THE ARCHITECTURAL FORUM

design decade

OCTOBER 1940
“AT LAST! AN EFFICIENT ROOF INSULATION THAT STAYS EFFICIENT!”

Moisture-Proof Asphalt Surfacing Guards Against Deterioration Caused by Absorption — Assures Permanent Efficiency

THERMAL conductivity of only 0.30 ... permanent protection against damage through moisture penetration during application and in use ... a patented device to take care of roof blisters caused by air expansion ... These are advantages which every architect will appreciate in connection with insulation and built-up roofing practice. And all these important features are offered by Celotex Vapor-seal Roof Insulation!

No other fibre board insulation in established usage equals its high insulating efficiency. No other has these three features to safeguard efficiency and permanently assure satisfactory functioning.

The tendency of the roof covering to blister under hot sun is reduced by a new exclusive feature of Celotex Vapor-seal Roof Insulation — a half-inch offset on all bottom edges. This forms a network of 1" x ½" channels next to the deck, which affords space for trapped air to expand when heated, averts blistering.

Permanently protected against termites and dry rot by the exclusive, patented Ferox Process, this new product deserves your investigation. See your roofing contractor, or mail coupon for specifications and sample.

THE CELOTEx CORPORATION
919 N. Michigan Ave., Chicago, Ill.

Please send specifications and Sample of Celotex Vapor-Seal Roof Insulation.

Name ____________________________
Address __________________________
City ______________________________
County ____________________________ State ____________

REG. U. S. PAT. OFF.

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REG. U. S. PAT. OFF.
THE MONTH IN BUILDING

TRENDS. An upward surge in all types of building activity during July boosted the 1940 cumulative total of building permits above the 1939 mark for the first time (see tabulation, right). More quickly reflecting the industry’s pulse, F. W. Dodge Corp.’s compilation of contracts awarded shows that August was the busiest building month since June 1930 when all business indices were coasting down the Depression slide. Thanks to national defense construction, industrial buildings in August totaled $39.4 million, four times the August 1939 volume.

PERMITS

(Source: U. S. Dept. of Labor)

<table>
<thead>
<tr>
<th>Permits</th>
<th>July ’40 (millions)</th>
<th>Comparison with June ’40 July ’39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>$118.0</td>
<td>-25%</td>
</tr>
<tr>
<td>Non-residential</td>
<td>63.5</td>
<td>-28</td>
</tr>
<tr>
<td>Additions, repairs</td>
<td>33.7</td>
<td>+15</td>
</tr>
<tr>
<td>TOTAL</td>
<td>215.2</td>
<td>-20</td>
</tr>
</tbody>
</table>

LANDLORD. Manager of 365 apartment projects and personal landlord of some 640,000 people is a big job. Month ago it was dumped on the broad shoulders of short, balking William P. Seaver when the Senate confirmed his appointment as Assistant Administrator of the U. S. Housing Authority. In his new capacity, Seaver will supervise the management and operation by local housing authorities of completed public housing projects.

Until this year USHA’s management problem was small, for in January only eight projects had been opened to tenants. Today, with about 65 projects open, the problem is huge. And, it will increase every month until the last of the 88,000 million program’s 363 projects for 640,000 people, 20,000 families, are in industrial buildings.

(About 270 of them in 30 different States are now under construction.) To solve it, USHA selected a freckled and bespectacled man well versed in most every phase of building. Seaver has been an architect, engineer, real estate operator, banker and at the time of his USHA appointment was the New York zone manager in charge of renting housing for the Federal Housing Administration.

He has estimated costs and supervised construction on 300 four- to twelve-story residential projects financed by the New York Title Co.; he has designed subways, “elevated” sewer systems, a 1,500 ft. pier and the approach to New York’s Manhattan Bridge; he has organized one New York bank and as consultant to another has appraised and managed 430 distressed business and residential properties.

“My job,” says new Assistant USHA Administrator Seaver, “is to see that only low income families become tenants and involves making homes of houses, neighborhoods of projects.”

RUMOR of the month, checked as far as possible by THE FORUM, has Promoter Roy S. Thurman about to launch a second and smaller edition of Rockefeller Center (without the Rockefellers) for the nation’s capital and has famed Modern Architect Frank Lloyd Wright as the chosen designer. Through the screen of “the most fantastic secrecy” which month ago was supposed to be veiling the development, several details could be seen: to cover a twelve-acre Washington site, the proposed project will probably include a skyscraper hotel, several apartment buildings, shopping facilities, a motion picture theater, an auditorium and a park. Also perceived was a lack of financial backing for the $12 million rumor.

That Washington has everything to gain by adding to its becolumned skyline a project by the No. 1 U. S. architect is not debatable. Nor is the physical need for such a project: In addition to the horde of Government workers who came to Washington in the New Deal’s wake and upped the population about 36 per cent in the last ten years (1940 pop.: 603,133), official estimate is that 10,000 more have been added to the payrolls this year as national defense office employees. Result: despite the recent building boomlet, there is still a shortage of residential and office quarters.

DEFENSE. Slow at first, the giant wheels of national defense gathered speed last month, and put out many a significant development for Building:

 Biggest news of the month for every U. S. industry was enactment on September 16 of the nation’s first peacetime compulsory military training law. For the building industry, and particularly those parts of it affiliated with the Army, it means the rapid production of housing for draftees. Immediate plans include the calling by January 1 of 100,000 men between the ages of 21 and 35, inclusive, and a like number by next Spring. But, according to a last-minute amendment to the conscription bill, none of these men may be inducted into the army until housing accommodations have been provided which meet the standards generally accepted by the U. S. Public Health Service.

 To cover the cost of this Army housing (estimated at about $330 per draftee) as well as transportation, food, etc., Congress was expected to pass in jig time an appropriation bill involving about $1 billion. ($388 million for housing was appropriated fortight ago.)

 Also on September 16 the President exercised his recently granted authority to muster the States’ armed forces and the Reserve Officers into the regular Army by calling 60,500 of the 240,000 National Guardsmen to the colors for a one-year period. And, just ten days later the President mustered the States’ armed forces into the regular Army, and a like number by next Spring. But, according to a last-minute amendment to the conscription bill, none of these men may be inducted into the army until housing accommodations have been provided which meet the standards generally accepted by the U. S. Public Health Service.

 Result: despite the recent building boomlet, there is still a shortage of residential and office quarters.

To the rescue came Congress with its second supplemental defense appropriation bill which provided $148 million for troop cantonments and housing facilities (enough to care for continually expanding enlisted personnel, all the Guardsmen to be called and with some left over to care for about 100,000 draftees). Also in the bill was an appropriation of $100 million for the construction of dwelling units for married enlisted personnel, married civilian employees of the Army, Navy and Marine Corps and the families of workers engaged in defense industries. As finally enacted, the bill gives the $100 million to the President who will allot it to the Army, Navy and Maritime Commission who, in turn, may choose any Government
MASONITE TEMPERED PRESDWOOD

... PROVED PRACTICAL IN DESIGN DECADE

This solution to a given living-room problem is highlighted by the recessed bay effect for the long window, produced by furring down the ceiling with Masonite Tempered Presdwood. The built-in sofa is flanked on either end by a built-in Tempered Presdwood utility cabinet.

This is an alternate solution to the same problem, stressing utility. Built-in sofa is flanked on one end by a built-in Tempered Presdwood desk, and on the other by a built-in radio cabinet. This design also allows more space for bookshelf area. Notice cubby-holes beside desk.

Many achievements of design decade would not have been possible without Masonite Tempered Presdwood. When this board became known in the early '30s, it fired the architect's imagination. Here was a material he had been looking for—a material that opened up unlimited possibilities for new and unusual treatments. An all-wood fibre board...hard...grainless...moisture-resistant...with a marble-smooth surface that can be cut or sawed into every conceivable shape with ordinary woodworking tools. A surface that will not warp, chip, split or crack when properly applied. And above all, a material that can produce expensive-looking effects at low cost. Today the possibilities of Masonite Tempered Presdwood are being explored more than ever. Shown on this page are two alternate solutions to the same living-room, illustrating the flexibility Tempered Presdwood combines with permanence and durability.
THE MONTH IN BUILDING

agency they wish to handle the necessary construction.

The last provision, or possibility, permitted the Federal Housing Authority to get only one of its feet inside the door, despite its fight to get all the way in. With a paternalistic interest in USHA, Senator Robert F. Wagner (Dem., N. Y.) before the bill's passage hot-footed it to the White House, squawked to the President about discrimination against his USHA, and between the two of them influenced the Senate to authorize direct allotments to USHA at the discretion of the Army or Navy. But, when the bill came back to the House for concurrence in Senate changes, the Representatives balked until these public housing projects are netted. Unfriendly to USHA Administrator Nathan Straus and cohorts, the House is doing its best to see that the public housing agency has little, if any, part in the national defense program.

Of financial importance for private builders, the wording of the act limits the average dwelling unit cost of housing under the President's fund to $3,500 including land, utilities, accessories and other collateral expenses. (In the opinion of experts this unit cost limitation throws the program toward the construction of small dwellings rather than toward the building of multi-unit structures.) It also permits the Government agencies to let the work out to contractors on a fixed fee basis without advertising for competitive bids.

Still on the legislative fire when Tim Foroux went to press was another housing bill which would authorize an appropriation of an additional $150 million also to be entrusted to the President for distribution. As passed by the House, the bill instructs the President to allocate the money to the Federal Works Administration and then instructs FHA Administrator John M. Carmony to proceed with the housing program through the Public Buildings Administration, a subsidiary agency which has been building Government buildings for years and was once known as the Office of the Supervising Architect of the Treasury. Unlike USHA whose public housing projects are netted away, USHA is leery of the mortgages as well as the equity investments in rental housing projects such as have been built right along under FHA's large scale housing program. Plan is that these projects be built for normal or long range markets which will be little affected by termination of the national emergency. RFC would step in where private equity investors hesitate, then after the projects are complete and operating successfully try to sell out. On the basis of 20 per cent investments, the $10 million would produce about $50 million worth of moderately low rent housing, and perhaps more; for, if private enterprise buys out the Government, the $10 million would become, in effect, a revolving fund. Accomplishment of this phase of the defense housing program hinges on the agreement of wary FHA to inure the mortgages. If it does and if private capital is leery of the mortgages as well as the equity investments in rental housing projects, RFC may finance the total cost of the initial projects to get the ball rolling.
In Formica "Realwood" a material is offered that provides a really handsome and modern finish for the interior of new or reconditioned elevator cabs, one that has unusual qualities that assure years of maintenance—free service.

It is a plastic material in which an actual veneer of fine wood is incorporated—the wood being protected by a transparent sheet of plastic. Hence you get actual grains of the finest woods with all the qualities of a plastic—resistance to moisture absorption, lack of porosity and chemical inertness (qualities which prevent staining), hardness and great durability under wear. Once your elevator interior is finished with Formica, you can forget it for many years. The picture shows a cab in a building of the Central Trust Company, Cincinnati, Ohio.

Let us send you the facts.

The Formica Insulation Co., 4620 Spring Grove Ave., Cincinnati, Ohio

FORMICA FOR BUILDING PURPOSES

OCTOBER 1940
For warm, golden beauty . . .

Newest of the I. Miller stores to grace New York is this beautiful unit on Fifth Avenue at 54th St. In designing the exterior, architect Robert Carson chose extruded shapes of Chase Architectural Bronze for doors and display windows—here handsomely fabricated and installed by the Superb Bronze Company.

