AWNINGS for commercial establishments combine appearance, weather protection and service.

Perma-Steel Lifetime Awnings provide commercial buildings and establishments with colorful, year-round, all-weather protection. Fabricated of stainless steel, permanently welded and trimmed in a choice of ten colors, they are said to represent a popular priced, lifelong investment in appearance and comfort. Construction is of tubular-strut type which provides ample rigidity to withstand wind drag or heavy loading of ice or snow. Hanger strip is permanently anchored and caulked to the building; each acts as a miniature rainspout. The new awnings are proof, impervious to salt spray, acid fumes, coal dust and most severe climatic conditions. They give ample rain and sun protection with plenty of ventilation and no trapping of static heat against the windows. Perma Steel Awnings safely remain on the building the year around, or if desired may be easily folded away for storage. They will be available in size increments of 6 in., length and width.


DOOR LOCK functions as door chain and safety bolt.

This all-steel precision Automatic Safe-T-Lock provides stant household protection. (Continued on page 166)
ELIMINATE "SUBWAY RUSH" IN THE LOBBY
WITH...WESTINGHOUSE

Selectomatic

The only supervisory system that matches elevator service with demand ... automatically!

When the early morning rush to work begins, or during similar periods of the day when large numbers of people all want "up" at once ... elevator service is often taxed to the limit. Building lobbies become congested and elevator passenger traffic slows to a sluggish crawl ... just when fast service is needed most.

Westinghouse Selectomatic eliminates this "subway rush" condition ... replaces it with efficient elevator control that keeps lobbies clear and speeds passengers to their destination.

Selectomatic is the only supervisory control that actually coordinates the right kind of elevator service to each of many widely fluctuating types of demand. At the push of a button, it establishes fully automatic patterns of operation that solve the three major types of elevator demand — up peak, down peak, and off peak traffic.

Another original Westinghouse development, Selectomatic increases passenger carrying capacity in office buildings, stores, hotels and hospitals by as much as 30%!

Ask to see the new 16 mm. sound motion picture "Speeding Vertical Transportation with Selectomatic." 17 minute story of Selectomatic in action.

Westinghouse

ELEVATOR DIVISION

Write to Westinghouse for your copy of "Selectomatic Makes Elevators Work As A Team." Address the Westinghouse Electric Corp., Elevator Division, 120 Pacific Avenue, Jersey City 4, N. J., on your letterhead please.
Protect your building from the hazard of flying sparks and burning embers. Insist on a Johns-Manville Flexstone Roof. It will not support combustion. That’s because the felts in a J-M Flexstone Built-Up Roof are made of the magic mineral asbestos—fireproof, rotproof, long-lasting.

Flexstone Roofs are smooth-surfaced, too—permitting thorough drainage, eliminating the weight of slag or gravel, and making any damage easy to locate and repair. Need no periodic coating. Felts are perforated to insure smooth application.

All Flexstone Roofs are engineered to the particular requirements of your building—whether it’s new construction or re-roofing. To insure skilled application, they are applied only by J-M Approved Roofers.

Three types available: Flexstone Super "A," Standard, and Service—each the finest that can be specified for its purpose. Write for brochure BU-51A, containing complete specifications. Johns-Manville, Box 290, N. Y. 16, N. Y.

Because of unprecedented demand, there may be times when we cannot make immediate delivery. Please anticipate your needs.
Presenting
THE SHOW-ROOM HOMES of the Nation

Ranch style or Georgian, Colonial or modern—the kind of well-designed, well-built homes you want your materials used in are owned by the kind of people who read TIME.

The million and a half families who read TIME from coast to coast belong in the nation's over $6500 income bracket; they have the salaries and savings people who are building or remodeling these days must have if they want the best.

But "there's always an extra reason for advertising in TIME," and one such extra reason is this: what TIME-reading families buy, millions of other families admire, ask about, resolve to buy for themselves. Show-room homes like these become sales-rooms for your products—when you sell the TIME market first.
It's SEAPORCEL for AMERICA'S CRACK TRAINS!

The Pennsylvania Railroad insists on the best in travel comfort and attractive surroundings for its passengers. So when Raymond Loewy Associates, consultant stylists to the Pennsylvania Railroad, suggested floral prints for the lounge cars of the postwar "Trail Blazer" and "Jeffersonian," naturally Seaporcel® was selected.