Subsidiary of KENNECOTT COPPER CORPORATION

CHASE BRASS
CHASE Bronze extruded shapes

~~~ specifications that call for CHASE copper, brass and bronze will save upkeep costs

In modern restaurants, stores, theatres, offices—in buildings where appearances count—Extruded Shapes of Chase Architectural Bronze quietly confirm the good judgment and good taste of architects who know the dependable dignity of bronze.

Chase Extruded Shapes are tough, durable, rustproof! The shapes have true, sharply-defined profiles. Nearly a thousand shapes from which to choose, many of which are available for immediate delivery from Chase mill stocks.

Make every metal specification rustproof, durable, dependable and practical! Whether it be extruded shapes, water pipe or tube, gutters, downspouts, flashings, or screen cloth—for the sake of lasting economy that comes from long service and your own satisfaction—specify Chase.

CHASE COPPER THRU-WALL FLASHING
Directs water to face of wall. Helps to prevent masonry discoloration and inside wall leaks. Made of 16 oz. copper.

CHASE COPPER TUBE
Water lines should be brass pipe or copper tube. Chase Copper Tube and Sweat Fittings are inexpensive.

CHASE BRONZE SCREEN CLOTH
Strong, rustproof screen cloth made from full gauge .0113" wire as approved by U. S. Bureau of Standards.

CHASE COPPER ROOFING PRODUCTS
All Chase gutters, downspouts, heads, elbows, ridge rolls and flashings are full weight 16 ounce copper.

CHASE PLUMBING FIXTURES
Chase bathroom fixtures are made in two distinctive designs ("Doric" and "Round"), with matched accessories.

CHASE BRASS PIPE
When the job calls for brass pipe, do you know what kind of brass pipe to use? Let us help you!

CHASE & COPPER CO.
WATERBURY, CONNECTICUT

OCTOBER 1940
The art of modern wood treatment

Zebrawood Flexwood treatment of walls, reflector and soffit, Reception Room, Hickey-Freeman Co. offices, Empire State Bldg., New York; Rybakoff Interiors, designers.

A SETTING THAT BEFITS THE NEW YORK OFFICE
OF ONE OF AMERICA'S FINEST CLOTHING MANUFACTURERS

Hickey-Freeman clothes are famous for matchless fit, for the suave, supple feel that only customized tailoring can produce. The modishness of the product as well as the spirit of the company is expressed in the luxurious combination of exotic Zebrawood Flexwood and glass block in the Reception Room. Offices and Showrooms are treated with Orientalwood, Rift Oak and Quartered Walnut Flexwood; 6,700 sq. ft. being used. More than forty rare woods are available in Flexwood, and the ease and speed with which it is applied makes it a logical choice when the luxury and beauty of real wood is desired.

Flexwood is thin wood mounted on cloth and made flexible for direct application to flat and curved surfaces ... it takes any wood finish. Wood in no other form approaches Flexwood in cost, ease and speed of application in modern wood treatment.

UNITED STATES PLYWOOD CORPORATION, 103 PARK AVE., NEW YORK
Manufacturers of Flexglass

Flexwood is manufactured and marketed jointly by The Mengel Co., Louisville, Ky., and the United States Plywood Corp., New York
"They've just made him Vice President. He's the man who suggested that the firm look into General Electric's complete line of heating and air conditioning."

Whatever your problem... General Electric's complete line gives you the answer

G-E Winter Air Conditioners (oil or gas fired) circulate warm, clean, moistened air. Highly efficient. A single switch provides circulation in summer. Cooling equipment can be added.

G-E Oil Furnaces (steam, hot water, vapor) quick steaming... unusually economical. Year 'round domestic hot water coil optional. Also a complete line of G-E Gas Furnaces.

G-E Unit Air Conditioners for low-cost air conditioning in shops, restaurants, offices, etc. Complete range of sizes. Low in cost. Easily installed, little or no duct work needed.

Attachment burner designed to operate with boilers and furnaces of the following types: pressure steam, steam, hot water, warm air. Economical in operation, quiet, odorless and safe.

Compact G-E Units for cooling a single room, a group of rooms, or for conditioning the whole house. Unusually quiet in operation. Also a complete line of Air Circulators.

G-E Water Coolers for every need. G-E Condensing Units available in a wide range of beverage coolers, food display cases, storage refrigerators, cube ice makers, etc.

FOR THE RIGHT EQUIPMENT

...TURN TO...

G-E Winter Air Conditioners (oil or gas fired) circulate warm, clean, moistened air. Highly efficient. A single switch provides circulation in summer. Cooling equipment can be added.

G-E Oil Furnaces (steam, hot water, vapor) quick steaming... unusually economical. Year 'round domestic hot water coil optional. Also a complete line of G-E Gas Furnaces.

G-E Unit Air Conditioners for low-cost air conditioning in shops, restaurants, offices, etc. Complete range of sizes. Low in cost. Easily installed, little or no duct work needed.

Compact G-E Units for cooling a single room, a group of rooms, or for conditioning the whole house. Unusually quiet in operation. Also a complete line of Air Circulators.

G-E Water Coolers for every need. G-E Condensing Units available in a wide range of beverage coolers, food display cases, storage refrigerators, cube ice makers, etc.

For full details on the complete G-E line, see Sweet's Catalog... or write to:

GENERAL ELECTRIC
Div. 199-1013, Bloomfield, N. J.
Western Architecture Invades Shanghai

East met West in Shanghai's famed civic center, now in ruins as a result of the war.

Warning evil spirits from sliding down the steel work to harass prospective tenants, a piece of old temple cornice rests temporarily on top. In U. S. the roof tree suffices. Buildings under construction are totally enclosed with woven bamboo—shown at bottom of picture in enlarged detail.

Foundations are on piles driven into the soil with this heavy pile driver, stores and Western cosmetics are prized.

For the Great China Hotel, take three parts Classic Renaissance to one part Chinese and serve to taste.

But for the bamboo sun shades, this block of apartments might be at home in Vienna or Philadelphia.

(Forum of Events continued on page 12)
A small triangle is the symbol you use to indicate a telephone outlet. This symbol, included in the plans you draw, is assurance that your clients will never have their walls and lovely woodwork marred by drill-holes and exposed wiring.

Telephone outlets should be planned before construction begins. Modern construction methods and materials make it virtually impossible to conceal telephone wires unless built-in facilities are provided. Inexpensive pipe or conduit installed in the walls at the time of construction serves this purpose.

Even the smallest home should have at least one outlet on each floor. Additional outlets should be located wherever an extension telephone would be a convenience.

Your telephone company will be glad to co-operate in planning efficient, economical telephone facilities. Just call the Bell Telephone Business Office nearest you and ask for "Architects' and Builders' Service."

OCTOBER 1940
A. R. P. VIGIL AT ST. PAUL’S

Sir Muirhead Bone, Admiralty Artist, recording events of this war as he did in 1914-18, pictures a night watch by volunteers chiefly from the architectural profession. On the evening of September 11, shortly after Sir Muirhead made this sketch, a one-ton time bomb fell in the churchyard, and after four days and nights of digging the British “suicide squad” succeeded in dislodging it and carried it to the Hackney marshes where it was harmlessly detonated.

By special permission of The London Illustrated News in which the drawing appeared. Crown copyright reserved.
New Fluorescent Lighting in
Certified* FLEUR-O-LIERS
"WINDOWS OF DAYLIGHT"
for Modernization ... New Construction

Mazda F (fluorescent)—the "light of tomorrow" has opened up revolutionary new design possibilities for architects. Whether your problem is one of remodeling or building, fluorescent "windows of daylight" produce cooler, higher lighting levels so necessary to the efficient operation of the modern store, office and factory.

In specifying fluorescent lighting, it's important for you to get it at its best—in Certified* FLEUR-O-LIERS. Today, 35 leading fixture manufacturers are making FLEUR-O-LIERS—certified by Electrical Testing Laboratories as meeting over 50 rigid specifications for good light—good service, as set up by MAZDA Lamp manufacturers.

Your lighting company will be glad to supply technical information to help you plan better seeing conditions for your clients. For complete information about Certified* FLEUR-O-LIERS, ask your electrical distributor or write to FLEUR-O-LIER MANUFACTURERS, 2119 Keith Bldg., Cleveland, Ohio.

Look for this label... Electrical Testing Laboratories certify that FLEUR-O-LIERS have met with over 50 rigid specifications for good light—good service, as set up by MAZDA lamp manufacturers. All Certified* FLEUR-O-LIERS must be equipped with auxiliaries (ballasts and starters) certified by E. T. L.

Whenever you buy fluorescent lighting... Insist on CERTIFIED FLEUR-O-LIERS
FACE-LIFTING SOME RAMPARTS

Fort Wood on Bedloe's Island, being judged not one of our best coast defenses, gives way to a more appropriate setting for Liberty. Designed by Norman T. Newton, associate landscape architect of National Park Service.

Independence Hall in Philadelphia, if Board of Trade's Planning Committee ideas carry through, will face a new "Constitution Gardens," reconstructed as of the 18th century.

Tacoma Narrows Bridge, now open, gives direct access from Tacoma to peninsular area north, hooks up defense units at Bremerton Navy Yard, Fort Lewis and McChord Army Air Field. C. H. Eldridge, engineer.

(Forum of Events continued on page 64)
NEW DESIGN Opportunities

TECO CONNECTORS CREATE WIDE NEW RANGE of STRUCTURAL POSSIBILITIES IN ECONOMICAL Timber

The nature of its use and the value of timber as a construction material has changed radically within the last seven years.

TECO TIMBER CONNECTORS have been responsible for most of the new design opportunities in timber. . . . It has altered accepted engineering formulas for wood . . . increased the range of construction possibilities in America's lowest cost building material . . . enabled it to do more work per member.

Engineers and architects now have a new medium at lower cost. Truss spans can now be longer . . . towers higher . . . bridges stronger . . . and a fundamentally low-cost material used for new kinds of exacting work.

Teco connectors decentralize loads and stresses at connections . . . enlarge the bearing area of such stresses to practically the entire width of the timbers involved, and eliminate expensive and wasteful over-designing.

ARE YOU FAMILIAR WITH THESE NEW DESIGN POSSIBILITIES? USE THE COUPON BELOW TO SECURE FULL ENGINEERING INFORMATION ON THIS DEVELOPMENT WHICH HAS CHANGED TIMBER FROM A CARPENTRY TO AN ENGINEERING MATERIAL.

TIMBER ENGINEERING COMPANY, Inc.

1337 Connecticut Avenue, Washington, D. C.

Please send us full technical information on the new design opportunities in timber made possible through the development of the Teco connector system. (AF)

Individual

Firm

Street

City  State

WASHINGTON. D. C.
This fine residence is described as "the home of an enthusiastic yachtsman, whose pleasantly informal house is most aptly set on a small peninsula extending into Long Island Sound." Its rugged, substantial appearance is heightened by this superb setting.

The charm of its exterior and interior has been further enhanced by the use of Pratt & Lambert Paint and Varnish, including Pratt & Lambert House Paint and Vitralite, the Long-Life Enamel.

The Pratt & Lambert Architectural Department nearest you will welcome the opportunity to co-operate with you in securing maximum decorative effects for any project whether it be a mansion or cottage, a hospital or industrial plant — in which latter case the utilitarian requirements are paramount.
STRIKE A NEW DECORATIVE NOTE IN WALL TREATMENTS WITH NAIRN WALL LINOLEUM

The soft, subdued tones of Nairn Wall Linoleum “Moonstone,” No. 7996 bring both charm and distinction to this spacious entrance hall. A floor of Nairn Linoleum “Pacific Blue,” No. 1114, “Personal-ized” with ready-cut insets, borders and feature strips, completes a pleasing and harmonious color scheme.

Unlimited creative scope for architects . . . increased sales opportunities for builders.

If you want wall material that lends itself to any decorative scheme . . . that offers you innumerable opportunities for new and unusual treatments — specify Nairn Wall Linoleum!

From the angle of beauty . . . you have a wide range of distinctive designs—soft, delicate pastels, rich, dark tones, mottled and striated effects.

Because of its extreme flexibility, Nairn Wall Linoleum is readily adaptable to any structural design. At corners and openings, it may be smartly rounded. And today an increasing number of architects use it to make ceilings more attractive.

Permanent, too. When correctly installed, Nairn Wall Linoleum needs no costly refinishing.

For your clients, economy is assured by its remarkable wearing qualities. Built for long service.

Installed by Authorized Contractors, Nairn Wall Linoleum is fully guaranteed. Write for free booklet.

CONGOLEUM-NAIRN INC., KEARNY, NEW JERSEY

SANITARY WASHABLE PERMANENT ECONOMICAL

*Trademark Registered U.S. Pat. Off. by Congoleum-Nairn Inc.
At the beginning of the Design Decade, stainless steel was neither plentiful nor its architectural possibilities clearly understood. All that has changed. Today there is an abundance of flat-rolled stainless, the kind most commonly employed. Architects and other building men realize that this versatile metal has almost unlimited applications: that first it is available in various finishes, from a soft, satiny surface to a high mirror polish; that it is a solid rustless metal; that it may be formed readily to any conceivable design; that it will not tarnish or stain; that even when its shimmering surface becomes soiled it cleans with magic ease; that its cost is not excessive when its many benefits are weighed. But perhaps the most important attribute of stainless steel is its equal facility in either patrician role or plebeian. Stainless steel is truly the metal that meets artistic desires and pleases common eyes.

From canopy to kitchen it is in character all the way. Stainless steel has made great strides in this Design Decade. It will make greater strides in the next. We invite your interest in ARMCO Stainless Steel, and in our broad facilities for helping you make the most of your conception. The American Rolling Mill Company, 2651 Curtis Street, Middletown, Ohio.
The photograph above shows a cylinder of Brixment mortar (left) and a cylinder of mortar made with portland cement and lime (right). Both specimens were made at the same time, and subjected to exactly the same treatment. After curing for 30 days, 1/4" of water was put into the tray and the cylinders were alternately frozen and thawed 15 times. Note in photo 2 that the Brixment mortar remains intact, whereas the other mortar has crumbled badly. This simple test can be made in any ice-manufacturing plant, or in the freezing unit of a domestic mechanical refrigerator.

BRIXMENT Mortar is More DURABLE!

FOR permanent strength and beauty, mortar must be durable—must be able to withstand the alternate freezing and thawing to which it is subjected many times each winter.

Brixment mortar is more durable. This greater durability is due partly to the strength and soundness of Brixment mortar, and partly to the fact that Brixment is waterproofed during manufacture. This waterproofing helps prevent excessive moisture from entering the hardened mortar—hence helps prevent scaling and spalling when the Brixment mortar is frozen.

Walls built with Brixment mortar therefore retain their original strength and appearance. Even in parapet walls and chimneys, where exposure is particularly severe, Brixment mortar will never require re-pointing.

BRIXMENT For Mortar and Stucco
Our Constant Objective is to furnish the architect with an honest, steadily improved product that will enable him to design architecturally correct floors which can be installed and maintained properly at minimum cost.
A brief decade ago, Tile-Tex was a stripling in the ranks of industry... serving well and striving to serve better... facing with confidence the years of tomorrows that lay ahead.

And so today, now that these tomorrows have become yesterdays, Tile-Tex has stepped forward from the ranks to assume leadership... leadership that is looked to in its own branch of industry for further guidance... for pioneering development and progress in the tomorrows yet to come.

When Tile-Tex pioneered the process of combining asphaltic binders with asbestos fiber and other ingredients for use as resilient flooring, it was hailed as a revolutionary discovery in the field of Soft-Tread Floorings... not alone for comfort and safety of footing... but as a forward step towards lower first and final cost.

The creation of Tile-Tex was an achievement in itself... yet the pioneers of this new product had the vision that impels unceasing search for betterment. Tile-Tex laboratory experts strove for greater breadths of utility... Tile-Tex designers sought for new beauty of pattern, colors and delicacy of shading... and Tile-Tex engineers concentrated on perfection and uniformity of production.

And so today, this pioneering company proudly presents its contribution to a Decade of Progress... the beauty, comfort and utility of the Tile-Tex triumvirate!

The TILE-TEX Company

TILE-TEX FOR FLOORING
TILE-TEX FOR WALLS
AND NOW FLEXACHROME

To Help You and Your Staff

While all the details of these Tile-Tex products are available in Sweets Catalog, may we send you complete data and sheets... helpful informative material for ready reference? Your request will bring it by return mail.
ONLY A

Ground \ AND \ Polished \ GLASS
GIVES MIRROR-LIKE REFLECTIONS

The accurate, mirror-like reflections provided by a quality structural glass are very important. They contribute vitally to the beauty and richness of the installation. They are largely responsible for the effect of spaciousness, elegance and modern smartness for which structural glass has become famous.

Yet no structural glass which is not mechanically ground and polished can provide these clear, perfect reflections. And that’s why so many architects standardize on Carrara Structural Glass.

Every piece of Carrara produced, no matter what its color or thickness, is mechanically ground and polished.* That means all Carrara Glass is top quality. There is no second grade.

Further, Carrara is permanent. It is easy to clean. It offers a wide choice of attractive colors, of thicknesses and decorative treatments. It is structural glass at its best. Write today for our free booklet of information about it, entitled “Carrara, the Modern Structural Glass.” Pittsburgh Plate Glass Co., 2193 Grant Building, Pittsburgh, Pa.

* The new Suede-finish Carrara is subjected to special treatment, after grinding and polishing, to soften its surface reflections.

CARRARA
The modern Structural Glass
PITTSBURGH PLATE GLASS COMPANY

IT TAKES A QUALITY GLASS like Carrara, with a ground and polished finish, to provide accurate, mirror-like reflections such as those shown in these locker-room partitions.

"PITTSBURGH" stands for Quality Glass
Announcing . . .

THE ADAPTATION

of the best marine-type boiler to
home use. It took the Scotch ship
builder to develop an economical
boiler that uses the least fuel to
make the most steam. For many
years this boiler has sailed the seven
seas propelling the commerce of the
world at the lowest possible cost per
ton mile.

Now S. T. JOHNSON CO., pio-
near builders of oil burners and
heating and air-conditioning units of
all kinds have "tamed" this rover
and put him to work at a price well
within the reach of every home
owner.

Anyone can now enjoy the "eco-
nomical luxury" of the ECONOLUX
and have healthful, carefree, fully
automatic oil heat.

A size for every need. Will fit into
a closet or out-of-the-way corner
anywhere.

Full information in beautifully illus-
trated folder sent FREE on request.

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ECONOLUX

BY JOHNSON

"A Promise is only a Promise—Performance is History". The following Ratings
and Dimensions Table shows the actual performance record of the new ECONOLUX.

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DISTRIBUTORS AND DEALERS... THROUGHOUT THE WORLD

OCTOBER 1940
During this significant Decade of Design, Bigelow Carpet has played an increasingly important role in contributing to the beauty of interiors.

And more and more eminent architects, interior designers and industrial designers have turned to Bigelow's Carpet Counsel.

For decades to come, think of carpet...think of Bigelow! And take advantage of the expert services of Bigelow's Carpet Counsel in choosing carpet for every kind of interior.

We shall be glad to help you select the right grades for the right spaces...to work out designs to meet your own ideas...to supply just the color you need. Consult your dealer, who will bring you to us. Bigelow-Sanford Carpet Co., Inc., 140 Madison Avenue, New York, N.Y.

CARPET COUNSEL by BIGELOW WEAVERS

THE SERVICES OF CONTRACT SPECIALISTS ARE AVAILABLE IN BIGELOW OFFICES IN:

ALBANY, N.Y. • ATLANTA • BOSTON • BUFFALO • CHICAGO • CINCINNATI • CLEVELAND • COLUMBUS • DALLAS

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MEMPHIS • MILWAUKEE • MINNEAPOLIS • NEW YORK • PHILADELPHIA • PITTSBURGH • SAN FRANCISCO • SEATTLE • ST. LOUIS
Grasmoor House is located in one of the most beautiful sections of Cincinnati, Ohio. Consisting of twin buildings three and four stories high, containing 275 rooms, the project also includes a seventy-two-car garage. Apartment ceilings are nine feet high rather than the customary eight or eight and a half feet. Stran-Steel joists, studs and rafters form the building frame, while metal lath and plaster plus masonry walls provide even further fire-safety. The architect is Emery Roth & Son of New York City, with Harry M. Price of Cincinnati as associate architect. The building was erected by the Wheeler Engineering Co. of New York and Cincinnati.

Stran-Steel—the modern building material—again is selected for an outstanding type of building. Grasmoor House, in which no expense has been spared to make it Cincinnati's loveliest residential building, combines the beauty of Georgian architecture with the structural superiority of STEEL! In a few days Grasmoor House will be "home" to many discriminating families. They will choose this beautiful residence for the luxury of its interior design, the quiet refinement of its landscaped setting. Because cost-wise building men and architects know the value of steel construction, Stran-Steel was specified for Grasmoor House.

Stran-Steel combines all the best features of steel (permanence, strength, fire-safety and rigidity) with the most desirable features of wood (low cost, nail-ability). Through new methods of handling and pre-fabrication, Stran-Steel makes possible record-breaking speeds for building programs. Write today for complete information and technical data on this modern, high-speed building material. Descriptive literature and consultation service are available on request.

607 SHELBY STREET, DETROIT, MICHIGAN
DIVISION OF GREAT LAKES STEEL CORPORATION

UNIT OF NATIONAL STEEL CORPORATION
NEW YORK'S MOST RECENT HOUSING PROJECT is assured the ultimate in heating comfort and fuel economy with five large Fitzgibbons Steel Boilers of a total capacity of 151,500 sq. ft. steam radiation. This New York City Housing Authority project will provide moderate cost homes for 1170 families.

Where operating costs are figured closely, Fitzgibbons Steel Boilers are the logical selection. The reasons are set forth in the Fitzgibbons R-Z-U catalog. Write for your copy.

Fitzgibbons Boiler Company, Inc.
General Offices: 101 Park Ave. New York, N.Y.
Works: Oswego, N.Y. Offices in Principal Cities
Survey on Wind Damage Shows the best records have been made by Pitch and Gravel Roofs

"DAMAGE TO ROOFS by wind is often a serious problem. Some of the wind damage is done by suction. Some is done by wind getting under exposed laps of roofing and ripping off large sections. "WHAT ARE the records on this?"

"A TAR ROOF has 400 pounds of gravel or 300 pounds of slag every 100 sq. ft. That alone is considerable protection against wind damage. Laps aren't exposed; the whole roof is tightly sealed by heavy top pouring of coal tar pitch."

"THE EFFECT of this is shown by a survey made by one company which is interested in roofing problems. It kept records of about 7,500 roofs over a five-year period ending last fall."

"WIND DAMAGE to roofs without gravel or slag surfaces was more than twice as frequent as to coal tar pitch roofs ... and the damage was almost six times as much."

"WHEN YOU REALIZE that the pitch and gravel roof not only has greater resistance to wind damage but also greater resistance to sun damage, to water damage, to hail damage, to fire damage ... you know why the coal tar pitch and gravel roofs have made the fine old records for long life."

When you hear of a built-up roof that has lasted 30 or 40 years, you usually find that it is of coal tar pitch. Nothing has happened in the roofing business to indicate that any other type of built-up roofing can equal those old records of the tar roofs.

For your own sake, specify Koppers Coal Tar Pitch Roofing.

OTHER KOPPERS PRODUCTS:
- Tarmac Road Tars for paving drives, parking areas, walks, etc.
- Bituminous-base Paints
- Pressure-treated Piling and other timber products.

KOPPERS COAL TAR ROOFING—KOPPERS COAL TAR WATERPROOFING
KOPPERS COMPANY, PITTSBURGH, PA.
Why versatile Douglas Fir Plywood is one of today's most important design materials!

There is a grade, a size and a thickness of this "modern miracle in wood" for every use!

Douglas Fir Plywood's contribution to modern design is one of increasing importance. Its versatility, large sizes and great strength permit the combination of flexible planning and streamlined beauty with sounder, speedier construction. Thanks to this "modern miracle in wood," interior walls can be beautiful as well as crack and puncture-proof. Sub-floors can be squeakless as well as laid in half time. Walls can be nearly 6 times more rigid than when horizontal board sheathing is used. Concrete surfaces can be formed that are smooth and flawless. A grade or type of this engineered lumber has been developed for every building purpose. Each is stamped with a distinctive "grade trade-mark" to make specification and identification easy and simple.


dri-bilt methods are revolutionary!

Two other important developments are the Dri-Bilt with plywood methods. In the standard Dri-Bilt method, Douglas Fir Plywood replaces conventional materials for sheathing, sub-flooring, interior walls and ceilings, etc., and is applied by on-the-job methods. In the DFP Dri-Bilt method, wall and ceiling sections, etc., are pre-fabricated from the proper grades of Douglas Fir Plywood away from the job-site in shed or warehouse. Both methods cut weeks from building schedules. Both are accepted by FHA and approved in Uniform Building Code.

For more information, consult Sweet's Catalog or write for this free literature: Suggested Specifications for Douglas Fir Plywood; Dri-Bilt with Plywood Manuals; Finishing Booklet. Douglas Fir Plywood Association, Tacoma Building, Tacoma, Washington.

The diagram at right shows how the various grades of Douglas Fir Plywood should be used in home construction.

The walls of this attractive living room in Newport-Balboa, California, are 3/8" Plywall, V-joined and lightly stained. The ceiling is Plycord, painted. This combination was used effectively throughout the entire residence. Frank Green, architect.

Plycord is the perfect base for every type of finish floor. It goes down in half time, never warps or cups, makes floor far more rigid . . . an important factor in earthquake or high wind areas. Linsolium laid over Plyscord never shows boardmarks.

Plyform was responsible for the smooth concrete walls of Station WJIV, Wheaton, Md. James Middlebrooks, CBS engineer; Burton Corning, architect.

(D) EXT-DFPA was used as exterior finish on the attractive Life House in Portland, Ore.
INDUSTRIAL DESIGN COMPETITIONS
FOR THE 21 AMERICAN REPUBLICS

COMPETITION PROGRAM

Announcement:

The Department of Industrial Design of the Museum of Modern Art, 11 West 53rd St., New York City, announces the opening of two competitions for the twenty-one American Republics.

The first competition is open to any resident of the United States of America with the exception that employees of the Museum of Modern Art are not eligible to compete.

The second competition is open to any resident of the twenty other American Republics: Mexico, Guatemala, Honduras, Salvador, Nicaragua, Costa Rica, Panama, Cuba, The Dominican Republic, Haiti, Venezuela, Colombia, Ecuador, Peru, Brazil, Bolivia, Chile, Paraguay, Uruguay, and Argentina.

The competition opens with publication of this program in THE ARCHITECTURAL FORUM. Publication of the premiated designs will also be made in THE FORUM.

COMPETITION I.
For residents of the United States of America.

PURPOSE

The purpose of this competition is to select a group of designers capable of creating a useful and beautiful environment for today's living, in terms of furniture, fabrics, and lighting. In order to bring the best designs on the market, arrangements have been made whereby stores and manufacturers will commission the designers selected through this competition, and work with them on the production and sale of their designs throughout the country. The Museum will handle the competition, and will consult on design during the period of production. The Museum will have no participation in the manufacture or sale of finished pieces or any responsibility in this connection.

FLEXIBILITY

The Museum has received assurances that the pieces selected through this competition will be produced and sold throughout the country. They will be used in the most varied kinds of rooms, and in all sorts of combinations. They will go into rooms with different exposures, and in regions of varying climates. For these reasons, flexibility of use is desirable. Design of pieces to be built in as part of the architecture is not a part of this program. All pieces are to be movable, though pieces which attach to the architecture but are not built in are allowable.

Pieces must be suitable for quantity production and possible to produce within a normal price range for the middle-income groups.

CHARACTER

Many of the pieces of furniture in common use are inherited types, and today's pattern of living has adapted itself to them rather than determined them. This program demands a solution starting with a sound analysis of the requirements, and a fresh approach to what our way of living calls for in furniture, fabrics, and lighting. The best solutions will inevitably be a contemporary expression and will reflect today's social, economic, technological, and aesthetic tendencies and possibilities. In order to allow as much room as possible for new ideas, no specific pieces will be called for in this program; a solution which provides adequately and handsomely for the various normal activities of a typical American middle-income group family is desired.
DESIGN CATEGORIES

Designs are called for in the following categories, and competitors may enter in any one or more.

A. Seating for a living room.
B. Other furniture for a living room. (Mechanical equipment such as radios, phonographs and clocks is not included.)
C. Furniture for a dining room.
D. Furniture for a bedroom.
E. Furniture for a one room apartment.
F. Furniture for outdoor living on terraces or porches of a house or apartment.
G. Movable lighting equipment to provide illumination for several uses; i.e., for reading, eating, writing, and so forth. These are not to be built-in fixtures.
H. Woven fabrics—for drapery, upholstery, or other uses.
I. Printed fabrics—for drapery, upholstery, or other uses.

FUNCTIONS OF FURNISHINGS

The normal activities in these areas for which furnishings are needed are, in part, as follows:

Living room—This is the center for social life. Furniture is needed for the occupants to sit down and converse, read, relax, study, write, entertain, serve food or drinks, play games, keep books, magazines and papers, and so forth.
Dining room—Two to eight people must be accommodated for meals. Storage space for china, glass, and silver must also be provided. It is assumed that a maid would serve on some occasions and not on others.
Bedroom—Facilities for sleeping, for storage of men's and women's clothing and accessories, and for dressing must be provided here.
One room apartment—Living is necessarily compressed in a one room apartment. All the activities of the other three rooms go on here in limited space, and ingenuity is at a premium in making useful and attractive furniture for these needs.
Outdoor living area—The use of outdoor terraces and porches in conjunction with a house or apartment is a characteristic and ever-increasing feature of American living. This requires furniture which can stay outdoors, or can be moved out from inside and perhaps be used in both places. Furniture for having meals outdoors, for relaxing and conversation, and so forth, are possibilities here. A wider range of materials may perhaps be used for this category than for any other.

ROOM SIZES

In order to provide a more exact idea of the normal living areas in which such pieces might be used, the following room sizes are given as a rough approximation of common shapes and conditions. These figures are not intended to bind the competitor in any way, and are given simply as an indication of scale and for correlation of the problems.

Living room 18 by 22
Bedroom 15 by 15
Dining room 15 by 15
One room apt. 19 by 25
An 8' 6" ceiling and windows along one side may be assumed.

INELIGIBLE PIECES

In all the categories of this program, pieces which have been previously designed and made may be submitted, with the following exceptions, which are ineligible:

1. Pieces on which any manufacturer or distributor has any rights.
2. Pieces which have been commercially produced for sale.
3. Pieces which have been publicly exhibited.
4. Pieces which have been published. (Pieces may, however, have appeared in publication photographs where they were not being shown for themselves, as a chair in a photograph of a house, for example.)
5. Pieces which are not original creations of the competitor. Any cases which do not fall into these classifications and whose eligibility is in doubt must be submitted to the Competition Director whose decision on them will be final.

REQUIREMENTS FOR SUBMISSION

Furniture & Lighting—(Categories A-G)
In order to give competitors maximum freedom in presentation, as few specific requirements as possible are given.

1. All drawings shall be submitted on 20" by 30" sketch boards or equivalent. Drawings on tracing paper or other paper may be mounted on boards of this size. A single line border shall be drawn 3/4" inside of each edge of the sketch boards.
2. Any number of drawings may be submitted. Enough material must be submitted to show the jury that the designer is capable of carrying out designs for the complete category.
3. Drawings may be in any medium, and arranged in any way.
4. Each piece must be shown in sufficient drawings (plans or half-plans, sections, elevations, details of construction, and so forth) so that the piece can be built from these drawings.
5. Scale of drawings is left to the competitor's discretion, and may vary as he sees fit. In the furniture categories, it is suggested that in general the scale of 3"=1'-0" be used. The scale of every drawing must be clearly indicated. All important dimensions must be shown and materials clearly specified.
6. In addition to the technical drawings, each piece must be shown in a colored perspective or isometric at a large enough scale to give an accurate idea of the appearance of the finished piece.

Suggested Additional Material—NOT REQUIRED

In addition to the required drawings and renderings of each piece, the following submissions are suggested as a further aid to the jury. These are not requirements, and competitors who do not send any extra material of this sort will not be handicapped in any way.

1. If the actual piece exists, one or more photographs of it may be submitted mounted on the sketch board with the drawings, or on a separate sketch board, 20" by 30".
2. A scale model, preferably at the scale of 3"=1'-0", may be submitted. This may be anything from a structural or diagrammatic model to an accurate replica.
3. Photographs of study models or constructions of any sort which might help in visualizing it may be added.
4. Samples of any special materials, finishes, special constructions (joints, etc.) and so forth may be submitted, either attached to the boards or separately.

Fabrics—(Categories H-I)

Required in Category H: at least two actual weaves one yard long, and of sufficient width to show the material adequately. Required in Category I: full color renderings for at least two prints. Each rendering should be 30" by 30" outside, but may be larger if necessary, and must show at least two full repeats. These renderings may be on any paper, stiff or flexible, which the competitor wishes. Information must be attached to the weaves or written on the renderings, giving the intended use of the material and any unusual or significant features about it.

COMPETITION DIRECTOR

Correspondence and entries should be addressed to:
Elliot F. Noyes, Director, Department of Industrial Design
The Museum of Modern Art, 11 West 53rd Street, New York, N. Y.
JURY
Alvar Aalto, Finnish architect and furniture designer. Professor of Architectural Research at Massachusetts Institute of Technology.
Alfred H. Barr Jr., Director of the Museum of Modern Art.
Catherine K. Bauer, Special Consultant to United States Housing Authority.
Edgar Kaufmann, Jr., Design Editor of New Directions, and Merchandise Manager in Home Furnishings of Kaufmann Department Stores.
Edward D. Stone, New York architect.
Should any of the jurors be unable to attend the jury meetings, substitutes will be designated by the Museum.

TECHNICAL EXPERTS
A committee of technical advisers from manufacturers of each main type of furniture, a lighting expert, and an authority from the field of textile manufacturing will be present for consultation at meetings of the jury. They will have no vote, but will advise on questions relating to price and manufacture of the pieces.

DATES
The competition opens with this announcement and closes on January 11, 1941, at midnight. Any entries bearing postmarks later than this will be rejected.

NOTIFICATION OF ENTRY—COMPETITION NUMBER
 Anyone intending to enter the competition must notify the Competition Director in writing, giving full name and address. This notification does not constitute obligation to submit. The Museum will acknowledge this notification by sending him an official entry blank and a competition number.

ANONYMITY OF SUBMISSIONS
The drawings and fabrics shall bear no identifying name or symbol. All material submitted shall have clearly marked on each separate sketchboard or other item the letter of the design category of that particular entry, and the competition number of the competitor. On all drawings this shall be on the upper right hand corner of the sheet in letters one inch high. On fabrics, a cloth or paper shall be attached to the upper right hand corner with these letters one inch high. On models or other material, these letters shall be clearly marked at any convenient place and in any legible size on the object. This number on each separate item sent in by competitors will be the only means of identification of them, and the Museum cannot take any responsibility for entries sent in without numbers or for entries whose numbers are not firmly attached.

QUESTIONS
Any questions may be sent to the Competition Director who will issue one bulletin simultaneously to all competitors who have registered. The bulletin will become a part of the program. No question received after November 8, 1940, will be answered.

JURY MEETING
The jury will meet one or more times. The first meeting will be held beginning January 20, 1941. If the Museum determines that any subsequent meetings of the jury are necessary announcement of the time of such meetings will then be made.

JURY PROCEDURE AND POSSIBLE CALL FOR MODELS
The jury and the technical advisers will first examine the submissions for the purpose of rejecting any which in the jury’s opinion can not be produced in quantity within a middle price range. The jury will then consider them from the point of view of design. They will select one or more winners for each category, except the categories, if any, that the Museum may determine should be further considered with use of models. If the Museum determines that any categories should be further considered with the use of models, the jury will select finalists from the competitors submitting designs in such categories. The finalists thus selected will be notified. The finalists who have submitted photographs of the finished object will be asked to have the object sent to the Museum, express collect. Other finalists will be given the opportunity of providing models for themselves. If such other finalists advise the Museum, within the time specified by it, that they do not intend to submit models, the Museum will have the right to cause such models to be constructed either in rough or finished form. Models which the Museum causes to be constructed will belong to the Museum but will not be exhibited, except at jury meetings, without the designer’s permission.

AWARDS
The purpose of this competition, as stated at the beginning, is to secure a group of designers who have the ability to create a useful and beautiful environment for today’s living. The opportunity to design for production and to be paid for it is therefore the logical award. With this in mind, the awards will be as follows:

The winning designer in each category within 30 days after the final judgment will receive an offer from a manufacturer to enter into a contract for the production of the winner’s designs selected by the jury. Such contract will provide for payment of royalties or fees to the designer at the usual rates. The jury will have the right to select more than one winner in each category and if it does so, all winners in such a category will receive similar awards.

However, in the event that the designs submitted are not, in the opinion of the Museum or the cooperating stores, suitable for being produced for sale, the right is reserved to give an award to each winning designer of $500.00 in cash in lieu of an offer of contract for production.

HONORABLE MENTIONS
The jury may, in addition to determining the winners in each category, select designs for Honorable Mention. Arrangements may be made for the production of pieces based on the designs chosen for Honorable Mention and if this is done the designer will receive the usual royalties.

PRODUCTION
All designs that are chosen for production will be manufactured during the Spring of 1941 in collaboration with the designers. In order to maintain the essential character and integrity of the designs, the Museum will arbitrate on any changes which the stores or the manufacturer may suggest and the designs as finally produced must be acceptable to the Museum. The Museum understands that the cooperating stores will advertise and promote the sale of the finished products throughout the country and will give proper recognition to the designers. Wherever feasible, a seal will be attached to all articles manufactured from winning designs, specifying the name of the designer and that the design was chosen in this competition.

EXHIBITION
The Museum has scheduled for October 1941 a large exhibition of the pieces which will be manufactured from the winning designs.
designs. At the same time, the stores in all the large cities of the country will have this complete line for sale. The Museum's show will have nothing to do with the merchandising of the pieces, and will treat the material from a design point of view. It will retain the winning drawings, the honorable mentions, and any others which have interesting points for exhibition. Drawings which do not receive prizes or honorable mentions will be exhibited only after securing the designer's permission. Winners may be asked to redraw or amplify their drawings slightly for the sake of the exhibition. A circulating exhibition of material from this show will be made up at the close of the exhibition in the Museum building.

RETURN OF SUBMISSIONS

Drawings, fabrics, and models will be returned to the competitors after a reasonable amount of time. Prize winning designs and Honorable Mentions will be kept for purposes of exhibition, publication, and for the traveling show.

GENERAL CONDITIONS

All persons entering the competition do so on the understanding that the Museum will not be liable in any manner for any contracts to be offered to winning designers. While the Museum will endeavor to take proper care of all designs, fabrics, models and other articles submitted in the competition, the Museum will not be responsible for any loss or damage thereto.

COMPETITION II.

For residents of: Mexico, Guatemala, Honduras, Salvador, Nicaragua, Costa Rica, Panama, Cuba, The Dominican Republic, Haiti, Venezuela, Colombia, Ecuador, Peru, Brazil, Bolivia, Chile, Paraguay, Uruguay, and Argentina.

PURPOSE

The purpose of this competition is to discover designers of imagination and ability in the other Americas, and to bring some of them to New York for a period of a few months. The competition is interested particularly in bringing out suggestions on the part of these designers as to how their own local materials and methods of construction might be applied in the making of furniture for contemporary American requirements.

MATERIALS

All the countries which this competition includes have many local materials such as woods, fibers, skins, and so forth which are handsome and practical for use in furniture. The Museum is interested particularly in designs which make intelligent and imaginative use of such materials. For example, bamboo, caroa fiber, tucum, jute, camauba, tin, copper, and both precious and other woods seem to have possibilities.

CHARACTER

Designs submitted should be straightforward solutions for today's living requirements, and should be contemporary in spirit.

REQUIREMENTS

Each competitor is required to submit original drawings for a few pieces of furniture such as might be used in a living room, a dining room, a bedroom, or an outdoor area. About four pieces would be considered a normal submission. These should be drawn or mounted on sheets of opaque paper 50 by 80 centimeters. Drawings should include necessary plans, sections, and elevations, and also a colored perspective or isometric. Drawings should be about one quarter full size where possible, but this is left to the discretion of the designer. Materials must be fully specified. Where possible, samples of the materials, fabrics, and so forth which are intended to be a part of the design should be sent with the entry. Explanations, notes, and details should be given where necessary. Drawings are to bear no identifying name or symbol. Each competitor must enclose with his drawings a plain opaque sealed envelope containing the full name and address of the competitor. A receiving department will number all drawings, models and other material submitted, and place the same number on the envelope.

DATES—COMPETITION DIRECTOR

All entries must reach the Museum not later than January 15, 1941. Any writing on the drawings may be in Spanish, Portuguese, or English. Correspondence and entries should be sent to:

Eliot F. Noyes, Director, Department of Industrial Design The Museum of Modern Art, 11 West 53rd Street.

New York, N. Y., U. S. A.

JURY

Alvar Aalto, Finnish architect and furniture designer. Professor of Architectural Research at Massachusetts Institute of Technology.

Alfred H. Barr, Jr., Director of the Museum of Modern Art. Catherine K. Bauer, Special Consultant to United States Housing Authority.

Edgar Kaufmann, Jr., Design Editor of New Directions, and Merchandise Manager in Home Furnishings of Kaufmann Department Stores.

Edward D. Stone, New York architect.

Should any of the jurors be unable to attend the jury meetings, substitutions will be designated by the Museum.

NOTIFICATION OF ENTRY

Anyone intending to enter the competition must notify the Competition Director in writing. This notification does not constitute obligation to submit. Notification should give full name and address of the competitor.

AWARDS

The jury will meet at the end of January, 1941, and from the entries will select a number of designers as winners. Winners will receive a round trip ticket to New York, and $10000.00 for expenses during a three or four months' stay here. During this period they will work with the Museum on the possibility of producing their designs. They will visit stores and manufacturing plants, and look into ways of utilizing the products of their countries for American use. At least three such awards will be made, and if sufficient ability is found through the competition, the jury may double the number of awards.

EXHIBITION

The Museum will hold an exhibition of the designs submitted in this competition. Examples of the materials used in the pieces as designed will be exhibited at the same time. This will later be made up into a traveling exhibition which will circulate to the museums of the United States. All entries will be kept during the period of these exhibitions.

RETURN OF SUBMISSIONS

Drawings will be returned to the competitors at the conclusion of the exhibitions. Prize winning designs will belong to the Museum and will not be returned. The Museum will take all possible care of the submissions, but no responsibility can be taken for loss or damage.