Of course, there are many uses for which Seaporcel is ideal. It is equally effective architecturally for dramatic sweep on building facades, store fronts, interiors of public buildings, restaurants, banks, schools, hospitals and hotels.

A multi-colored porcelain enamel mural, measuring 72 feet by 28 feet can be seen in the Union Terminal, Cleveland, Ohio. There, is an example of vast size, of picturesque ornamentation...art supreme...with no requirement ever of retouching or repainting. It's as permanent as the walls and pilasters.

Seaporcel is beautiful, yet inexpensive to maintain. Sparkling ceramic fused to steel at 1550° F., Seaporcel can be fabricated to any shape, form, section—finished in any shade, from purest white and pastels to deepest black. Best of all, Seaporcel is fireproof, corrosion-resistant and will withstand moderate mishandling. It always remains clean and lustrous. Specify Seaporcel on your next plans.

Incorporating a patented automatic safety latch which snaps into place when the door is opened, it functions as an old style door chain to prevent the entrance of persons not desired inside. The safety latch, when set in this extended position, also allows the door to be opened for ventilation with complete security. An all-steel bolt with spring tension button control keeps door securely closed when desired. Safe-T-Lock automatically engages whenever the door is closed, can be released by a flick of the finger from inside the room. Both safety latch and bolt may be opened from the outside with a key.


MEASURING INSTRUMENT aids in taking off quantities.

The Minerva Curvimeter is a new, high-precision measuring instrument for taking quantities off plans, scaling curved or irregularly shaped areas, estimating, etc. It is simple to operate and gives immediate readings, functioning on the same principle as a speedometer. Three scales are shown on the dial: ½ in., ¼ in., and ½ in. A large and small hand register footage, with one turn of the long hand being equivalent to 100 ft. In operation, the small hand moves forward one division for each turn of the long hand, thus registers the number of turns of the long hand. Totals of various distances can be registered without the necessity of taking intermediate readings and, if a certain distance has been erroneously measured, the mistake can be rectified by reversing the same distance. A slight pressure on the (Continued on page 174)
Meet the Adlake Window

Maintenance Man

THAT’S RIGHT—he hasn’t a thing to do but loll in the sun—because NO MAINTENANCE IS REQUIRED with an Adlake Aluminum Window. You install it—you forget it.

ONLY A DLAKE combines non-metallic weather stripping and serrated guides to stop excessive air infiltration and give you finger-tip control. What’s more, its lustrous aluminum sash requires no painting or maintenance. No warp, rot, swell, stick or rattle—ever.

TRULY, the Adlake Aluminum Window fulfills your every architectural requirement! Complete information and data will be mailed you on request. Drop us a postcard today... there’s no obligation, naturally. Address: The Adams & Westlake Company, 1101 N. Michigan, Elkhart, Ind.

THE Adams & Westlake COMPANY

Established 1857 • ELKHART, INDIANA • New York • Chicago

FURNISHERS OF WINDOWS TO THE TRANSPORTATION INDUSTRY FOR OVER 30 YEARS
Again

This time in the gigantic
BROWNSVILLE
STATE FINANCED HOUSING PROJECT

Time and again MA•TI•CO Mastic Tile gets the "call" when "quality-controlled" asphalt flooring is required for large installations. Now 1,000,000 sq. ft. of MA•TI•CO Mastic Tile throughout all the buildings—all the apartments—in the Brownsville Houses, Brooklyn—one of New York's most gigantic State-financed Housing Projects!

Proof again that MA•TI•CO's reputation for beauty, uniform high quality, and rugged durability is deserved! Proof again MA•TI•CO Mastic Tile is delivered on schedule as promised!

Send for Our New Price List and Samples

The next time you specify asphalt flooring tile, be sure it's MA•TI•CO—"quality-controlled" through continuous PRECISION INSPECTION!

Send for Our New Price List and Samples

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OF AMERICA

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Lexington 1293-M

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Townsend 7-1328

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Lancaster 405-M

The Architectural FORUM September 1947
Honeywell Clock Thermostats are here again!

NEW DESIGN
NEW APPEARANCE
NEW FEATURES
NEW PERFORMANCE

THE NEW Chronotherm

Check these ten outstanding DESIGN FEATURES:

2. New bimetal element...assures more accurate temperature control, yet sturdy and dependable.
3. Fingertip external adjustment for day-night temperature settings.
4. Gradual morning pickup insures accurate temperature being restored to the daytime setting without overshooting.
5. Ease of time settings for day and night operation.
6. External fingertip wheel for setting clock...hands may be set as easily as a watch.
7. Low speed clock motor...the ultimate in quiet, accurate clock operation.
8. Clock motor provides 30 times more power than required.
10. Separable wall plate for easy mounting.