in Design You Cannot Afford to Ignore

Yielding, as did the bathrooms of a generation ago, to the demands of a luxury-loving public seeking the modern note in every environment, the toilet rooms of this day are taking on a lively brightness and cheerfulness that lifts toilet facilities out of the oblivion of commonplace conveniences.

A major factor in promoting this renaissance in toilet room environments has been the strikingly modern designs of toilet partitions sponsored by Sanymetal, all three of which are available in "Porcena" (porcelain enamel) finish. Sanymetal was first to detect the need for, and apply successfully, the merits of porcelain enameled metal in the manufacture of toilet partitions. Beauty and sound mechanical construction making for faultless performance, enduring quality for the years to come, and generous protection against obsolescence, all are combined in these toilet partitions.

Sanymetal has for a period of twenty-five years manufactured metal flush type and full panel type toilet partitions. Today, Sanymetal offers five distinct types of toilet partitions, of which these three, Normandie, Embassy, Academy, are available in three different finishes. Quick to recognize the merit of galvanized, bonderized steel, Sanymetal has perfected its own exclusive formula for applying a luxurious and lasting finish called "Tenac" to this highly suitable material. With these five types of Sanymetal Toilet Partitions and three finishes to select from, the trend to modernity in toilet room environments is certain to continue, quicken and grow. Write for new Catalog No. 78 illustrating five distinctive toilet room treatments.

THE SANYMETAL PRODUCTS COMPANY, INC. • 1687 URBANA ROAD • CLEVELAND, OHIO

For a full description of all five types, refer to Sanymetal Section 20/23 in Sweet's for 1940
PAINT LASTS LONGER OVER ALUMINUM FIRST COATER

At the U. S. Forest Products Laboratory, Madison, Wis., these two sections of Douglas fir siding were painted exactly the same except for the first coat. On the left, the ordinary type of oil paint priming was used. On the right, an Aluminum first coat. Both sides then got the same two white topcoats. After 6 years exposure to sun and moisture, the Aluminum primed section was in far better condition as you can plainly see.

SPECIFY .. “Aluminum House Paint”, made specially for priming wood. Sold by many well known paint companies and labeled with this Aluminum disc and wood background. Names on request.

AND I'LL TELL YOU WHY!
A first coat of Aluminum House Paint keeps topcoats more elastic and durable. First, because very little oil from the topcoats penetrates the Aluminum and disappears in the wood. Second, the highly impervious Aluminum coat permits less moisture to penetrate into the wood to cause swelling of the grain.

With a tougher paint film and with less strain upon it, you naturally get longer life. The paint weathers evenly, chalks slowly, and does not check so soon. When repainting finally becomes necessary, a first coater of Aluminum House Paint isn't needed again; just two topcoats. The benefits of the original Aluminum first coater extend through the numerous repaintings. The life of the new topcoats, too, is lengthened by it. It saves your client money on maintenance.

For literature, write PAINT SERVICE BUREAU, ALUMINUM COMPANY OF AMERICA, 1947 Gulf Building, Pittsburgh, Pennsylvania.

ALBRON Pigments for ALUMINUM HOUSE PAINT
FIRST COATER FOR WOOD
The Name
HOPE'S
Guarantees
1818
WINDOWS
1940

Minneapolis Club
March Z, 1939.

The installation of the Hope casements at the Minneapolis Club thirty years ago has proved most effective and satisfactory to us. At present the casement sashes and frames are in excellent condition and their maintenance has been a minimum expense; their ease of operation has continued.

The air leakage of the casements is negligible, providing us with a maximum insulation, precluding the use of storm windows in thirty degrees below zero temperature and providing us with a sealed condition to the exterior atmosphere for a recently installed air-conditioning plant.

It is a pleasure to commend your casement sashes and frames and testify to their efficiency.

Very sincerely,
Carl W. Johnson
President

IT IS GRATIFYING TO KNOW THAT HOPE'S STEEL CASEMENTS INSTALLED SO LONG AGO ARE GIVING SUCH RELIABLE SERVICE. OUR METHODS OF MANUFACTURE AND OUR DESIGNS HAVE OF COURSE UNDERGONE MANY CHANGES BUT OUR STANDARD OF QUALITY, ESTABLISHED OVER ONE HUNDRED YEARS, REMAINS UNCHANGED.

HOPE'S WINDOWS INC., Jamestown, N.Y.
Form follows function...and economy follows the use of Concrete as your design medium. Whether your building is to be severely functional, or elaborately enriched, selection of this material will open up "new worlds" of design.

Concrete can be molded into practically any shape or form. Distinctive, harmonious textures are created economically in the forms along with integrally cast detail. Walls, frame and floors are erected as one firesafe unit.

In short, it's the money-saving, time-saving way to build your apartment, school, factory, or other building. Ask your architect or engineer about concrete. Illustrated literature on request (free in U.S. or Canada); or a representative will call.

- Shangri-La Apartments, Santa Monica, Calif. Wm. E. Foster of Beverly Hills, architect; H. C. Whittlesey, structural engineer, A. N. Tims, construction superintendent for owner.

PORTLAND CEMENT ASSOCIATION
Dept. 10-7, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work.
Ten new flat-glass and related products in ten years. Ten products that were born because Architect, Designer and Decorator demanded them. The success that these design elements have achieved during the Design Decade can be attributed largely to the skillful interpretation given them by the Architectural profession.

For our part, it has been this professional interest and encouragement that has kept us constantly searching out new uses and new products of Glass. Libbey-Owens-Ford Glass Company, Toledo, O.
All these new Flat Glass products and their uses have developed during the Design Decade 1930-1940

Here's a glass that literally soaks up heat and lowers air-conditioning costs. Characteristically, too, it greatly reduces glare—saving money and eyesight by increasing production, boosting employee efficiency. Aklo Heat-Absorbing Plate Glass in display windows, in groceries, bakeries, flower shops and other places where heat damages merchandise, saves money by reducing spoilage.

From 4 to 5 times stronger than regular plate glass, Tuf-Flex heat-tempered clear plate glass has greatly extended the uses of glass. It withstands impact and thermal shock to an amazing degree; can be bent or twisted and return to its normal plane instantly. When broken, Tuf-Flex crumbles into small, relatively harmless particles, its manner of fracture providing a distinct safety factor. Used in marine craft for portholes and windows; as windows in oven doors; as shelving; for display cases; as Tuf-Flex doors in smart, modern buildings.

Vitrolux has created a new era in the design of signs; soffits for store entrances and for interior display panels. In the home, the theater, hotels and in many other places, Vitrolux makes possible new achievements in luminous ceilings and panels. By day Vitrolux appears colorfully opaque; by night, when backed with illumination, Vitrolux becomes softly but vividly luminous, diffusing its illumination evenly.

Control of daylight for interior installations, or artificial illumination is now at the command of the architect. Thermoluxdiffuses light and directs it—downward, upward or straight across a room. Thermolux consists of mats of spun glass sandwiched between panels of clear or pattern glass. Thermolux, as partitions for offices, public buildings and homes, frees the designer from small-panel types of glass, being available in sizes up to 6 by 9 feet.
Attractive display of perishable products that must have proper refrigeration is achieved with surprising ease by the use of this improved glass insulating medium. Thermopane consists of a double or triple-glazed metal-sealed unit. Dehydrated air spaces between each pane of glass assure highly effective insulation and freedom from condensation. The natural clarity of polished plate glass thus gives unhampered vision into commercial refrigeration cases, and well-conceived displays have full opportunity to function effectively as merchandising factors.

A new range of Vitrolite colors, new applications of this colorful glass and the newly developed satin finish have given this product a new functional place in modern construction and design. Add to this the fact that it is easily cleaned...impervious to odors and moisture...and you have the reason why so many architects and designers are constantly using it to give added beauty and attractiveness to their designs for storefronts, theaterfronts, bathrooms and kitchens.

Glastone offers the many advantages of Vitrolite and the additional advantages of solid masonry. Glastone utilizes Vitrolite as a permanent finish securely adhered to slabs of lightweight concrete. The Vitrolite facing is free from pressure or load from any direction, the concrete box carrying the wall load and the design of the unit automatically providing for expansion and contraction.

As a design medium, Decorative Glass with its distinctive character, is now coming into its own. The many new patterns of decorative glass are widely employed in homes and public buildings to stimulate or accentuate the basic design...in some cases, to permit ample light without sacrificing privacy. Many of the patterns are available as wire glass.

When architects demanded delicately Colored Plate Glass to broaden their field of creative effort with ground and polished plate glass, the answer was, first—three shades of blue, then peach, then green and now golden plate glass. The degree of coloring is such that the plate glass retains its visibility when used for Picture Windows or decorative purposes. Colored Plate Glass has broadened the field of design with mirrors.

Companion to modern glass storefront materials, Extrudalite holds the glass front firmly and in a velvety grip. Extrudalite cushions the glass against breakage and chipping, while providing an appropriate decorative setting. Extrudalite is a special alloy highly resistant to rust and corrosion. The various units of Extrudalite are sufficiently diversified in size, design and price to fit every class of construction.

Libbey-Owens-Ford Quality Glass
Blue Ridge Decorative Glass has created a new element in the design decade.

New patterns to create new effects... A New Type Glass that Creates a New Usefulness for GLASS

BLUE RIDGE DECORATIVE GLASS has furnished the architect with a new design aid—freeing him of many former restrictions... permitting large areas to be glazed without the limitations of small-pattern panels... adding to architectural design in some instances, complementing it in others. The various patterns of Blue Ridge Glass are used by architects to aid directional design, and when double glazed in different ways, to provide unusual effects, hard to obtain by any other means. The distinctive patterns of Blue Ridge Glass mark them at first glance as synonymous with—The Design Decade.

BLUE RIDGE INDUSTRIAL GLASS, including Aklo Heat-Absorbing Glass, has contributed in good measure to modern industrial design and practice. Aklo is daily effecting worthwhile savings in Industry and Commerce—lowering air-conditioning operating costs... reducing spoilage of perishable products in retail establishments... increasing production and employee efficiency by reducing glare and resulting eyestrain.

Inquiries are invited from Architects and Designers in the solution of their problems. Write Blue Ridge Sales Division, Libbey-Owens-Ford Glass Company, Toledo, Ohio.

Blue Ridge Figured and Wire Glass
FOR STRONG TONE AND COLOR VARIATION

The use of black is a distinct design feature of modern architecture. Instead of monotonous buildings with accents obtained by ornamentation, contemporary designers resort to strong, accenting changes of materials. The demand for a black material which will retain its color and maintain its polish is met by Alberene Black Serpentine, and the widespread use of this natural, quarried stone by outstanding architects and designers attests their satisfaction with it. Having great toughness and density, Alberene Black Serpentine can be cut into sections as thin as $\frac{3}{8}"$, which makes it even more economical for panels, spandrels, bulkheads, and facing.

The Centre Theatre in Baltimore, where the stone is used with Roman Travertine, shows a pleasing, accenting use. The stone is neither reflective nor mirror-like. A request on your business letter-head will bring you samples, conveniently boxed, showing the range of stones, including black and mottled dark blues and greens. Please address Alberene Stone Corporation of Virginia, 419 Fourth Avenue, New York. Quarries and Mills at Schuyler, Va. Sales offices in principal cities.

Alberene
BLACK SERPENTINE
Moderate in cost . . . negligible in upkeep
"No fooling!...

These glass block partitions go up faster’n they can make vice presidents"

You're due for a surprise if you haven't already prescribed your first partition of metal-locked glass blocks; it goes up so quickly and easily: It is strong and rigid, giving a feeling of permanence, yet it can be taken down and erected in a new location, with 100% of the materials salvaged.

The architect has been quick to recognize the decorative possibilities of glass block for interior work. Now he can allow free rein to his imagination, knowing that what's outmoded tomorrow can easily be changed to meet new requirements, and at low cost.

Extruded Aluminum shapes, used for the metal members in this construction, hold every course of blocks in uniform alignment. And Aluminum, with its subdued beauty and neutral color, fits in well with the sparkling beauty of the glass blocks. The smooth surfaces of blocks and metal are trim and neat in appearance, and are easily cleaned. Aluminum offers endless decorative possibilities, here and elsewhere, architecturally.

You can get complete data on metal-locked glass block construction from Owens-Illinois Glass Company, Pittsburgh Corning Corporation, Pittsburgh Plate Glass Company, and Revere Copper & Brass, Inc. Or write Aluminum Company of America, 2166 Gulf Building, Pittsburgh, Pennsylvania.
Chin Up
Forum:
Your article on p. 210 of the September issue of The Architectural Forum on the subject, “Three Jinx in New Apartments,” has naturally been of great interest to us, in view of the fact that this company holds a mortgage on the Highland Village project and also the Fair Oaks project, both insured under Section 207 of Title II of the National Housing Act.

We have no objection whatsoever to publication of the fact that these two mortgage loans now are in process of foreclosure, but at the same time, we also believe that certain comments contained in your article do not create a true impression, with respect to the consequences of these foreclosures to this company.

In the first place, your headline reads: "Three Jinx in New Apartments are high rents, low working capital and out-of-season completion. Eight projects, four insurance concerns and FHA take it on chin."

In the second place, in paragraph 2 of your article, you state:
"FHA is not alone in its misery, however. Four top-notch life insurance companies were holding bags instead of mortgages."

We do not believe that this company is "taking it on the chin" in so far as these two mortgage loans are concerned, nor do we experience any "misery" therefrom.

Careful perusal of Section 207 of the National Housing Act will reveal that this company has two alternatives when the defaults occurred. We had the choice of exchanging our loans for "debentures having a total face value equal to the original principal face amount of the mortgage, plus such amount as the mortgagee may have paid for (A) Taxes, special assessments, and water rates, which are liens prior to the mortgage; (B) insurance on the property; and (C) reasonable expenses for the completion and preservation of the property, less the sum of (i) that part of the amount of the principal obligation, that has been repaid by the mortgagor, (ii) an amount equivalent to 2 per centum of the unpaid amount of such principal obligation, and (iii) any net income received by the mortgagee from the property . . . " or of acquiring the property and transferring the title to the Federal Housing Administrator and receiving debentures equal to the unpaid balance of the mortgage loan and certain expenses incurred during the time of foreclosure. In either case, the debentures received will bear 3 1/4 per cent interest, will be the obligation of the Federal Housing Administration, and will be guaranteed by the U.S. Government. In other words, this company will exchange its defaulted obligations, or the property acquired, for an obligation of the U.S. Government yielding 2.75 per cent. In the present market, U.S. Treasury 3 3/4 per cent bonds, 1960/65, are selling on a 2.30 basis.

Perhaps, in the Section 207 loans, there is probable loss of which we are not aware, in spite of our careful investigation of these loans. Consequently, we shall appreciate it if you will point out to us any such probability.

ELBERT S. BRIGHAM, President
National Life Insurance Co.
Montpelier, Vt.

President Brigham must be aware that two mortgages in question (aggregating about $2 million) originally grossed him at least 4 per cent, that after his overhead and collection expenses they probably netted him at least 3 1/4 per cent. With Government bonds substituted for the mortgages, he is now netting 2 3/4 per cent on the investment. On $2 million the 1 per cent difference amounts to $20,000 a year. The Forum suspects that a $200,000 annual loss, while infinitesimal to a company whose assets total $815 million, is a bit of a "misery"—at least a dimple on its chin.—Ed.

DESIGN DECADE
Too late to catch the announcement of Museums (September issue, pp. 46, 47) which will present Design Decade exhibitions in collaboration with THE FORUM came the following comments. THE FORUM is proud to salute these distinguished new collaborators.

SAN FRANCISCO
Forum:
The last ten years have seen a tremendous development in arts, crafts, and industrial design in this country. Influences from abroad, discoveries in techniques and new materials, the creativeness of young designers aware of contemporary living in the U.S., growing penetration of art into industry, combined to make this a period worth noting in the evolution of contemporary styles. Modern design tendencies that were at first superficial and decorative have settled into a sincere harmony between form and function, and standards of both execution and of appreciation have noticeably risen. In many fields, a distinctive contemporary style has emerged.

Just now, when the world is undergoing changes of which we cannot foresee the extent, but which we also cannot escape, seems an appropriate time to stop and take stock of what has happened here in this field of design.

The plan of The Architectural Forum to devote an issue to a thorough survey of the past decade in design seems to me most timely. Further, to stimulate shops and museums—so greatly concerned with placing design before the public—to conduct their own surveys in their own communities in the form of exhibitions, spreads the good work far and wide, beyond the research scholar and expert, to the great general public, in a tangible form easy to understand, and therefore influential. In summing up the past ten years, THE FORUM may be also orientating movements in design for the next decade.

We look forward to the design exhibitions we plan to hold in October-November as an opportunity to point out once more to our public quality in design and the connection between art and everyday life—two major aspects of all our work at the museum.

GRACE McCANN MORLEY, Director
San Francisco Museum of Art

RICHMOND
Forum:
... Your splendid program with its cooperation by the museums throughout the country is showing what can and what has been done, is quite in keeping with the sound and progressive reputation which THE ARCHITECTURAL FORUM has made itself. Unfortunately the taste of too large a percentage of the American public is still limited by superficial and misdirected traditions. Your courageous magazine has been one of the main factors in correcting this condition. . . .

HANS VAN WERKEN-GREEK, Curator
Virginia Museum of Fine Arts

MEMPHIS
Forum:
Every cycle of civilization has had its dominating factor. Today we see rising in every part of the globe a struggle for mastery based on this factor: mass production.

Mass production has made fantastic strides during the last century, but the last decade has outdistanced the previous ninety years in the progress of design of manufactured articles. At first it was only necessary that a machine or article of manufacture would work. Today much more is demanded. Factors of safety, cleanliness, efficiency, speed, appearance, new materials, etc., modified the fact that a machine or manufactured article should only work. Design, then, was found to answer all these requirements.

Since the Roosevelts, "Architectural design" had been subordinated to other qual-

(Continued on page 104)
**A DISTINGUISHED NAME . . .**

**A DISTINGUISHED PRODUCT**

**Constructed of Copper**

and **Bronze Throughout**

The name "Penberthy" has been distinguished for fifty-two years as representative of highest quality products.

Penberthy Automatic Electric Sump Pumps are distinguished for their dependability and long life wherever seepage water accumulates.

Penberthy Automatic Electric Sump Pumps are available in six sizes.

**JOBBERS EVERYWHERE CARRY PENBERTHY PRODUCTS IN STOCK**

---

PENBERTHY INJECTOR COMPANY

Manufacturers of Quality Products Since 1886

Canadian Plant, WINDSOR, ONTARIO

DETROIT, MICHIGAN

OCTOBER 1940
How can you take full advantage of women’s intelligent interest in home ownership? The answer? Make full use of a powerful force of consistent advertising in the magazines their whole family reads regularly.

She wants her questions about home ownership and home remodeling answered!

She has plenty to say about buying. Her influence can mean a lot to you.

She realizes what the security of a home of their own can mean for her family. But she is a smart buyer—she wants her home conveniently, efficiently planned. She has a lot of questions on financing, planning, construction and materials she wants answered.

Why not be the man she takes her husband to see? Make known to your community the easy way for both men and women to answer their questions. It helps people understand home ownership and remodeling.
O S G's new famous books have helped over 200,000 families answer their questions about home ownership and home remodeling. Both men and women read U S G national magazine advertisements featuring them. You can put these books to work for you. They save your time. They tell and sell for you!

When prospects have answered their own questions, they know about and they want the quality you recommend. They demand fire protection, insulation, quality materials and the better, safer construction you suggest to them. They are excellent prospects for you. They are ready to act!

These are the highlights on U S G’s 1940 advertising program. It is helping the entire building industry because it is helping people understand what they want to do.

Here’s a program with month-after-month consistency! It covers both new home building and home remodeling. It answers questions on both subjects, inspires action in both markets.

Every month, USG advertising is finding prospects—good prospects who are building and remodeling now. Can you cash-in on this USG program? Can it help you? Why not ask your USG representative or write your nearest USG office.

**Here are the fall advertisements in USG’s 1940 advertising program**

(Above) This full page advertisement is in the August 24th issue of SATURDAY EVENING POST. It tells the story of USG’s new home book "How to Have the Home You Want."

(At right) And USG’s valuable book on home remodeling, "How to Modernize and Make It Pay," is featured in this advertisement in BETTER HOMES & GARDENS for October.

(Above right) In the September 23rd issue of LIFE, another commanding advertisement on USG’s new home book, "How to Have the Home You Want."

(At left) Other USG advertisements to appear this fall in AMERICAN HOME, McCALL’S, HOUSEHOLD, GOOD HOUSEKEEPING, PARENT’S MAGAZINE, COLLIER’S, etc.

**UNITED STATES GYPSUM COMPANY**

300 West Adams Street, Chicago, Illinois

—where research develops better, safer building materials
LOW FIRST COST

... TWO INSTALLATIONS—ONE, LITTLE; ONE, BIG

... WHERE REVERE COPPER TUBE WAS USED
BECAUSE OF ITS LOW FIRST COST!

The combined unit for furnishing both heat and hot water in the 204 houses of the Colonial Village development at Clairton, Pa., is scarcely larger than a kitchen chair; yet exacting engineering tests show it to be highly efficient. Each of these houses had rigid first cost requirements because they were sold for less than $5000.00. Yet Revere Copper Tube was used exclusively—because Revere Copper Tube had low installed cost. In addition, the builders of the Clairton project state that the unusual operating economies of these installations, is closely linked to copper.

In forced circulation hot water heating system for the Wm. Henry Smith apartments in Beiglesville, Pa., 2000 feet of Revere Copper Tube was installed. Circulation to individual apartments is speeded by 7 electric circulators. Smaller pipe sizes are used and it is therefore particularly important that there be no hindrance to flow. The smooth interior surface of Copper Water Tube reduces flow resistance to a minimum and it is estimated that there is 10% to 15% greater velocity circulation in copper with the same circulating head.

Range of sizes of Copper Water Tube is such that a balanced system can be designed using minimum pipe sizes, with the result that installations are neat and efficient and can be made at prices which are competitive with those for iron or steel pipe.

Investigate the use, advantages and economies of Revere Copper Water Tube in hot and cold water, heating and air conditioning lines. Fully illustrated, 48 page booklet sent on request. Just write to:

... MILLS: BALTIMORE, MD. 
NEW BEDFORD, MASS. ... TAUNTON, MASS. ... ROME, N. Y. 
DETROIT, MICH. ... CHICAGO, ILL.

REVERE COPPER AND BRASS INCORPORATED

Executive offices: 230 Park Ave., New York, N. Y.

Sales and distribution in most of America's major cities
NO ICY FLOORS IN OUR HOUSE!

CONTINUOUSLY CIRCULATED HOT WATER HEAT PUTS AN END TO STRATIFICATION

Never before have you been able to specify and get a heating system which so closely approaches your ideal in heating comfort, . . . and at so low an operating cost! To the many advantages of forced hot water heating, Hoffman Hot Water Controls now add hair-breadth regulation of room temperature. When installed on either new or remodeled hot water heating systems, the old troubles of “Cold 70”, overheating and uncomfortable variations in temperature are eliminated for good.

Hoffman Hot Water Controlled Heat combines continuous circulation with indoor-outdoor temperature controlling devices which effect a constant balance between heat loss and heat supply. Heat is supplied to the radiators on a gradually ascending or descending temperature scale—always matching the weather.

The three basic operating units of Hoffman Hot Water Controlled Heat are adaptable to any type of automatically fired hot water boiler. Designing the system for high B.T.U. emissions, plus constant maintenance of heat at exactly the right degree, permits the use of minimum size radiators. This means easy concealment and a material saving in installation cost. The system is ideal for indirect domestic water heating, producing an ample supply of hot water, winter and summer.

Send for literature describing fully the installation and operation of Hoffman Hot Water Controlled Heat units.

HOFFMAN
Hot Water
CONTROLLED HEAT

Hoffman Heating Specialties are sold everywhere by leading wholesalers of heating and plumbing equipment.

HOFFMAN SPECIALTY CO., INC., DEPT. AF-10, WATERBURY, CONN.
INVESTIGATE THE COMPLETE ZOURI STORE FRONT

★ IT'S EASY TO CREATE STRIKING COMBINATIONS OF ZOURI METAL AND PORCELAIN ENAMEL...

The lustre of aluminum or bronze surfaces—the brilliant contrast and wide choice of color in K.Z.S. Porcelain Enamel—the interesting shadow lines and contours of numerous decorative mouldings; these are the stimulating materials with which the designer of a complete Zouri Store Front works. There are practically no limitations. Curved surfaces may be specified, large or small show windows may be safely planned, K.Z.S. Facing in Alumilite or Porcelain Enamel may be used to any height, since each panel is individually and mechanically suspended with strong spring clips.

Before you start your next store front design, investigate the complete up-to-the-minute ZOURI Store Front. Write ZOURI STORE FRONTS, NILES, MICHIGAN, to-day.

ZOURI STORE FRONTS INCLUDE:
SASH AND BARS
AWNING BARS
MOULDINGS AND SHAPES
SIGN LETTERS
ALUMILITE FACING
AWNING BARS
PORCELAIN ENAMEL FACING

ZOURI STORE FRONTS
THE ARCHITECTURAL FORUM
The story of what has happened to the machine, to the objects and to the environment it produces. For countless generations men made things with their hands or with tools that were ingenious extensions of their hands. For countless generations, too, a few men made machines, but they generally ended up as toys in the court of some bored potentate or as implements of war: there were enough slaves or serfs to do the work. This story is concerned only with the machine since it first became a significant factor in production. And because it is largely an American story, it follows that this land of extremes has produced the worst as well as the best manifestations of the contemporary design approach. Finally, the critical observer must conclude that the decade just closed, nearly two hundred years after the Industrial Revolution, has for the first time shown a substantial accomplishment in relating machine inspired design to a machine inspired way of life.
The social consequences of machine production need no recapitulation here, but against the background of this issue it is interesting to note the effects on the creative arts. Perhaps the most important thing that happened was the subordination of the aristocrats of state and church, patrons of the arts since the beginnings of recorded history, to a new class: merchants, bankers and industrialists whose ignorance of art was equaled only by their total lack of interest in it. Also important as a disintegrating element was the machine's sudden extension of design possibilities and the consequent undermining of a handicraft tradition hitherto disciplined by limited materials and limited techniques. Looking back, it is easy to see how the normal processes of design development were disrupted by the formidable combination of social and technical changes, and throughout the nineteenth century the arts and artists languished, finally to express their frustration in escape or rebellion. Gaugin fled to Tahiti, William Morris tried to turn the clock back with a return to the handicrafts, and the Pre-Raphaelites took refuge in sickly dreams of the glories of a dead era. The artist became a kind of social vermiform appendix, and as his usefulness declined, so did the respectability of his profession. The new favorite of the mighty was the engineer-inventor, whose function was not to glorify the rulers, but to make them still richer, and in his hands the crude early machines were brought to such a degree of efficiency that the once
clumsy forms gradually began to show an organic beauty comparable to those found in nature. And as in nature there was no conscious esthetic effort involved, merely a very hard-boiled process of selection and rejection on the basis of performance. Architecture, during this period, followed the course of the machine only in the increasing complexity and diversity of types, the palace, church and fortress being replaced by hundreds of previously non-existent structures: factories, railroad stations, schools, department stores, etc. The results were not fortunate. Left without directions in a chaotic environment, the architects plunged into eclecticism, exhausting the various “styles” almost as rapidly as they discovered them. Only in such engineering works as Paxton’s magnificent Crystal Palace was the great tradition in building still followed.

The twentieth century opened with a tremendous accumulation of industrial forms, so great in many cases that the entire physical landscape was altered, and inevitably these strange and powerful shapes began to find expression in the work of a new generation. The painters and sculptors in particular showed a strong emotional response to the industrial scene, and abstract art appeared as a possible way out of a century-old dilemma. Frequently the expression of this influence was very direct indeed, and on at least one occasion harassed U. S. customs officials classified incoming abstract sculpture as machinery. Apart from such extreme manifestations, however, the new movement spread with phenomenal rapidity through the entire field of design, from architecture down to the smallest commodities, and today it is evident, as suggested by the graph above, that the gap between machine design and esthetics is fast closing.
It is characteristic of any period that all of its creations have a certain family resemblance, an underlying unity of form which does not spring from the imagination of the artist, but rather reflects the surrounding world and especially the prevailing modes of production. This is evidenced by the above photographs, although such parallels can obviously be carried to absurd lengths. Similarities in the Miro painting and the highway photograph do not necessarily mean that the painter ever saw a road intersection, but they do suggest that the technical trend toward complex curves is not without its effect on contemporary artists. With the emergence of the designer as the conscious exponent of a machine esthetic, design enters a new stage. Not only are the arts influenced by the machine, but the reverse is also now true. It is this interplay of influences that gives the 1930-40 period—"Design Decade"—its peculiar interest and importance. The rapid maturing of design does not mean that any millennium has been reached. Streamlining, for instance, has been perverted from functional design to a mere selling trick. The small radio is one of thousands of examples that might have been selected. Occasionally this tendency is carried to sheer idiocy, as in the case of a coffin manufacturer who asked his designer for the latest in streamlined caskets.

Sometimes the influence is reversed, as in the piece of heavy machinery illustrated. Since the vertical skyscraper style is distinctly inferior to pure machine design at the present time, its use in such cases can only mean pointless retrogression. There are other unfavorable factors, some beyond the control of the designer. One is superficial styling to speed up obsolescence and thereby stimulate sales. There is deceptive packaging, the use of sheet materials over open structural forms to give an illusion of greater size and weight. Equally important is the manufacturer's understandable fear of styling his product beyond the limits of public acceptance, particularly since mass production methods discourage gambling with the enormous sums needed to re-tool the modern plant.
The lack of ornament in contemporary design has been noted by any number of critics. It would be absurd, however, to ignore the extraordinary richness of form in the modern scene, or the amazing variety of textures, colors and patterns at the disposal of the designer. The practice of breaking up surfaces better left intact is another matter, however, and among the current manifestations of this persistent search for a "modern" ornament is the curious cult of the "three little lines." As indicated in the illustrations, few objects have escaped the plague of this unholy trinity.

The story of "Design Decade" covers an epoch of historic importance, for within this ten-year period the trend of a century has crystallized. If in the pages that follow the reader finds a few examples subject to the criticisms made above, as well as much work comparable to Vahan Hagopian's superbly direct and beautifully proportioned TelAutograph machine, it should be remembered that a true picture of the decade could not be otherwise. Any such compilation of photographs as this has two functions: while summing up past accomplishments, it also indicates future directions. To give emphasis to the latter the editors have asked a number of architects and designers to prepare projects indicating possible future trends. These projects are not visions of the year 2000, but a serious attempt to project existing trends in America a few years forward, and like the issue itself they cover a broad range.

Throughout this summary of an exciting period, one theme runs through like a red thread: the machine as a basic influence and a new creative instrument. Through the machine the artist is replacing a lost group of select patrons with a greater one, numbered in tens of millions. Through the machine the arts have come off their crumbling pedestals and gone back to the workshop. Which is where they belong, and where they always were in the great periods.
Contemporary design, from painting and sculpture to architecture and commodities, has its most important basis in the widely varied elements of the industrial scene. The machine is its purest expression, with the factory as a logical architectural counterpart.
The vertical style reached a peak early in the decade and has showed no further progress. Distinguished examples of work along other lines are illustrated in 13 and 14. The significance of Rockefeller Center lies not in any new exterior expression, but in the fact that single ownership of three city blocks made group planning possible. Office building lobbies have reflected passing fashions of the period; at present they follow the broad general trend of greater simplicity and directness.

4. International Building in Rockefeller Center, New York, Reinhard & Hofmeister; Corbett, Harrison & MacMurray; Hood & Fouilhoux, architects.
5. Time & Life Building, Rockefeller Center (see No. 4).
The structures most closely related to industry represent the peak of present-day architecture. Two examples are shown on the opposite page. An interesting illustration of evolution in factory design is shown above (1), where a recent addition was made to an earlier building. Windowless factories are a development within the decade; one type (3) uses glass block walls, another (2) depends entirely on artificial illumination. There is no indication that these will supplant the glass-enclosed type (6).


F. M. Demarest

Minnesota Mining & Mfg. Co. scotch tape dispenser, Barnes & Reinecke designers.

D. Gestetner Co. duplicating machine, Raymond Loewy, designer.

Shigaota-Wright

Heyer Corp. duplicating machines, Barnes & Reinecke, designers.

Durant Manufacturing Co. counting machine, Brooks Stevens, designer.

Dictaphone Corp. Cameo Model dictating machine.

Todd Proteograph checkwriting machine, Henry Dreyfuss, designer.

The variety and improved appearance of business machines is echoed in the offices themselves. As in houses, the 1930 tendency toward interiors of the operating room type has not persisted. The stamped metal ceiling (3), designed for scientific light distribution, is a good example of textural richness produced by industrial developments. Below, a new slip, functionally designed to maintain its proper position regardless of the wearer's posture.
Evidence of the vitality of contemporary building is found in the fresh patterns it has produced. As in periods past, these patterns develop naturally from the structure itself.
The Offices of Paul Schweikher, Theodore Lamb and Winston Elting, Associated, were formed in 1940, Mr. Elting having come into the firm from private practice. Distinguished for outstanding domestic work, much of which has been published in previous issues.

A GENERAL PRODUCTION FARM IN THE MIDDLE WEST

"This farm study is based primarily on the theory that the most successful farming operation in the Middle West is the so-called Dairy and General Production Farm.

"Such a farm presupposes a location on an important highway, where much of the farm produce would be sold. All feed except concentrates is raised on the farm. The adjacent fields are rotated for pasture. The access to the fields from the farm group is past the machine shed and the horse stalls.

"The farm buildings are grouped in one single-story structure, divided into zones separated by masonry walls and fire doors. Hay, the greatest fire hazard, is contained in a separate fireproof haykeeper. Circulation throughout the group is under shelter. Feed is carried on an overhead conveyor. A through passage wide enough to take a manure spreader extends the length of the horse and cattle zone. "All animal shelter is oriented for the best sunlight, with the axis turned slightly toward the southeast. Prevailing summer winds will carry animal odors away from the house. "Stalls placed in a single line give all cows equal light during winter months. The narrow barns are easily ventilated. While the group, because of its length, would seem to indicate high construction costs, the plan requires no heavy timber construction, uses standard lumber lengths and simple framing. Masonry walls can be either local stone, rammed earth or concrete. Sod roofs are suggested for their insulation value and economy.

"The residence has a large area for the important activities of cooking, laundering, sewing and canning. This space overlooks the farmyard, drive and farm market, while the zone for sleep and relaxation faces a lawn and garden. An oversize washroom and bath, provided with lockers, is adjacent to the entrance.

"The large fireplace is placed in the northwest corner, backed against winter winds."

Contributors to the development of the project: William B. Fyfe, Joseph Salerno, and Ralph Rapson.
Edison General Electric Appliance Co. restaurant range.

Ingersoll adjustable roll miller, Herbert Rosengren, design.


Towmotor Co. lift truck, John Gordon Rideout, design.

Brown & Sharpe vertical milling machine.

Cream separator by International Harvester, Raymond Loewy, consultant designer.


Pneumatic Sales Corp. Ltd. automatic inverted bottle cleaner, Herbert Rosengren, design.
Among the most interesting developments of the decade has been the application of industrial design to products of heavy industry, products rarely seen and never purchased by the average consumer. A number of examples are illustrated on the opposite page. TVA, created almost entirely within the past ten years, has set an unsurpassed standard for industrial structures; shown here are two of the most recent constructions, the storage dam at Hiwassee (4) and the new Chickamauga power house (5).

EXECUTIVE OFFICE

A super-mechanized office for the modern executive. Control centers in the desk, which is equipped with a series of rotating, changeable file units, panel-board. The large window is equipped with vertical louvers, mirrored both sides, which automatically turn to reflect light at a constant angle through a translucent glass fiber screen as shown in the plan diagrams (below, right). At night the louvers close to form a reflecting screen for the lights. In combination with daylighting, fluorescent lighting, controlled by photo-electric cells, is used.

Material frequently used for reference is kept on microfilm, run through a projector operated by the secretary. Television screen is directly below. Blackboards can be used with regular chalk and fluorescent chalk, the latter visible only when ultra-violet ceiling lights are used. The “whiteboard” extension can be used for confidential matter, or extended to partition off the alcove. Also provided in the office are a private phone booth, a rest area or exercise room, a bar, conference and lounge area. Ceiling units contain the conditioned air supply, projected light sources, loudspeakers, and smoke ejectors, based on the principle of the venturi tube.

The office interior at the right offers striking evidence of the possibilities in modern structural materials. Supports and roof are integral, with skylighting through the spaces between the circles. Illustrations above show the degree of consistency achieved in the most common pieces of furniture and equipment for the office.

From giant bathing establishments to toys and beach accessories, from stadia to cameras, scooters to theaters and night clubs, range the increasingly diverse demands on the designer who caters to America’s new found interest in recreation. Often he must combine a sense of fantasy with the ability to handle large scale planning problems. Despite this variety the same contemporary trend is visible throughout: simplicity enhanced by textural richness, functional expression, and a feeling for form conditioned by the all-pervading influence of the machine.
Large scale projects for recreation are distinguished, but unimpressive in number. American architects and planners have done enough to indicate their competence to handle such projects with ingenuity and vigor: only the opportunities are lacking. Two of the examples shown (2, 3) are by-products of bridge construction. At the other end of the scale are a number of week-end and beach houses (7-11), also limited in number but extremely varied in conception and execution.
2. Triborough Stadium, Randall's Island, New York, Dept. of Parks.
Three outstanding designs for recreation. Streamlining is legitimate in the tricycle, because the younger generation expects the latest expression of modernity in its playthings. The design also reduces the number of stampings to a minimum. Commendable in the camera is the directness of expression: there has been no attempt to make a complicated instrument look like a box Brownie.

Top Left—Heddon fish lures. Top right—Tot bike for American National Co., Harold Von Doren & Assoc., designers. Right—Eastman Kodak 16 mm. camera, designed in collaboration with Walter Dorwin Teague.
Purse unit. Made of plastic, aluminum, or other lightweight material. Contains powder, rouge, mascara, two shades of lipstick, memo pad and pencil, key compartment. Coin compartment opened from outside.

Two piece sport dress. East-west zipper instead of usual vertical opening. “Loophol” device at waist forms attachment between blouse and skirt; belt threads through holes in skirt, loops in blouse, engaging both.

Travel coat. Waterproofed wool or Byrd cloth. Sleeves cut full to cover any type of costume. Pocket on left sleeve; inside zipper pocket for money and papers. Multiple leather pocket on skirt of coat replaces separate purse.

Travel-bureau. Luggage of aluminum or plastic comes apart to fit into wood cabinet. Units combine to make suitcases of varied sizes. Separators in cabinet slide out for use as “trays” when luggage is in use.

*Born Ohio. 1908. Studied fine arts at Ohio State University. Art director, photographer, designer of furniture and interiors. For photograph and biography of Merry Hull (Mrs. Robert Geissmann) see page 285.*
The objects assembled here give some idea of the scope of design for recreation. From cameras and accordions to marine hardware, tennis dresses and the humble yo-yo, the same trend holds good.

Playground Equipment

"A multiple length swing teaches that the rate of swing is determined by the length of the pendulum, not by its weight or width of arc. (Constructed of pipe and scaffolding joints.)

"The spiral slide will develop instinct regarding the bank necessary to overcome the centrifugal force developed by the rate of slide. (One photograph shows the skeletal structure, the other shows the model with the slide contour formed by strips of tape in much the manner in which one could make it of steel sheet or possibly wood. It could also be built of a number of other mediums, such as cupric magnesium oxide covered with latex or cement with ship cement surfacing and if a weather resistant plastic could be found, that would be very wonderful.) The whole construction is in cantilever balance.

"The basketball stop is adjustable as to height and verticality and has a movable counterweight to keep it in place while at the same time minimizing weight of construction.

"The see-saw is adjustable as to height. The climbing plaything supplies a variety of climiable forms and textures: upright rungs, corrugated post, a series of rings to climb in and out of, a series of beads like oversize fishnet buoys and a rope with a ball on the end."
The cinema interior exhibits few remaining traces of period influence, most architects having come to realize that in a room that is dark most of the time there is little point in decoration beyond that provided by lighting and acoustical treatments. Figure 4 shows a distinguished, unconventional theater entrance, and the Esquire Theater exterior (5) is interesting for the frank acceptance of the auditorium as a windowless box. Where decoration counts, as in the mosaic wall (6) and the translucent plastic ceiling (9), it is being handled with increasing freshness and assurance.

1. Radio City Music Hall in New York, Reinhard & Hofmeister; Corbett, Harrison & MacMurray; Hood & Fouilhoux, architects.
4. Telepix Cinema in Boston, Peter & Stubbins, architects.
5. Esquire Theater in Chicago, Pereira & Pereira, architects.
7. Waring mixer, Peter Muller-Munk, designer.