Here's BIG news and it's opportune.

Once again Honeywell leads the way—this time with the entirely new Chronotherm, the finest electric clock thermostat ever built.

Coming at this time in the face of a possible fuel shortage, the Chronotherm has special, added significance because it saves fuel. This feature alone creates an immediate demand. Your clients will be quick to appreciate the advantage of extended fuel supplies, lower heating costs.

You'll want to specify this control as a mark of the newest and most modern improvements in the homes you're designing. And don't overlook the Chronotherm as part of every home remodeling and modernizing project. When you explain how the new Chronotherm saves fuel by automatically lowering temperatures during the night and providing more accurate control at all times, it's a matter of timely interest to every home owner. And they'll recognize the advantages of increased comfort and convenience. Call the Honeywell branch in or near your city or write for complete information at once.

Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Toronto 12, Ontario.
COSTS LESS Latest electronic manufacturing methods plus high volume production put Olsonite ahead of the field both in low unit cost and in speed of delivery.

LOOKS BETTER Olsonite will not chip or mar and resists acid or cigarette burns. Non-corrosive brass hinges are covered with Olsonite so that no metal is exposed.

LASTS LONGER Solid homogeneous plastic construction has no core to split or warp. There are no joints, seams or crevices to give way.

DEPT. AF 6 FOR INFORMATION Swedish CRUCIBLE STEEL COMPANY PLASTICS DIVISION 8561 BUTLER AVENUE - DETROIT 11, MICHIGAN

The University of Sydney
Chair of Town and Country Planning

The Senate of the University of Sydney invites applications for the Chair of Town and Country Planning which has recently been established. The tenure of the Chair will be for a period of five years, extension of tenure may be made under conditions to be determined before the expiry of that period. The Professor will be required to conduct post-graduate courses leading to a Diploma in Town and Country Planning and such other special courses in the University as may be established. He will also be required to undertake duties of an advisory character for the Department of Local Government and the Sydney Technical College and to discharge such teaching duties in addition at the Sydney Technical College as may be determined. He will be permitted to engage in consultative practice under conditions approved by the University. The salary will be at the rate of £2,000 (Australian) per annum. Applicants for the Chair are requested to send one application to the Secretary, Universities Bureau of the British Empire, 8 Park Street, London, W.1, and one copy to the undersigned not later than 30th September, 1947, in each case.

G. DALE, REGISTRAR
Whether the shortage in your community is gas or oil — here is your answer to present restrictions. The Mueller Climatrol 201 Convertible Furnace is engineered for equal efficiency with OIL or GAS — converts to either fuel later, at a moderate cost.

The Mueller Climatrol
201 Convertible Furnace

solves your problem
of temporary
fuel restrictions

If it's a gas shortage in your community, you can sell an oil furnace to people who want gas and can’t get it — converting with a gas burner when the shortage is over. If it's a fuel-oil shortage, reverse the process. The complete, versatile Mueller Climatrol line brings you out on top again!

With the Convertible 201, your customer will be getting automatic heat all the time ... with the efficiency of an oil-designed job when he burns oil — and the efficiency of an AGA-listed gas-designed job when he burns gas for home-heating.

The Mueller Climatrol Convertible Furnace is the answer to your inventory problem too! With various combinations of these 4 standard packages:

- **A** — The Heater Package
- **B** — The Oil Burner Package
- **C** — The Gas Burner Package
- **D** — The Blower Package

you can install: (1) an oil-fired gravity furnace — A+B; (2) a gas-fired gravity furnace— A+C; (3) an oil-fired winter air conditioner— A+B+D; (4) a gas-fired winter air conditioner— A+C+D. You can work with a minimum inventory, varying your stock of (B) and (C) according to changing demand.

It's easy to see why the Mueller Climatrol dealer is always on top. Sell Mueller Climatrol for every new home and replacement job — it pays!

Write for bulletins.