The Highway Hotel was designed to provide the same degree of elegance in accommodations as the good hotel. Each room has maximum privacy; there is a screened individual garden and a garage. Only clerestory windows lighting the bathrooms and providing cross ventilation for the living-bedroom are visible from the outside. The main building is shaped to become a baffle to highway view and sounds, to provide restaurant, parking and dining facilities visible from the highway, and to become a signboard which would be especially useful if the building were part of a standardized chain.

(Continued on page 92)
The Fokker yacht (1) was one of the first attempts at modern design in naval architecture; also significant was its extensive use of plywood. Figure 3 shows an amusing and handsome gadget: the frankfurters are impaled on strips of metal which form an electrical connection and become the heating elements. The plane (2) is typical of recent sport and training models.

With modern clearly intrenched wherever building has to pay a return, domestic architecture still shows stout resistance. But today every city and many towns can point to their modern houses, and many of the new “traditional” houses show greater openness and flexibility, some use of new materials and always the new equipment. An uninhibited generation of home buyers is beginning to question the resale value of the old copybook designs ten years from now. The modern house, which opened the decade as a completely intellectualized importation in the International manner, now shifts to indigenous forms and materials with wider appeal. More and more of these houses will be built, eventually acquiring the same sentimental aura now attached to the houses modern will replace.
Outstanding among the changes in house design is the growing importance of the concept of flexibility, itself a reflection of new ways of living. Expressed in the linking of indoor and outdoor areas, and in the merger of inside spaces formerly divided into fixed cubicles, these developments have at the same time humanized the modern house and added to its efficiency.

The single-family modern house exhibits one of the most interesting design progressions of the decade. Beginning as a slavish copy of International Style types imported from abroad, it has rapidly shifted in character, the most recent examples showing a successful combination of traditional warmth and intimacy and modern flexibility and openness. The change can be attributed partly to the public's dislike of hard white boxes, partly to the architects' growing impatience with the narrow limits of the style. Prefabrication, after its over-publicized beginnings, has now settled down as a small but steadily growing business. It has still to produce designs basically adapted to industrial production and thereby drastically reduce costs. Town houses, designed within a much more rigid program and conditioned by the paramount necessity of admitting a maximum of light to the interior, crystallized much earlier and show fewer changes.

The two strips of photographs on these pages illustrate the two main trends in modern interior design. As might be expected, they parallel the developments previously noted in exteriors. The upper strip shows examples of the earliest modern—and modernistic—interiors and their more recent counterparts. At the beginning of the decade, to find the appearance of livability associated with the conventional idea of home, it was necessary to turn to one of the traditional styles (8). Later interiors (9-13) demonstrate conclusively that the same desirable qualities can be expressed in contemporary terms.
The variety of accessories for the contemporary interior has increased each year, with distinguished painters and sculptors (2, 8, 13) beginning to show interest in this field. The influx of fresh talent has done much to broaden the scope of interior design, which has been moving steadily away from the mechanical frigidity of earlier work.

The sequence of small radios is of particular interest, showing the first plastic case (15), one of the earliest modern designs (16) and a change in the placing of knobs and dial for greater convenience (17). Recent examples (18, 19) show an excellent integration of parts and a variety of satisfying solutions. The metal chair (14) is one of the few new designs for steel tubing; the seat and back of perforated sheet metal is a good illustration of the manner in which pattern is being emphasized through the imaginative use of standard industrial products.
It is characteristic of the decade that the tubular steel chair, once an indispensable part of the modern interior, now serves only those purposes for which it is best suited. Wood—turned, bent, laminated—appears in new designs. The current interest in texture is expressed by materials as old as leather, as new as plastic webbing. The same trend is visible in interiors, with a choice ranging from magnificent handwoven fabrics to inexpensive straw matting.

Three more interiors (5, 6, 7) show the range of treatments open to the modern designer. Stock furniture designs, while lagging behind other developments for the house, include such attractive and useful pieces as 12 and 13. An ingenious piece recently produced (13) can be used as shown and as a dining table; the ends can be used separately as stools or end tables. Fashions in wallpaper are confusing, and the designer must conform to the momentary dictates of market and manufacturer. Typical are the examples above: illustration 1, executed in 1931, still looks more fresh than 3, executed about nine years later by the same designer.

The use of old furniture in modern rooms (3), unthinkable in the early Thirties, has become quite respectable in the Forties. The change has been valuable, both in undermining the rigid style concepts of early modern and in fostering a trend toward warmer interiors. In this connection the efforts of designers of furniture, rugs, and accessories have been of great assistance. An especially ingenious example is shown in 6, a sideboard which contains linen drawers, trays, silver compartment and a small bar.

LOW COST HOUSE

This house was designed for the Southwest. Its cost (for single units) has been estimated in Los Angeles as under $2,500 including all fees. In quantity the price would be close to $1,500. As it stands it would be suitable for summer use in other parts of the country, and with modifications, for year-round living.

The scheme differs fundamentally from conventional construction in that the entire house is supported on a rigid, earthquake-proof frame, as shown in the drawing below. It uses the exterior walls and partitions only as screens without structural value beyond that needed for rigidity of the walls themselves. Mr. Stein states that a basic purpose of the design is to make possible a really low cost house of suitable quality:

"A distinctive feature of this design is that in the mild climate of the Southwest, it is entirely feasible for one to build such a house with only the money for the supports, roof, and minimum mechanical necessities. This could be done for about $750, including labor. Heavy straw mats that are fireproof and good insulation could then be hung to form the exterior walls and the house would be comfortably habitable. The house could then be completed as soon as convenient.

"If a complete house were desired, it could be built and amortized within the space of a few years, thereby eliminating mortgage payments during the period when maintenance and repair charges begin to mount up.

"The plan as shown provides a private bedroom or study. Lounging or sleeping space off the living room could be closed off with folding doors or heavy curtains. This area has direct access to the bath.

"One wall of the house has windows in service areas only. This could face the street or charring property. Sleeping areas would open on a walled bedroom garden. Living and dining terraces could be walled as desired.

"The arrangement of doors and windows permits the sun to enter the house freely with almost any orientation. Economy and efficiency were the controlling factors in the design of the service areas.

"This scheme offers a modern dwelling to the house-starved low income family, thanks chiefly to the radical departure from the prevailing system of load support.

"For the rest, the plan abides by the teachings of functionalism, modified only by the need for maximum economy. Its spirit is meant to be akin to the architectural humanism of Frank Lloyd Wright rather than the inhibited abstractionism of the International Stylists.

"The larger philosophy in back of the plan is this: the home for the average American family must be brought down to the price-level of the automobile; yet it should be more than a mere gadget; it must be a witness to man's humble spirit of romanticism as well as to his proud insistence upon up-to-date rationality and mechanical perfection; it must harbor the imponderable longings of his soul as well as serve the measurable needs of his body."
The image contains a model of a modern building with various labeled sections: Entrance, Terrace, Enclosed Garden, Lounge Sleeping, Living, Bedroom, Bath, Dining, Outdoor Dining, Study, Play Space, Kitchen, Service Yard, Study & Play Space, and Water Heater Sink Range. The model also includes a floor plan with labels for these areas, and there are photographs of the building exterior and interior. The date on the page is October 1946.
Any prediction concerning the kitchen made in 1930 would probably have noted an increasing number of standardized units, forecasting a perfectly functioning room, the last word in machine design. This trend is still important, but the publication of the Willey house kitchen (3) in 1938 started another trend, based on a less rigid interpretation of the kitchen's uses. The project on page 269 suggests further simplification of kitchen equipment with greater flexibility of use.

Equipment reached a high point quite early, as in the 1933 refrigerator (5). Design changes in the past few years have involved only surface styling for the most part. Kitchen utensils, such as the kettle above, include some of the best designs produced to date.
The efforts of industrial designers in the field of kitchen utensils have produced many inexpensive and attractive tools. (1). The electrical appliances 5, 6, 7 and 8 constitute a strong argument for Mr. Hamby's contention (see facing page) that the kitchen of the future will have individually wired cooking utensils in place of the present range.

CREATED BY WILLIAM HAMBY FOR THE "Clearest indication of coming changes in kitchen design is found in the host of individually wired gadgets: toasters, roasters, broilers, percolators, etc. In this kitchen it therefore seemed logical to replace the range with such utensils, and with the projected ones of Miss Mergentime. It also seems reasonably certain that women will continue to prefer large kitchens. Here we have space for dining, a porch for tea, an alcove for laundry.

"This kitchen was designed on a basis of operation only. There is a position for the work required by each type of recipe, with food, dishes and utensils instantly available. For greater flexibility of use, the refrigerator is arranged in several units whose temperatures range from 70 degrees to minus 20.

"The design contemplates the use of many other work-savers: garbage bags, disposable plates, inserts for pots and pans, knee-operated sinks, etc." The utensils by Miss Mergentime are of transparent material, the heating wires forming a visible pattern. Removable handles serve to plug in the utensil, which are also used as serving dishes. The Thermodome (left, below) is used for roasting. The double boiler has removable inserts for cooking, integral rims. The double-walled glass has a brine filler. Such glasses would be kept in the refrigerator for use with chilled beverages.

Elimination of floor fixtures permits adjustment to correct height for operator. All cabinets within easy reach. Wall glass or glass block.
The bathroom, already one of the best rooms in the house by 1930, has been cleaned up in the intervening years, but not fundamentally improved. One of the outstanding fixtures (12) was developed early in the decade. The prefabricated bathroom (11), representing a basic design change, never got into production. An interesting organization of fixtures for greater simplicity and convenience is shown in 14. The tremendous volume of product redesign is indicated by the before and after pictures on the opposite page.

THE MECHANICAL WING is a compact, mobile package in which the mechanical essentials of contemporary U. S. living can be transported to the Vermont farmhouse, lakeside camp site, week-end or vacation house, or incorporated in a permanent dwelling.

It is attached to a tubular steel A-frame trailer, frame integral with axle. Attaches to car by ball joint hitch, weight sprung by car. Has integral jacks on casters for maneuvering by hand, blocking up Wing, etc. A-frame alone is useful as luggage, fuel, boat and water carrier, also as a crane for manipulating heavy objects. Note hinged-up tubular barrel chock.

Bath-dressing room unit supplied optionally with (1) water line connection where running water available, (2) combination compressed-air, water and chemical fog-gun cleansing devices, (3) hermetically sealed waste packaging and chemical disposal apparatus.

The energy unit is located between bath and kitchen. Contains diesel engine (h.p. optional), electrical generator, air compressor and tank, battery and radiator. The last uses domestic hot water to warm incoming air. The fan shown can be reversed in summer to exhaust warm air from living units. Kitchen and laundry unit, with sink, laundry tub, electric range and refrigerator, storage space for dishes, silver and linen. Dry warm storage shelves over diesel above sink.

Side walls: waterproof, synthetic-resin-glued plywood truss. Walls and floors of the three units (Continued on page 92).
PINT HOUSE

The familiar concept of the one-room apartment has been developed in an ingenious way, with certain fundamental improvements based on a new apartment house plan. Rooms set on a diagonal intersect a curved front, creating a series of private balconies. The long vista through the room from its entrance would be attractive. For cross ventilation the short exposed wall of each apartment is provided with movable sash; this would be of translucent glass, and so tilted that there would be no loss of privacy for the adjoining terrace. There is a dining table at the end of each apartment which can be pushed through a wall opening into the kitchen. Sleeping facilities would be provided by one of the numerous types of convertible couches on the market.
Design progress in multi-family buildings during the decade can be seen in a comparison of the two buildings above, the false horizontals of (1) giving way to a much more honest and satisfying treatment. In housing generally, however, the few outstanding examples are only an indication of what the architect could do if he were not hamstrung by prevailing conditions of small scale land ownership. Design development in this field will of necessity be confined to minor improvements in plan and surface treatment until some means of planning in larger units is found.

The best of the large scale projects make use of the effective repetition of standard units (3, 6, 7, 8). The greatest opportunities for the future are probably to be found in the free plan, unconfined by an existing street layout; the closest approximations here are 4, 5 and 6, all government projects constructed in the open country. Examples of moderately priced furniture and accessories are shown on the opposite page (9-11).

Quantitatively less important than the products of heavy industry, scientific instruments have nevertheless played a significant role in giving direction to contemporary design. This is particularly true in the case of medical instruments and equipment, whose special requirements have resulted in a profusion of new forms. The refreshing absence of surface styling reflects the uncompromising insistence on mechanical perfection. Here as in industry the finest achievements have been produced by men not primarily concerned with esthetic effects. Only in the buildings, with a few outstanding exceptions, have survivals of eclecticism had a restraining effect on design development.
The bulk of the big general hospital has prevented a wholesale adoption of the vertical style, and in some cases attempts have been made to apply vertical and horizontal treatments to the same framework. Distinguished buildings in the field are not lacking, however, and include such excellent examples as the Denver Children's Hospital (7) and (13), the Lake County Sanatorium (14), and others shown on these pages.

ALLERGY CLINIC

"A study of conditions in the field of allergy indicates certain needs for trusted clinical expression. To create a plan form, it has been necessary to observe the benefits derived from a few isolated private clinics. Much work has to be done here. The field is comparatively new; laboratories have at hand or under test many of the treatment necessities. Commercial research has in this field the material available and the resources to develop more. Clinical and diagnostic facilities have not kept pace with the treatment available.

"These drawings are a visual outline of a concrete program expression—they are no cure, nor are they the only solution. They only recognize the basic requirements of a need which in its solution must accept all the aids of nature and medicine. The job is yet to be done.

(Continued on page 92)
Hospital equipment shows an interesting contrast between engineer- and designer-produced objects. Granting the necessity for easily cleaned surfaces, the tendency of the designer, nevertheless, is to oversimplify such complex apparatus, obscuring the basic forms through the arbitrary application of a rigid envelope. A typical example is the X-ray machine (4), a handsome design, but much less interesting in form than the base of the operating table directly above.


OCTOBER 1940
The light-transmitting properties of transparent plastics are put to good use in the new dental light (2) above. Plastics are playing an important part in medical equipment, as elsewhere, because of their ease of cleaning, light weight and strength. The toothbrush (5) for traveling is an ingenious design whose handle serves as a container for tooth powder. The dentist's stand (3) represents a substantial improvement over the conventional equipment in this field.

CATERPILLAR ARCH SHOE

The arch of the foot is made up of many small wedge-shaped bones which permit upward expansion (1) but maintain a basic arched position under the weight of the body. In ordinary shoes this upward flexing is not permitted by the vise-like construction of steel and leather, and bending takes place only at the ball of the foot. The “Caterpillar Arch” is designed of articulated segments of plastic, shaped like keystones. Perfect support is obtained under the body’s weight, but when the foot takes a step the arch expands upwards as the bones do. The Caterpillar Arch provides basic support with freedom of motion.

Figure 2 shows a simple design using this construction. The extension of the plastic heel into a strap at the back of the foot is held firmly by the shoe band around the ankle. A cushion is built into the rounded sole for pavement shock. Illustrations A, B, C and 4 show suggestions as to the mechanical structure possible with the design. The segments could be strung on steel bands or held rigid under pressure by use of a leather base. Once anchored, they must be rigid in the lowest arch to support the foot firmly.

ARCH CONTRACTION
FOOT LENGTH FLAT
FOOT LENGTH DURING STEP

CATERPILLAR ARCH
PAT. APPL. FOR

PLASTIC ARCH SEGMENTS ON LEATHER BASE

STEEL BAND TO ANCHOR "KEystone" SEGMENTS AND IN ALLEW UPWARD MOVEMENT

ARTICULATED SEGMENTS
"Functionalism" is an overworked word. Nevertheless the remarkable progress in design for shops and stores is based largely on a new understanding of the meaning of functional design. The shop exists for trade: it can only serve to attract customers and to please them once they are inside. Every picture in this section illustrates in one way or another various attempts at functional design for merchandising. In no field has the triumph of the modern architect been more complete. Reasons: the comparative lack of prejudice against change in the commercial field, and the necessity for every shopkeeper to meet the highest standards set by his competitors.
1929

1930

1931

1931

1935

1937

1940

1939

The great advances in commercial design are based primarily on the designers' concentration on essential merchandising ideas. All of the shops on these two pages have been selected from this viewpoint.

1: Counter used as display feature. 
4: Furniture arranged in model rooms. 
5: Modernization of the old arcade: the shop merges into the window. 
7: Emphasis on comfort for women shoppers. 

3: Department store becomes parking space for customers. 
6: Luxury for the shoe shop: the usual row of chairs disguised as a long divan. Quilted wall completes the setting. 
11: Large simple shapes give unity to displays of small objects. 
15: Special fixtures for favorable presentation and convenient storage of prints.
10: "Hat bar." Small, intimate shop within a large store. 12: Prominent grid pattern to unify display of varied objects. The separately lighted niches suggest the value of each piece shown. 13: Alcoves in a large space create illusion of privacy. 16: Attractive bulk display of candy. Boxes of candy assembled as customer directs.


Nowhere is the broad range of modern design better illustrated than in the field of commercial design. Extremes are alike, however, in their emphasis on functional elements, as in the stair and columns in 1 and 3, and the decorative use of lighting units in 1, 8 and 11. In equipment (2, 5) the invariable trend is toward the smooth, curved forms produced by stamping and molding.

Design for mass merchandising is closely restricted by display and counter storage requirements. To date the most successful examples have concentrated on producing a well-organized general scheme, subordinating in this manner the thousands of different articles. The supermarket (1) is a comparatively new type for which a completely satisfactory solution has yet to be found. Still ahead of the store is its best equipment. The portable scales above mark a high point in this field.

STORE BLOCK

This project represents a fundamental re-design of the conventional business block. It involves development of minor streets as traffic arteries, with all Main Street parking and deliveries eliminated. It consists of a flat slab on regularly spaced columns, covering the entire area, under which shops are freely disposed. The usually unrentable rear half of the block is developed as usable space. Shops would be constructed of standard, easily changed elements, making alterations both as to size and shape a simple matter. Presented as a basic idea, not as a complete solution for a given location, the project is extremely flexible. The office building could be larger, differently placed, or eliminated. Parking, obviously, could be provided on an adjacent lot rather than on the roof. The shops could be rented in any desired combination. With these possible modifications, the scheme represents an admirable solution for any city of average size: economical, rentable, and a fundamental contribution to improvement of the existing town plan.

An interesting feature of the scheme is that many of the shops have a window display space longer than the entire block frontage. Coupled with this great advantage is the added convenience to shoppers, who can go on their way unimpeded by sun or rain. The amount of display space and solid wall in any given shop would be regulated entirely by the shop owner's requirements. As in modern office buildings, there would be one central heating plant. Storage space is located in the basement, with direct access for trucks. Another set of ramps leads to the roof, where parking for 342 cars is provided.

The structural framework is laid out on a 20 foot module; columns are set back 5 ft. from the street to allow for continuous show cases where desired. The floor is formed of steel beams supporting removable concrete slabs, so that stairs, dumbwaiters, plumbing, air conditioning and electric services may connect to the basement at any point.

"Human circulation," says the architect, " favors the stores. From upper parking lot and office building the crowd pours through the center of the block on its way to Main Street. Each store becomes an island, with window shoppers on all sides. Inside entrances are now as important as those on the street, while the bus and car traffic on the minor street favors those shops at the rear. With proper location of traffic aisles all stores can be seen from the street, and all stores can be permitted overhead signs leading out to the street.