**L. J. Mueller Furnace Company**
2010 W. Oklahoma Avenue • Milwaukee 7, Wisconsin
ARCHITECTURAL CONCRETE

puts longer legs on your building dollars

ARCHITECTURAL concrete permits casting both the structural and ornamental parts of your building in one operation. That promotes economy. It’s a fact to remember in planning hospitals, hotels, schools, apartment houses and industrial plants. Architectural concrete is adaptable to a wide range of decorative treatments. Moderate first cost, low maintenance expense, long life, fire-safety and low annual cost are advantages of architectural concrete to remember in planning any new building. Architects and engineers are invited to make full use of our services to secure maximum advantages of architectural concrete. See our catalog in Sweet’s.

PORTLAND CEMENT ASSOCIATION

Dept. A9-7, 33 W. Grand Ave., Chicago 10, Illinois

A national organization to improve and extend the uses of concrete through scientific research and engineering field work
Ripple Fin coils prove their ability to "take it" right from the start through McQuay's unique method of construction. The 3,000 lbs./sq. inch hydrostatic pressure that expands tubes permanently into fins also provides a rigid test of material strength.

Hydraulic expansion methods of coil construction, pioneered by McQuay, assure positive contact between primary and secondary surfaces under all operating temperatures. Wide fin collars increase area of heat transfer. Spun collar surfaces give extra high quality of contact... actually put more metal on metal for real heat transfer efficiency. Ripple Fin coils feature elliptical copper headers to compensate for unequal expansion during the warm-up period, copper tubes and aluminum fins for fast heat—lighter weight, continuous plate type construction for a rigid, vibration free core.

McQuay blast coils are available in practically limitless combinations to fit your application. Consult the McQuay representative in your area or write, McQuay Inc. 1609 Broadway Street Northeast, Minneapolis 13, Minnesota.
DECORATIVE FLEXGLASS captures the

Delicate Beauty of "MIMOSA" . . . in crystal and color

Here's something you're always looking for ... really new decorative material with almost endless possibilities.

This new Decorative line is real Flexglass . . . rectangles of genuine glass firmly mounted on a flexible fabric backing. It fits snugly and easily on curved surfaces, around corners, on pillars . . . anywhere at all.

Yes, there's all that versatility and more. Much more. Decorative Flexglass features striking designs fired on the underside of the glass in brilliant ceramic colors (where it can't ever wear off).

Use Decorative Flexglass for entire walls, striking panel effects, compelling emphasis . . . any way your ingenuity dictates. Available now in various color combinations, are 3 standard patterns . . . "Clusters," "Vintage," and "Mimosa" (illustrated). And you can order custom patterns to your own design.

Interesting? It's enchanting! Write today for full information to:

BOATHOUSES & DOCKS.
Private Boat-Houses and Docks.
Outboard Boating Club of America, 307 N. Michigan Ave., Chi­
cago, Ill. 14 pp. 8½ in. x 11 in. Price $3.35.

Featuring 21 plans for private, modern boathouses and docks by Chicago architects Leonard Wayman and Ray Stuermer, this publication contains sketches, elevations and detailed floor plans of each. In addition, it includes a check list and bill of necessary materials to aid in selecting and constructing a boathouse suitable to local water, bottom and bank conditions. Sizes and arrangements of boathouses and docks are based upon findings of a comprehensive national survey of existing waterside facilities and needs by the Outboard Boating Club of America. Architects Wayman and Stuermer have provided modern architectural treatments for the shelters, and a maximum of flexibility in the plans to permit easy alterna­tion for wet or dry storage, and for placing the boathouse on shore or in the water.


This pioneer volume on heat pumps offers a clear technical treatment of the heat pump. It discusses the progress made in adapting it not only to building heating and cooling services but also to such industrial processes as the evaporation and purification of liquids, the drying of solids, and the simultaneous chilling and heating of process fuels.

The book is organized into successive considerations of the thermodynamic principles involved; equipment design, specification and selection; maintenance, operating, econom­ic and installation problems. The discussion is thoroughly prac­tical, designed for those concerned with the development and use of this important new tool. The book is not a detail discussion of all the theory, performance and design of the multitude of apparatus which make up the heat pump. The authors include only the aspects of performance and design of those parts which are essential to the assembly of a good installation.


This informative semi-technical manual deals with the principal problems encountered in the design of a radiant heating system. In addition, it points out how "Raydut", Bethlehem tough ductile pipe, offers advantages in the fabrication of radiant heating assemblies. The manual, beginning with a brief discussion of Raydut, goes on to explain what radiant heating is. It then analyzes the principal features in the design of a radiant heating installation. Detailed information is given for designing and installing a workable system in a one-story structure with concrete slab on the ground, a one-story building with wood-joist construction and a two-story wood frame structure with basement. Heat-loss tables, charts of pipe sizing and spacing, typical installation layouts, construction details, etc. amplify the text. Following sections are devoted to interesting discussions of the basic design of radiant heating and general considerations in planning such a system. A few of the general considerations include: possible methods of installing piping, grading and venting, testing, boiler equipment, control operation of the system, installation costs, lag, etc. Man­agement and construction photographs of radiant heating installa­tions, information on special radiant heating and applica­tions, specific data on Raydut are also contained in this booklet.


This guide giving recommendations for the design, location, and installation of individual sewage systems, is designed to help those who are building beyond the immediate reach of municipal sewage systems. Contents are divided into two parts; are presented under the headings of water carriage and nonwater carriage methods. Under the first heading are included: the septic tank, subsurface disposal field, seepage pit, dry well and cesspool. Under the second heading are the earth pit privy, mausoleum vault privy, chemical toilet, pit or can type privy, and cremating latrine or incinerator privy.

(Continued on page 18)
This consumer advertising faces the challenge squarely—
appearing in the September 13th "Saturday Evening Post" and September "Better Homes & Gardens." Remember, the base price of aluminum is 30% below pre-war!

NOW... build it better at less cost with

REYNOLDS Lifetime ALUMINUM CLAPBOARD SIDING AND SHINGLES

Get these advantages for no more money:

Fire-Proof... Rust-Proof... Rot-Proof... Termite-Proof

...plus Radiant Heat Insulation

According to national averages compiled by a recognized authority, "it would actually cost you less to build this house with Reynolds Lifetime Aluminum Siding and Renewed-Shingles than it would with stained wood siding and the original brick siding. And look at all the advantages you get with aluminum!"

Lifetime permanence... protection against fire, rust, rot and termites. And greater comfort... because aluminum reflects radiant heat. In summer this roofing and siding throws off the sun’s heat... so your house stays cooler. In winter it reflects interior heat back from the roof and walls... so you keep warmer, with less fuel.

Note that the cost comparison made here includes painting your aluminum clapboard and shingles... cleaning, then primer coat and second coat. But you can eliminate this if you like... and save more money. Aluminum needs no paint. It weathers naturally to an attractive grey-white... looks better year after year without any maintenance.

This modern roofing and siding is immediately available, in any quantity you need. So talk to your architect, your builder. They will like the way both clapboards and shingles fit together, self-aligning, weather-tight, handsome. Have them this ad. Write for your booklet on House No. 705, as well as for detailed product literature. Address: Reynolds Metals Company, Building Products Division, Louisville 1, Kentucky.

REYNOLDS Lifetime ALUMINUM BUILDING PRODUCTS

For 100% performance use only the nails recommended by the manufacturer.
HUNDREDS OF MOR-SUN U-4-G GAS-FIRED FORCED AIR FURNACES SUPPLY HUNDREDS OF G.I. HOMES WITH YEAR ROUND INDOOR COMFORT!

Hundreds of G.I. families are living in prefabs* in Peoria—and every one is equipped with a MOR-SUN Heating System!

And what a system! With a house heat loss of 45,000 BTU's, the MOR-SUN packaged gas-fired blower furnace—with a capacity of 72,000 BTU's—in a centrally located service room—took only three hours of two men's time** to install (including the runs to the various rooms)!

Each of these hundreds of G.I. families has more than a heating plant—each has a MOR-SUN U-4-G*** that supplies year-round indoor comfort!

You Get MORE with a MOR-SUN!

*General Contractors — Best Construction Co., Peoria
**Heating Contractors — Lee Wagener Co., Peoria
***MOR-SUN Midwest Sales Representative — F. C. Evans, St. L.
SAFER every step of the way with

WHEELING EXPANDED METAL

The criss-cross, non-slip design of Wheeling Expanded Metal is an important safety factor in walks and platforms. And the strength of this modern construction metal... stronger than sheet metal of the same weight... makes it perfect for hundreds of other around-the-plant uses.

Wheeling Expanded Metal contributes to plant safety, cleanliness and ventilation. Use it for machine guards, tool room enclosures, lockers, storage bins, sanitary shelving, drying racks, etc. Write us for information on the many weights and sizes available.

Wheeling ExM forms two sides and bottom of this inexpensive assembly line conveyor guard.