"When this original block is duplicated by neighboring blocks along both sides of Main Street, it would result in all auto traffic being routed along the parallel streets at both sides. This in turn would lead to the eventual use of Main Street for pedestrians only, with the closing up of all cross streets except main traffic arteries.

"When that happy day arrives, Main Street's paving can be torn up, gardens planted, and the citizens can enjoy open air lounging and dining with their window shopping, with no traffic light to bother them."
At the top of the building are a restaurant and day nursery, both served by the same check room and kitchen. Children would be provided with a lunch bar, indoor and outdoor play spaces.

The typical floor plan allows for adequate light and air in all offices. The framework is exposed on the outside. As in the shops, prefabricated wall sections would give the tenant any desired combination of wall and window.
This sequence of one New York store's windows begins with a traditional setting, goes through several modernistic phases to surrealism, and ends with a traditional setting again. But the circuit is not complete, as a comparison of the first and last illustrations will show.

The show window is so sensitive an indicator of public taste, at least in the hands of the best men in the field, that a summary of its ten-year development could prove anything or nothing. Here rule the fads of the moment. Nevertheless a trend can be seen. The good window display of 1940 capitalizes on something beyond the merchandise, whether a new play, exhibition, or the notoriety of a painter, to gain attention. It is set as a scene rather than a collection of mannequins. Sometimes (12) it shows no merchandise, merely attracts passers-by to advertise the store. In the larger stores, these days, it is rarely dull.
Sequence of Saks Fifth Avenue windows, Sidney Ring, designer.
If the entire issue were devoted only to packaging it would still be difficult to show all of the outstanding examples that have appeared in the past ten years. The problem is one of getting attention, presenting the product favorably, and introducing functional improvements in the package itself. Illustrating the latter are the coffee sacks (1) and the cotton container (5). All show great skill in organizing the lettering as an integral part of the complete design.

The educational institution is one of the strongholds of a conservatism which is clearly expressed in the great majority of school buildings. However, the growth of progressive education and the community's increasing demands on the school plant are being reflected in new designs. A break with the "styles" is visible in the substantial body of distinguished modern work, whose influence is spreading to include not only the schools, but colleges as well.
That the demands of contemporary schools and other educational institutions can only be fully met by a contemporary approach in architecture has been demonstrated beyond dispute in the ten years just past. Ample light demands the glass wall, and this is now being supplemented by photo-electrically controlled (3) artificial illumination. The requirements of flexibility, as important in museums as in schools (3, 6) have also emphasized the validity of the modern solution.

For all its advantages, the open-air classroom (1) has been rarely used despite the precedent set by this handsome example. The glass wall (3) is used most appropriately here to give an approximation of modern factory conditions. School furniture (4, 5) follows the modern trend; of particular interest is the sheet metal chair design. An amazing new machine is the examination paper grader (6). This device makes use of the electrical conductivity of pencil marks to grade intelligence tests, true-and-false questionnaires, etc.

1. Experimental School, Bell, Calif., Richard J. Neutra, architect.  
4. Chairs and desks, American Seating Co., redesign by Designers for Industry Inc.  
5. International Business Machines Corp. test scoring machine, Gerald Johnson Associates, designers.
Microfilming is here. Its present development is amazing. Over 100 newspapers now can be purchased on film which results in a saving in volume of some 95%. For records of all kinds it is valuable in that beside space saving it is accurate. Rare books can be photographed at a cost of a cent or two a page, making it possible for any rural library to have the intellectual if not the economic wealth of our great institutions. There are two problems at present. Eye fatigue and the necessity of not allowing the general public actually to handle the film which can be easily ruined by scratches, tearing, etc.

The perspective shows a microfilm wing of a library—because even the most rabid enthusiast does not believe books are doomed.

**The PLAN**
1. Control. Those taking out film for home use can borrow small "readers."
2. The index (see drawing 2.)
3. Projectors for newspapers and encyclopedias etc. See Drawing 3.
4. The reading room. Looking along axis y the louvers—plastic walls afford a view of the garden which allows a change in the muscular effort of the eyes affording rest—along x which is the direction of one's screen the louvers cut out direct outside light.
5. Garden.
6. Reference and newspaper film stacks.
7. Research. These patrons will service their own machines.

Drawing 1
1. Projector in stack room under reading room. By an Iconoscope the projectors could be in a central room, but the ideal will be when the books can be televised right to one's home.
2. Screen adjustable to any angle.
3. Control and communication to stack room.
4. Writing area. Looking along this axis one can see out into the garden.
5. Light on back of one projector lights work space of opposite neighbor.
6. Adjustable chair.

(Continued on page 94)
GRADE SCHOOL

"We have assumed the problem of providing for approximately 350 children in a satellite area of temperate climate attending school for the intermediate grades. "We have assumed that the unit will need extension within a reasonable future, and the plan is arranged with that definitely in mind. With the increased use of buses for transportation of pupils, it is the thought here to provide adequate loading and unloading facilities, storage and maintenance of buses. "The storage and protection of pupils' bicycles is recognized as a definite part of the school's transportation problem. "Limited sheltered parking space for staff automobiles is included.

(Continued on page 94)
Breaking through the stranglehold of eclecticism in school and college architecture are those units to which no sentimental significance is attached. An outstanding example is the magnificent swimming pool (2) in the Yale gymnasium, concealed behind an absurd Gothic shell. Splendid illustrations of recent engineering design are the gymnasiums (3, 5) at the right. Below, one of the earliest modern auditoriums.

TRANSPORTATION AND COMMUNICATION

Uneven development is the chief characteristic of transportation design. Airplanes, where functional considerations are all-important and with no tradition to live down, show phenomenal progress. The automobile, on the other hand, despite mechanical improvements and better styling, is still far from a definitive solution which would involve real streamlining and consequently fundamental redesign. The new trains are chiefly notable for mechanical alterations (diesel and steam-electric drive), structural improvements (light-weight alloys) and better interior design.
1938 FORD
1940 LINCOLN ZEPHYR "CONTINENTAL"

1938 CADILLAC
1940 CADILLAC

1938 BOEING PAA STRATOCLIPPER
1938 BOEING PAA CLIPPER

1939 PENNSYLVANIA LOCOMOTIVE
1939 G.E. STEAM ELECTRIC LOCOMOTIVE

1938 BOEING PAA STRATOCLIPPER
1938 BOEING PAA STRATOCLIPPER
1940 BOEING TWA STRATOLINER

5 AMERICAN AIRLINES SKYSLLEEPER

20TH CENTURY LTD.

Howard Reeds, Designer
Raymond Loewy, Consultant Designer
Ray Patten, Designer
The changes in the design of broadcasting studios closely follow technical developments. At first rectangular rooms with banal mural decorations, they have acquired distinctive form through the use of acoustically necessary elements. An interesting example is the convertible studio (8) which can be used as a lounge, bar and small music room. Typical of the many visually satisfying objects produced by engineers in this field are the transmitter tube and microphone.

One of seventh generation of milliners. Flunked business course in New Rochelle, went to L. S. Ayres in Indianapolis to learn merchandising but was no good. Went to Philadelphia to design textiles and has been a successful hat designer ever since. Criteria: 1. Would I wear it? 2. Does it match the material of the costume and the mode of living?

Convertible Hat
for convertible car

The push-button-operated convertible top has brought back the open car. It has also created the problem of a hat suitable for driving with the top down, equally suitable for town wear. The Convertible Hat is presented as one solution: it is convertible, collapsible, packable. Upper left: the hat worn as a turban for country driving. Upper right: On arrival in town the detachable brim is taken from a handbag and (lower left) adjusted over the turban. Different arrangements of brim and turban are shown at the lower right, and left.
The Dymaxion car (3), the first (1927) model of which is illustrated, is still a revolutionary advance over 1941 models. Never put into production, it had more room, greater maneuverability, driver visibility and speed than any stock car today. The three-wheel, rear engine design made possible a type of aerodynamic design comparable to the best ships and airplanes. A recent adaptation, somewhat overstyled, is shown in figure 5. The hydraulic jack (2) is a beautiful example of straightforward engineering, completely free from superficial styling.

Nowhere is the drastic change in transportation better illustrated than in the interiors of the newest trains and airplanes. Design for greater comfort and spaciousness is the preeminent characteristic. The ticket office (2) shows an interesting adaptation of materials and forms in the new trains.

1. Interior of T.W.A. Stratoliner, Raymond Loewy, designer.
Born Paris, 1893, came to U. S. in 1919. Graduate engineer, Paris University. Turned from engineering to fashion illustration, later to industrial design. Has offices New York, Chicago, London; designs range from heavy machinery to cosmetics packaging. Only U. S. designer who could cross the country in a car, bus, plane and train of his own design.

The transcontinental bus below could be used on such highways as the new Pennsylvania Turnpike between Harrisburg and Pittsburgh. It is designed for long hauls, has two diesel engines, hydraulic steering mechanism and a cruising speed of approximately ninety miles per hour under capacity load. Passengers would be shuttled to the super-highway terminal in limousines, and change to the bus for a rapid, comfortable transcontinental journey in a fully air conditioned and soundproofed unit. The interior plan provides the convenience of a modern train. Deep-seated lounge chairs and built-in sofas seat about forty-six persons. There are front and rear observation sections with glare-proof polaroid glass, a bar and buffet and toilet facilities. The driver is enclosed in a transparent plastic turret, giving him 360-degree visibility.
The new fast motorways are bringing a new pattern to the countryside, and permitting the car to realize its potentialities. Bridges reached their high point in the Bronx-Whitestone bridge (10). Also outstanding is 11, whose pylons are the decade's best example of what the architect should not do when presented with a first-rate piece of engineering. Railroad terminals made a brilliant advance in the Cincinnati station, where seating is logically disposed by the train gates. Typical of the newest trend in terminals is 6, with its emphasis on comfort and pleasing appearance.

1. Grumman "Sky-Rocket."
2. Bowlin Sailplanes. Bar­tow revolving airport bea­con. Lenses by Corning Glass Works, Corning, N. Y.
Architectural Concrete Slabs, hung from floors, provide decorative exterior walls with high structural strength, eliminate cost of fenestration and sprinkler system, save construction time, and allow adequate light and ventilation for a 3-story garage.

That is part of the story of a unique parking structure built at unusually low cost at Washington, D.C. The use of thin Architectural Concrete Slabs—little more than 2" thick, yet with strengths of 8,000 to 10,000 pounds per square inch—eliminated the need for 9" masonry walls and reduced the support such walls normally require. At the same time, they served as forms for the parapet and the fender curbs on the parking floors (see sketch).

The Architectural Concrete Slabs, measuring 3½ x 9½ x 2½" thick, are hung from the floors. They form a decorative concrete curtain of pleasing texture between the open structure and the street. They are made with Atlas White cement and exposed yellow quartz aggregate, reinforced by a 4" x 4" welded, galvanized mesh. Their size cuts construction time and reduces the number of joints. Perforations in certain of the slabs take the place of windows to provide light and ventilation as well as decoration. Larger openings allow direct access for firemen, saving the cost of expensive fire-protection equipment.

Write for further information, or see SWEET’S CATALOG—Section 4. Universal Atlas Cement Co. (United States Steel Corporation Subsidiary), Chrysler Bldg., New York City.

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THE MONTb IN BUILDING

(Continued from page 4)

Neither McDonald nor Jones appeared over-enthusiastic and both will require further prodding by "Chuck" Palmer before bricks are laid. However, preliminary discussions have two projects all but built: one in Newport News, Va., another in Moline, Ill.—both centers of booming defense activity.

Of prime interest to building managers and mortgagees is legislation now before Congress to revive but completely revise the Soldiers' and Sailors' Civil Relief Act of 1918 which, among other things, lightened the rent and mortgage payment loads carried by men called to the colors. Both the recent National Guard mobilization and the compulsory military service acts were accompanied by civil relief provisions similar to those in the World War I law, but these provisions will be brought up to date and superseded by the more complete legislation now under discussion. For instance, while the families of inducted Guardsmen and draftees are currently protected from eviction provided rent bills do not exceed $50 per month (the figure), under the proposed law the ceiling will probably be raised to $80 to reflect the general rent increase in the last 20 years.

The proposed law the ceiling will probably rise to $80 to reflect the general rent rise that has taken place in the past 20 years. The proposed law will also continue the blanket moratorium on mortgage foreclosures and will probably revive the clauses providing relief from tax sales and from the suspension of insurance policies which were not included in the recent Guard and draft acts.

Also directly related to the progress of the national defense program are these important building developments:

► Appointment by Housing Coordinator Palmer as "special consultants" to his defense department: Executive Vice President Herbert U. Nelson of the National Association of Real Estate Boards; Manager S. M. Buckingham of the Cleveland Terminal Building, a representative of the National Association of Building Owners and Managers; Research Director Miles Lanier Coleman of the Twentieth Century Fund's defense housing survey at which The Forum this month takes an advance peek (see p. 60, col. 2); Director Coleman Woodbury of the National Association of Housing Officials; Washington Builder Gustave Ring, the nation's most successful developer of low rent FHA-insured housing projects. Also, Engineer R. L. MacDougall, Atlanta lumber manufacturer and general contractor, as assistant coordinator of "program execution."

► An increase in the monthly volume of marriage licenses to the highest level yet recorded by The Forum's five-year-old index—a promising sign (see col. 3).

► Release of the initial 1940 Housing Census statistics—fortunately for defense bidders, they cover vacancies and spot many a potential bottleneck (see p. 92).

DEMAND. Like Spring, the prospect of compulsory military training turns young men's fancies. And, according to marriage statistics, the conscription bill enacted last month outdid Spring as far as ringing wedding bells is concerned. Based on reports received fortnight ago, from municipal officials in 34 leading U.S. cities, The Forum's monthly index of marriage licenses skyrocketed to 44,750 in August, 78 per cent above the July 1940 level and 67 per cent above August 1939. The highest point reached since The Forum began its compilation in 1935, the August figure stood about 98 per cent above the June figure, normally the year's peak, and swelled the cumulative eight-month total to 395,000, about 17 per cent larger than the volume for the comparable 1939 period.

The trend of marriages has always been considered one of the prime factors behind Building's behavior, for a marriage means a new family and usually the rent or sale of another dwelling. While the current upward surge in marriages must be discounted somewhat by the nature of the incentive—the nation's first peacetime military draft—it is nevertheless highly significant for Building. Conscription of married men will be deferred, and with

(Continued on page 52)

"SMOOTH" IN APPEARANCE AND IN OPERATION

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That fact is demonstrated clearly in the case of the Ivory Soap Dispenser. For here is a modern dispenser that's equally "smooth" in appearance and in operation.

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THE SCRATCH TEST

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Address: ___________________________

City: __________________ State: ______
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THE MONTH IN BUILDING
(Continued from page 50)

the subsequent birth of children these men stand a good chance of total exemption. Thus, it is safe to say that a sizable proportion of couples whose marriage has been hastened by the draft will require housing, and thus will distort the normal curve of housing demand. Moreover, since most of the newlyweds naturally fall in the lower income, younger group, the unduly increased demand will be almost wholly for low cost or low rent shelter. Probability is that, to begin with, most of the couples will look for small rental apartments.

In conjunction with residential vacancy data collected in the 1940 housing census (see below), a city-by-city analysis of the marriage statistics spotlights several communities which may expect particularly sharp increases in housing demand: Atop the Forum's 84-city list percentage-wise is New Haven where August marriage licenses soared to 391, about 160 per cent more than were issued in the corresponding month last year.

Louisville, with 805, registered a 125 per cent advance.

New York City's 14,696 August licenses, up 120 per cent, comprise, as might be expected, the largest of the 84 totals.

On a par with New York City percentage-wise was Cleveland, which issued 3,368 licenses in August.

Thirteen other cities reported increases of 50 per cent or greater: Baltimore, Boston, Buffalo, Chicago, Columbus, Minneapolis, Newark, Omaha, Philadelphia, Providence, Rochester, Seattle, Washington, D. C.

Only four cities reported decreases: Los Angeles, Oakland, Richmond and San Francisco.

PINCH. When Government year ago phrased the questions to be included in its exhaustive 1940 Housing Census, it probably did not realize the importance of the answers to the efficient accomplishment of the national defense program. But, when the census was completed in early May, Director William L. Austin of the Commerce Department's Census Bureau caught on quickly, ordered his crew of Washington house-counters to feed vital housing figures first into their electrical tabulators. Month ago these vital housing figures began to trickle out of Census Bureau's sputtering machines.

First basketful of preliminary statistics covered 176 cities of 50,000 or more population, showed that of the 8,562,611 dwelling units counted in these communities on April 1, only 425,974, or about 5 per cent, were vacant. About 3% were occupied or unoccupied and for sale or rent, they also included some units held for absent household members and a few temporarily occupied by non-resident households. Moreover, they (Continued on page 54)
IN TOPEKA'S
Modern Municipal Auditorium

Wheeling
CORRUGATING COMPANY

300 squares of Wheeling Long-Span Roof Deck were used in the municipal auditorium at Topeka, Kansas. Architect: Greist & Coolidge, Topeka, Kansas. R. A. Finney, Consulting Engineer. General Contractors: F. M. Spencer & Son, Topeka, Kansas.

6 men can lay and weld 1,000 square feet of Long-Span floor or Roof Deck in one hour. The smooth surface of the completed deck simplifies application of the insulation and any type of built-up roofing.

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ARMSTRONG'S FLOORS LINOLEUM
Rubber Tile - Linotile (Oil-Bonded) - Asphalt Tile - Cork Tile - Linowall Wall Covering

THE MONTH IN BUILDING

(Continued from page 52)

also include dwelling units in resort areas which are normally occupied or available for occupancy only during certain seasons. Thus, the 2 per cent vacancy average is somewhat distorted by the 19.4 per cent vacancy in Atlantic City, N. J., and the record-breaking 23.9 ratio in Warwick, R. I., both summer resort cities which were doing far from a boom business on April 1. Final vacancy statistics will show separately those dwelling units which are for sale or rent and will therefore present a more accurate picture of housing conditions.

Much that is significant for national defense houses may be gleaned, however, from the Census Bureau's preliminary figures of the 63 cities in which World War I industrial production was bottlenecked by housing shortages (Arch. Forum, Aug. 1940, p. 138), seventeen are included in the initial 1940 census report—and most of them on April 1 reported below average vacancies, ill omens for the current national defense program.

Total dwelling units, the total number vacant and the vacancy ratio for each of these seventeen communities stack up like this:

<table>
<thead>
<tr>
<th>Units</th>
<th>Vacant</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,692</td>
<td>1,128</td>
<td>1.3%</td>
</tr>
<tr>
<td>15,053</td>
<td>2,101</td>
<td>1.3%</td>
</tr>
<tr>
<td>40,207</td>
<td>1,227</td>
<td>3.1%</td>
</tr>
<tr>
<td>15,314</td>
<td>472</td>
<td>3.1%</td>
</tr>
<tr>
<td>8,500</td>
<td>1,137</td>
<td>3.4%</td>
</tr>
<tr>
<td>8,646</td>
<td>1,130</td>
<td>1.3%</td>
</tr>
<tr>
<td>115,564</td>
<td>4,248</td>
<td>3.7%</td>
</tr>
<tr>
<td>113,566</td>
<td>7,348</td>
<td>6.4%</td>
</tr>
<tr>
<td>8,500</td>
<td>692</td>
<td>7.8%</td>
</tr>
<tr>
<td>10,356</td>
<td>726</td>
<td>7.2%</td>
</tr>
<tr>
<td>22,970</td>
<td>2,106</td>
<td>9.1%</td>
</tr>
<tr>
<td>22,519</td>
<td>2,049</td>
<td>9.2%</td>
</tr>
<tr>
<td>25,474</td>
<td>2,086</td>
<td>8.2%</td>
</tr>
<tr>
<td>23,730</td>
<td>1,327</td>
<td>5.6%</td>
</tr>
<tr>
<td>39,535</td>
<td>1,273</td>
<td>3.2%</td>
</tr>
<tr>
<td>36,367</td>
<td>1,524</td>
<td>4.2%</td>
</tr>
<tr>
<td>36,900</td>
<td>2,095</td>
<td>5.8%</td>
</tr>
<tr>
<td>18,490</td>
<td>1,524</td>
<td>8.2%</td>
</tr>
<tr>
<td>11,224</td>
<td>1,407</td>
<td>12.6%</td>
</tr>
</tbody>
</table>

To this list might well be added those cities whose airplane and airplane engine industries have sprang up since the World War I armistice and whose housing conditions are summarized in the initial census report:

<table>
<thead>
<tr>
<th>Units</th>
<th>Vacant</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>234,723</td>
<td>8,771</td>
<td>3.7%</td>
</tr>
<tr>
<td>44,889</td>
<td>740</td>
<td>1.6%</td>
</tr>
<tr>
<td>16,960</td>
<td>766</td>
<td>4.7%</td>
</tr>
<tr>
<td>11,224</td>
<td>821</td>
<td>7.4%</td>
</tr>
<tr>
<td>25,510</td>
<td>578</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

With or without emergency industrial and military expansion, these additional communities appear ripe for further residential development, for, having vacancy ratios below 2 per cent, they are pinched hardest by the general housing shortage:

(Continued on page 56)
Gentlemen of the Board—
our architect is a FLOOR EXPERT

HUNDREDS of school and hospital maintenance staffs are tossing bouquets to architects who have specified long-lasting Armstrong's Asphalt Tile floors. And don't think the boards aren't happy.

The cost of Armstrong's Asphalt Tile is low. Upkeep is really economical. Routine sweeping, occasional washing and waxing, do the trick. Expensive refinishing is never needed. This is the only type of resilient material which can be used safely on concrete in direct contact with the ground, on or below grade.