WHEELING CORRUGATING COMPANY
WHEELING, WEST VIRGINIA

Atlanta - Boston - Buffalo - Chicago - Cleveland - Columbus - Detroit - Kansas City
Louisville - Minneapolis - New Orleans - New York - Philadelphia - Pittsburgh - Richmond - St. Louis
Skipper SHOWER

WITH Flat Low Door  Two popular low cost items combined to fill the demand for a quality glass door shower priced within a modest budget. A good glass door shower typifies a quality installation to most users and is a much-wanted feature by home owners. By installing this Skipper-Low Door combination, smart builders can add value and desirability to bathrooms far in excess of the small added cost over a shower with curtain.

Specifications

FIAT SKIPPER SHOWER
SIZE—32 x 32 x 76.
WALLS—BONDERIZED GALVANIZED STEEL. Finished inside and out with baked-on-synthetic enamel.
RECEPTOR—Semi-flat Stonetex, slip-proof, leak-proof, non-absorbent. Brass drain for 2" waste connection integral with receptor.
VALVES—Combination hot and cold compression valves with shower head and arm.

FIAT LOW DOOR
FRAME—One-piece heavy aluminum alloy.
JAMBS—Heavy aluminum alloy.
HINGE—Reversible, can be installed right or left without special drilling.
CATCH—Bullet type.
HANDLE—Offset design on both sides.
FINISH—Satin.
SIZE—24" x 64" for opening 24" wide.

In Canada—Fiat showers are made in Canada by The Porcelain and Metal Products, Ltd., Orillia, Ontario.

PREFABRICATED INSULATED PIPE. Specification Data. Engineers and Architects Ric-Wil Prefabricated Insulated Pipe Units. The Ric-Wil Co., 1972 Union Commerce Building, Cleveland, Ohio. 16 pp. 8½ in. x 11 in.

Designed for practical use, this booklet of specifications for underground pipe distribution systems employing prefabricated insulated pipe conduit is a comprehensive compilation of data arranged in convenient tabular form. Typical information includes tables of dimensions for one or more conduits in one trench, tables of maximum conduit capacities, wrought iron and steel pipe sizes, and standard prefabricated expansion loop details. Loop dimensions expansion charts for both steel and wrought iron pipes are shown in convenient usable form. Construction details of Ric-Wil insulated pipe units and available accessories are also given.

VOLTAGE CONTROL. Superior Voltage Control, Bulletin #547. The Superior Electric Co., Bristol, Conn. 12 pp. 8½ in. x 11 in.

Bulletin #547 on voltage control features the latest developments in Powerstat variable transformers and Stabiline automatic voltage regulators. It serves as a guide in selecting the correct Powerstat variable transformer to obtain continuous adjustable voltage from a.c. power lines. A Stabiline voltage regulator is used to maintain a constant output voltage from fluctuating lines, and test instruments for variable voltage testing are also included. All information on the voltage control equipment is presented in concise, easily read form, is complete with ratings, performance and engineering data, drawings and photographs.


This analysis, based on reports of passenger and freight elevator and moving stairway accidents in 1946, analyzes the accidents according to type of conveyance, degree of seriousness, location of injured at time of accident and probable cause. Statistical tables and comments adequately present the information. Results indicate that a large percentage of the accidents could have been materially reduced had the elevators been equipped with proper safety devices.

METALS. Rigidized Metals. Rigid-Tex Corp., 658 Ohio St., Buffalo, N. Y. 12 pp. 8½ in. x 11 in.

Rigidized Metal, a product of an exclusive design-strengthening and texturizing process that is applicable to both ferrous and non-ferrous sheet and strip, is described in this bulletin. This product, a wide range of applications, mechanical properties, etc. are fully elaborated upon and illustrated.

METAL TRIMS. Builder’s Guide for All Wallboard Materials. The B & T Metals Co., 425 W. Town St., Columbus, Ohio. 18 pp. 8½ in. x 11 in.

This Builder’s Guide on Chromedge Metal Trims illustrates and describes a wide selection of decorative, extruded aluminum alloy and stainless steel trims for use with all types of wallboard materials. Beginning with a brief discussion of the advantages of Chromedge Metal Trims, the following pages are devoted to dimensional details of various types of trims. A few of these include: binders; cap, corner and cove trim; divider bars; edgings; fittings; nosing; etc. Special sections cover matched sets of trims; sing well frames; linoleum-inset trims; accessories, etc. Installation details showing use of Chromedge with wall and floor materials are also included.

(Continued on page 182)
ENGINEERED
for Highest Sanitary Conditions

BENEKE PLASTIX

Illustrated below
Style 523-B Beneke Plastix Seat

BENEKE CORPORATION
Columbus, Mississippi, U.S.A. • Offices in Principal Cities
Home buyers brighten up at first sight of this new Crane Sunnyday Sink. Here is beauty—sparkling vitreous enamel that wipes clean in a flash. Here is convenience—an extra deep basin... two generous drainboards. And here is Dial-ate, the amazing Crane faucet that harnesses water pressure to aid in closing, yet opens at the barest touch of a finger!

Features like these carry through a wide range of Crane sinks, embracing a style for every taste and a price for every building budget. And the quality that goes with them—always associated with this best-known name in plumbing—you'll find that kind of quality in beautiful Crane bathrooms, too. You'll see it again in heating, whether for hot water, steam, or warm air... for coal, coke, oil, or gas.

See the Crane line in the 1947 Sweet's Builders' File—or write us for a copy. For information on products and delivery, call your Crane Branch.
When your plans include an ORGAN INSTALLATION...

You'll find this Reference Manual most helpful and informative. A copy is yours for the asking!

A 16-page brochure covering features you must look for in any organ you specify—organ nomenclature, American Guild of Organists’ playing specifications, relationship of tone, space and cost; acoustics, pipe organ vs. electronic organ; essential and auxiliary equipment, installation requirements and techniques.

consider the TONE FACTOR as majestically portrayed by the

WURLITZER ORGAN

Series 20 Two Manual

- For many centuries, profound music has found its highest expression in the organ. Yet for reasons involving space and cost the widespread installation of organs has been greatly limited. It remained for the Wurlitzer Organ, by wedding the science of electronics to principles which are the basis of pipe organ tone production, to bring the majesty of traditional organ music within the reach of all.

The source of tone in the Wurlitzer Organ is the wind-activated free reed, producing a richly varied wealth of electrical impulses. Electronics then select, modify and translate these impulses into perfectly proportioned organ voices, without the use of space-consuming blowers, organ chambers, relay rooms, huge pipes and the like. Thus, the Wurlitzer Organ performs as a pipe organ but, in keeping with modern engineering standards, it does so with amazing economies in both space and cost.

Architects are learning that with the Wurlitzer Organ they can interpret these economies in terms of extra facilities within the building and faster acceptance of their plans.

Ornament Division

THE RUDOLPH WURLITZER CO.

North Tonawanda, New York.

SPECIFY WITH CONFIDENCE THE WURLITZER ORGAN IN...

churches - chapels - mortuaries

concert halls - homes - universities

schools - hospitals - institutions

THE RUDOLPH WURLITZER CO

N. Tonawanda N. Y., Dept. FO9.

Gentlemen:

Please send me, without obligation, your 16-page Reference Manual..."Important Facts On Organs And Their Installation."

Name...

Company...

Address...

City... Zone... State...
FINE WLS WOOD CARVINGS

Again Available!

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REQUESTS FOR INFORMATION

ALEX M. BARCLAY, architectural student, 27 Barnes Ave., Dundee, Scotland, requests information on store fittings.

R. L. HORNE, architectural student, 201 16th Ave., Columbus 1, Ohio, requests information on materials and equipment applicable to modern homes, particularly lighting.

CLAUDINE SENNETT, civil engineer, 3074 Lacombe Ave., Montreal 26, Quebec, Canada, requests information and literature on log-cabin construction.

REQUESTS FOR LITERATURE

DAVID A. CASTRO, 8a. Calle Poniente #6, San Salvador, El Salvador, Central America.

RAY C. CLAYTON, architectural student, 544 Harrison St., Fresno, California.


FUKAIR, OLSEN, URBAN & NEILLER, architects, engineers and appraisers, 19 South La Salle St., Chicago, III.

JOHN H. LARSON, architectural student, 5820 Fordham St., Houston 5, Tex.

OFFICE OF THE DIRECTOR, University of Minnesota, The University Gallery, Minneapolis 14, Minn.

WALTER L. ROBERTS AND ASSOCIATES, architectural and engineering construction, 207 Florida Ave., N.W., Washington, D. C.

C. J. BYLAND, architect, Monterey, Calif.

ROY M. SCHEENBROU, architect & engineer, 8 S. Dearborn St., Chicago, III.

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<th>1 in 1 Year</th>
<th>3 in 3 Years</th>
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