There are 41 rich plain and marble colors to choose from. This asphalt tile is quickly hand-set, a block at a time. Custom-cut insets can be added for very little extra.

See "Sweet's" or write for Floor Beauty at Low Cost, Armstrong Cork Company, Building Materials Division, 1204 State Street, Lancaster, Pennsylvania.

FOOTSTEPS DON'T RESOUND on the resilient floor of Armstrong's Asphalt Tile in this auditorium of the Chaffey Junior College, Ontario, Cal. Five rich colorings, tan marble, old rose marble, travertine marble, Pompeian red, and black keep this area from looking cold and institution-like.


ARMSTRONG'S ASPHALT TILE
MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM
THE LOW-COST FLOOR WITH THE LUXURY LOOK!
WHO IS SIMON DEGREE?

...he's the guy that blockades production

STOP HIM WITH MODINES

Beware of Simon Degree! He sneaks through factories, lurks in laboratories, hides in offices and stores. When he's found out, his dirty work is done. Workers have slowed up! Production has bogged down! Morale is low! Costs are high!

And it's all the fault of Simon Degree. He's the sinister symbol of insufficient and inefficient heating—the silent saboteur of production and profits.

What About Your Clients' Buildings?

So insidious is Simon Degree that he may have designs on the very buildings you're working on this minute. Just when Uncle Sam expects production to be stepped up as a part of our national defense.

Why let your clients run the risk of losses due to ineffective heating? Kick Simon Degree out now!

Take the precaution that thousands of architects and engineers rely on—Modine Unit Heaters—America's recognized standard. This is no time to experiment or skimp. Insure proved productive heating backed by Modines' billion hours of satisfactory service.

Prompt Delivery

New construction, or modernization, calls for 24-hr.-day speed. Modine leadership, Modine facilities... Modine organization, alert and ready...assure prompt delivery.

Faster Installation

With Modine-patented direct-from-branch-supply-pipe suspension, installation is faster and easier. No brackets, rods or straps...every Modine costs you $3 to $8 less to install.

More Modines are sold than any other unit heater. Get literature!
Winning Architects Everywhere!

CAREYSTONE
ASBESTOS-CEMENT

More Roof Beauty—Lower Cost

INDIVIDUAL SHINGLE EFFECTS

AUTOMATIC COLOR BLENDS

STRIP SHINGLE LOW COST

FIRE-PROOF—PERMANENT

CAREY brings to architects and home owners a sensational roofing development—CAREYSTONE asbestos-cement strip shingles in “tri-tone blends.” So popular is this shingle that many architects are using it on their own homes.

By an ingenious method of manufacture, each panel in the strip is produced in a separate color tone, with individual wood-grain texture and corresponding staggered butt. The colors blend automatically. Lay the shingles as you will, there can be no “bunching” of tones.

CAREYSTONE strip shingles in “tri-tone blends” meet every architectural demand for roof beauty and harmony—give the identical appearance of expensive color blending by hand—and at an all-time low cost for this type of shingle and this roof effect.
EICHLEY
 Moves Buildings

THE MONTH IN BUILDING
(Continued from page 54)

<table>
<thead>
<tr>
<th>Units</th>
<th>Vacant</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristol, Conn.</td>
<td>7,742</td>
<td>93</td>
</tr>
<tr>
<td>Canton, Ohio</td>
<td>39,927</td>
<td>427</td>
</tr>
<tr>
<td>Clifton, N. J.</td>
<td>13,367</td>
<td>233</td>
</tr>
<tr>
<td>Cumberland, Md.</td>
<td>10,263</td>
<td>180</td>
</tr>
<tr>
<td>Decatur, Ill.</td>
<td>12,535</td>
<td>234</td>
</tr>
<tr>
<td>Elyria, Ohio</td>
<td>7,153</td>
<td>71</td>
</tr>
<tr>
<td>Gadsden, Ala.</td>
<td>5,479</td>
<td>180</td>
</tr>
<tr>
<td>Garfield, N. J.</td>
<td>7,250</td>
<td>109</td>
</tr>
<tr>
<td>Granite City, Ill.</td>
<td>6,425</td>
<td>99</td>
</tr>
<tr>
<td>Hamtramck, Mich.</td>
<td>11,677</td>
<td>100</td>
</tr>
<tr>
<td>Hazleton, Pa.</td>
<td>8,137</td>
<td>117</td>
</tr>
<tr>
<td>Lebanon, Pa.</td>
<td>7,489</td>
<td>90</td>
</tr>
<tr>
<td>Lorain, Ohio</td>
<td>11,444</td>
<td>124</td>
</tr>
<tr>
<td>Nanticoke, Pa.</td>
<td>6,043</td>
<td>102</td>
</tr>
<tr>
<td>New Britain, Conn.</td>
<td>17,232</td>
<td>103</td>
</tr>
<tr>
<td>Norristown, Pa.</td>
<td>8,557</td>
<td>149</td>
</tr>
<tr>
<td>Richmond, Ind.</td>
<td>10,316</td>
<td>141</td>
</tr>
<tr>
<td>Rochester, Minn.</td>
<td>6,372</td>
<td>91</td>
</tr>
<tr>
<td>Royal Oak, Mich.</td>
<td>6,747</td>
<td>101</td>
</tr>
<tr>
<td>Scranton, Pa.</td>
<td>36,164</td>
<td>650</td>
</tr>
<tr>
<td>Sheboygan, Wis.</td>
<td>11,977</td>
<td>172</td>
</tr>
<tr>
<td>Torrington, Conn.</td>
<td>7,235</td>
<td>100</td>
</tr>
</tbody>
</table>

Also worth examination is the extent of the housing shortage in the largest of the 176 cities included in the preliminary census report—that with 100,000 or more dwelling units and not already presented above:

<table>
<thead>
<tr>
<th>Units</th>
<th>Vacant</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cincinnati, Ohio</td>
<td>143,777</td>
<td>8,919</td>
</tr>
<tr>
<td>Denver, Colo.</td>
<td>100,429</td>
<td>4,182</td>
</tr>
<tr>
<td>Detroit, Mich.</td>
<td>450,288</td>
<td>15,578</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>131,871</td>
<td>10,829</td>
</tr>
<tr>
<td>Milwaukee, Wis.</td>
<td>169,734</td>
<td>5,322</td>
</tr>
<tr>
<td>Minneapolis.</td>
<td>146,727</td>
<td>4,653</td>
</tr>
<tr>
<td>New York, N. Y.</td>
<td>3,321,257</td>
<td>169,879</td>
</tr>
<tr>
<td>Pittsburgh, Pa.</td>
<td>179,869</td>
<td>4,754</td>
</tr>
<tr>
<td>St. Louis, Mo.</td>
<td>281,242</td>
<td>16,790</td>
</tr>
</tbody>
</table>

Severity of the housing conditions in all 176 communities is aggravated by three prime facts: 1) The volume of vacancies includes in many cases resort houses which were normally unoccupied at the time of the census; 2) it is logical to assume that since April 1 many vacancies have been filled by virtue of industrial expansion for war orders and national defense; increased employment and marriages (see p. 30, col. 3), and mounting consumer purchasing power; 3) many of the vacant dwelling units are unfit for habitation. On the basis of 1934-36 real property inventories conducted in 203 urban areas, it is estimated that about one-third of all vacant dwelling units are either unfit for use or in need of major repairs to prevent them from becoming uninhabitable. In these inventories the condition of only about one-quarter of all vacant units was classed as "good."

CHEAP. To strike contentions that private builders are either unwilling or unable to supply low cost housing for national defense workers, Director Thomas

(Continued on page 58)
An announcement of a new development for protection of plaster corners, at lower cost:

**MILCOR** presents

**PATENT APPLIED FOR**

**SUPER-EX**

The Superior Expansion CORNER BEAD

—the only major improvement in corner beads in 15 years

Combines all the advantages of every corner bead into a superior product that assures your clients of long-time plaster beauty!

The rigidity of a solid wing... plus the added plaster reinforcement of expanded metal — all in one superior corner bead exclusive with Milcor... Goes on fast to please your clients with reduced erection costs. Requires practically no plumbing. Stands up to protect plaster corners against cracking, chipping... to assure straight, true-edge beauty...

Part of Milcor's complete line of corner beads used successfully everywhere...

Write today for free, colorful bulletin giving facts about the new Milcor Super-Ex Corner Bead, so that you may have it in mind when drafting plans and specifications.

**MILCOR STEEL COMPANY**

MILWAUKEE, WISCONSIN

CANTON, OHIO

CHICAGO, ILL. • KANSAS CITY, MO. • LA CROSSE, WIS. • ATLANTA, GA.

• NEW YORK, N.Y. • ROCHESTER, N.Y. • BALTIMORE, MD.

Sales Offices: Minneapolis, Minn., Little Rock, Ark., Dallas, Tex., Denver, Colo.,

Washington, D.C.
THE MONTH IN BUILDING
(Continued from page 56)

E. Colleton of New Jersey’s FHA office has advised national defenders via the press that his charges were already considering plans for the construction of 20,000 “defense housings”; has concluded: “From our current experience, private business is not only capable but also eager to provide quarters where needed.”

Director Colleton’s boast is not idle chatter. According to FHA records, New Jersey builders who have already launched really low cost house programs (sales prices: $2,900 and less with lot), have plots available for 2,144 houses, 507 of which have already been sold and 238 already built. Typical of these going projects are: 1) A Kenilworth tract of 750 lots, 153 of which have been sold for an average development charge of $2,900 by the Blue Ridge Manor Development Co.; 2) General Housing Corp. has sold 100 of its projected 400 houses in Hamilton Township (near Trenton), has room for 500 in Haddon Township and 350 in a new tract near the industrial city of Paterson where 27 units were sold for an average price of $2,250 before construction began last month; 3) In Woodbridge, Better Homes Corp. with 150 houses planned, has already sold 30 for $2,900 each; 4) Alhar Home Builders Corp. sold all of its 32 units in East Rutherford for $2,750 each in one day with the aid of a model house, now plans to develop other tracts.

RECOUP. Property owners by force rather than volition, two New York landlords have recently taken significant steps to help themselves:

In swank Westchester County, eleven savings banks have banded together, cooperatively advertised their acquired houses and month ago had made 39 sales totaling $390,700—an average consideration of about $7,400 per property. Known collectively as the Central Committee of Westchester Mutual Savings Banks, the group reaches the buying public via quarter-page advertisements in the New York press, catches its eye by flagging the wide range of offering prices ($4,000 to $35,000), by mentioning low down and monthly payments and by listing 55 properties in a few of the 30 closely grouped communities in which they are available. Typical listing: “Dobbs Ferry—6-room bungalow. Frame. Every modern improvement. Newly decorated. Plot, 50 x 100. Now $8,500.” Most of the sales are handled through established brokers.

The second large scale landlord, Nassau County to the east of the city on booming Long Island, last month prepared home seekers, realty investors and builders for its third annual real estate auction. The means: half-page newspaper advertisements heralding the availability of books describing with the aid of photographs and plot plans the 5,000-odd foreclosed

(Continued on page 60)
There is no need for uncertainty in the selection and purchase of your store front construction. It's easy to distinguish between promises and proof, because proof can only come from actual experience over the years.

For three decades, architects and designers have looked to Brasco for the latest and best in store front construction — ultra-modern design — the application of all newer metals and finishes — permanent beauty — sound engineering — girder-like strength — assured safety to glass.

Today, Brasco is still up ahead and still initiating the trend toward new and higher store front values. The line is most complete, in both Rolled and Extruded constructions, embodying every essential item from sidewalk to coping. AND A GOOD STORE FRONT NEED NOT BE HIGH-PRICED.

BRASCO MANUFACTURING CO.
HARVEY (Suburb of Chicago) — ILLINOIS
National Distribution Assures Effective Installation
Solid Stainless Steel, Aluminum, Bronze, Copper, Extruded Bronze or Extruded Aluminum, in Any Finish.

BRASCO MFG. CO., Harvey, Ill.
Send Samples and Details of Brasco Modern Store Front Construction.

Send Samples and Details of Brasco Modern Store Front Construction.

Firm:
Address:
Individual:


At left, Brasco Aluminized Aluminum Store Front Construction, combining both rolled and extruded sections. Architect, David Harrison, Baltimore.

Modern Brasco Shadow Line Sash, shown with complete sill covering.
"my architect didn’t forget a thing that meant a better home—
—for example he specified the

LUCKE LEAK PROOF

Bath Tub Hanger"

"Better see him," continued the satisfied home owner.

Get acquainted with the LUCKE—the only permanent, scientific and successful method of installing the modern built-in bath. Guarantee your clients that they will have no tub settling—no risk of water damage—but full assurance of leak-proof protection to ceilings and walls beneath both, making redecorating or refinishing expense unnecessary from leaky bath tubs.

The LUCKE is quickly and easily installed on any type of wall or tub. It is not costly or oil and saves money, worry and bother for your clients year after year. Once installed it is impossible for the tub to sag or pull away from the wall.

WILLIAM B. LUCKE, INC.
Manufacturers
Wilmette, Ill.

Get all the facts—learn the full importance of the LUCKE—see why it will pay you by helping you to gain greater community confidence.

THE MONTH IN BUILDING
(Continued from page 58)

properties which the county will put on the block during October. Owned in fee simple by the county, the properties range in size from tiny beach houses to multi-acre estates and are all offered at "upset" prices representing the amounts of taxes due or, of course, the highest bids above these figures. The auction will be unlike the ordinary tax sale in that title of the properties may be immediately transferred and guaranteed; and the properties may not be redeemed by the former owners. (This enforced provision prompts taxpayers to pay up promptly, helps the county maintain an above-average tax collection record.)

Included in the bargain offering are country estates with acreage at $1,000 and up; year-round houses at $500; vacation, waterfront houses at $300; business lots at $95, residential and waterfront sites at $95; and acreage for builders and developers at $100 and up per acre.

Stated purpose of the auction is restoration of "these parcels to progressive private ownership." Hope is that during October, as last year, the county will dispose of about $1 million in tax liens and thus convert the properties from market draws into revenue producing assessables.

The county estimates, perhaps over-estimates, that about half of the thousands of Nassau houses built during the past year have been erected on sites acquired by builders at the 1938 and 1939 auctions. Example: Sunrise Spring Corp. is erecting some 1,000 houses in Franklin Square on lots picked up at previous auction.

GUIDE. Early in July the Twentieth Century Fund's Executive Director Evans Clark wisely foresaw the need for authentic information on emergency housing. Thus to his Housing Researcher Miles Lanier Colean, he suggested that the Fund's barely begun survey of general housing needs be shifted to defense housing matters. To the Fund's credit is the fact that what was to be a brief report has been expanded to a book of some 175 pages jampacked with vital facts and that its timely guide for defense houcers will be finished in quick time and distributed later this month. Privileged to scan advance proofs of the book's early chapters, THE FORUM herewith briefs their highlights:

Chapter I is a detailed diary of housing mistakes and contributions made during World War I by Government with its 195 million housing dollars—particularly by the Emergency Fleet Corporation and the U. S. Housing Corp. (For further details on World War I housing activities, see Arch. Forum, Aug. 1940, p. 128.)

Like the Congressional Committee which soon after the Armistice investigated war housing operations, the Fund comes to two general conclusions: 1) the housing

(Continued on page 62)
Boarded windows are out of date...today's preference is for...

**VENETIAN BLINDS**

Today your homes are planned for plenty of light and ventilation. That's why SUNCHEK translucent fabric Venetian Blinds have become an integral part of every well-rounded architectural plan...and an important contribution to the modern developments of home designing. No more dark, gloomy interiors! No more rooms where the brilliant sunlight is left uncontrolled! SUNCHEK Blinds filter the harsh rays of the sun...diffusing them in the soft, restful glow of "toned" sunlight. But this is not the only advantage of "fabric" slats. Their amazing wearing qualities...their flexibility...and, highly important, the ease with which they may be washed have made SUNCHEK Blinds today's preference in thousands of better homes from coast to coast.

**WASHABILITY.** SUNCHEK Blinds launder easier than curtains. Simply "tubbing" them in warm Lux or Forex Detergent—metal parts and all—then hanging at the window to dry, restores their natural beauty and freshness.

**FLEXIBILITY.** The flexible construction of SUNCHEK Blinds has made casual cleaning so much easier...eliminating those hard-to-get-at slat surfaces. No longer is the cumbersome task of dusting necessary, when "flexing" the slats causes all loose particles to be literally "bounced off."

**DURABILITY.** In spite of their light, airy construction, the durability of SUNCHEK Blinds under ordinary—yes, even extraordinary—use is almost unbelievable. There are no wood slats to warp...no metal slats to bend permanently out of shape.

**BEAUTY.** Complete fabric window ensembles—blinds, curtains and drapes—are recommended by leading architects and interior decorators. And for perfect blending, with every decorative scheme, there's no finer choice than SUNCHEK.

---

**FREE BOOKLET with complete description of all features of SUNCHEK Venetian Blinds will be sent on request, without obligation.**

**THE WESTERN SHADE CLOTH CO.**
22nd & Jefferson Sts.
Chicago, Ill.

**WILLIAM VOLKER & CO.**
Main, Second & Third Sts.
Kansas City, Mo.

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

OCTOBER 1940
THE MONTH IN BUILDING
(Continued from page 60)
was too good, too costly; 2) the housing operations of the two Government building agencies were too slow, too inefficient. In brief, "The major deficiency was lack of planning."

In Chapter 2, titled "Facing a New Emergency," the Twentieth Century Fund report points to many hopeful signs and many a potential stumbling block along the way of efficient national defense housing expansion. Favorable are these conditions, none of which was present in the former crisis: 1) labor shortages threaten neither the construction nor manufacturing industries; 2) building materials of all kinds are readily available and no scarcities are anticipated for the near future; 3) transportation facilities seem adequate to avoid the problems of priorities, delays and capital risks; 4) there is an ample supply of building money; 5) there is real momentum behind current private house building activity; 6) both Government and private enterprise have had widespread experience in low cost housing; and finally 7) "the skill of designers and the capacity of builders are both much greater."

Noting that in Government's allocation of initial defense orders, housing was not properly considered as a feature of industrial expansion, Coleen warns that the provision of "sufficient and adequate shelter ... must parallel, and not lag behind, the expansion of these industries. There must be a parallelism in essential to an impenetrable defense." Another warning: if housing needs are entirely neglected or if it is assumed "that in some way housing will take care of itself, the result can only be a repetition of the last war's industrial delays and stoppages."

The special housing problem of the emergency is not due to increased population, or a different sort of population, but to a displaced population. Therefore, in Miles Coleen's opinion, two important facts immediately present themselves: 1) Major existing housing problems will remain. "If subsidies are necessary to provide housing for the lower paid workers [TSHA], we shall still have to pay them. If, in order to stimulate private financing, the Government has had to assure protection of mortgage investment [FHA], it will still have to in the crisis ahead."

To minimize the emergency's special housing problem (population displacement) it is essential that heady policies be adopted regarding the labor market of plan expansion.

Two other influences will complicate this housing problem for both Government and private builders: 1) "Improvement in the economic position of a large number of families will itself increase the pressure for better housing, whether or not these families are members of the shifted group." 2) Most of the shifted or displaced families will be in the low income group which normally occupies the "medium grades of used housing" and for which comparatively little new housing has been designed.

For private builders, who accounted for more than 90 per cent of the 260,000 dwelling units started during the most intensive year of World War I activity, Coleen offers some advice and joins them in their fondest hope. His advice: "All dwelling construction now under way or contemplated will have to be pushed to completion since in this way our stock of housing can be increased before pressures of special needs and unforeseen obstacles appear." His hope: "Chances of maintaining private house building should be greater than in 1917 and 1918. We see the obvious desirability of limiting, as far as possible, the administrative burdens of Government and the general tax burden on the public. We can see, too, the probable greater speed, flexibility and economy of private as against public housing."

To permit private building to do its utmost, Coleen says national defenders must: 1) avoid heavy concentration of industrial activity; 2) minimize the need for labor migration, particularly low paid, unskilled labor; 3) balance defense activity with the supply of housing and building capacity of communities; 4) "make known the size and character of housing needs to builders before the crises develop;" and 5) make known "how far the building industry can adapt itself to suddenly increased and specialized demands." But, he also believes that Government itself must aid private operations, first, by removing obstacles, by offering inducements and by generally guiding defense activity and, secondly, by direct housing operations where private initiative is unable to function.

**Earnings**

<table>
<thead>
<tr>
<th>First six months: 1940</th>
<th>1939</th>
</tr>
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<tbody>
<tr>
<td>Acme Steel.........</td>
<td>1,045,495</td>
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<tr>
<td>Allis-Chalmers...</td>
<td>9,609,738</td>
</tr>
<tr>
<td>American Radiator-Standard Sanitary</td>
<td>1,330,935</td>
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<tr>
<td>Amer. Steel Foundries</td>
<td>1,066,830</td>
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<tr>
<td>American Rolling Mill</td>
<td>2,044,599</td>
</tr>
<tr>
<td>Armstrong Cork</td>
<td>2,114,653</td>
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<tr>
<td>Atlas Plywood**</td>
<td>360,502</td>
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<tr>
<td>Babcock &amp; Wilcox</td>
<td>1,474,905</td>
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<tr>
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<tr>
<td>Briggs Mfg.</td>
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<tr>
<td>Celotex Corp.</td>
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<td>Crane Co.</td>
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<tr>
<td>Cumulus Steel</td>
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<td>Detroit Steel</td>
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<tr>
<td>Jones &amp; Laughlin</td>
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<tr>
<td>Kennecott Copper</td>
<td>4,287,764</td>
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<td>Midland Steel</td>
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<td>National Gypsum</td>
<td>695,636</td>
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<tr>
<td>Otis Elevator</td>
<td>1,785,092</td>
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<tr>
<td>Paraffine Co.</td>
<td>1,713,080</td>
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<tr>
<td>Penn Dixie Cement</td>
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</tr>
<tr>
<td>Revere Copper &amp; Brass</td>
<td>1,287,896</td>
</tr>
<tr>
<td>Yale &amp; Towne</td>
<td>442,880</td>
</tr>
<tr>
<td>Youngs'n Sheet &amp; Tube</td>
<td>2,423,212</td>
</tr>
</tbody>
</table>

*July 31 quarter.* **12 mos. to June 30. $ Preli before Federal income tax.
Fixtures that help you put more beauty and greater protection into modern bathrooms

The compact, space-saving Cosmette is ideal for the powder room ... only 13 1/2" x 20". Made of twice-fired vitreous china. Chromium fittings. In white and more than 60 colors.

The DeLuxe Water-saver Closet stands clear to leave the wall free from defacement. It is an economical, compact, quiet-operating fixture, only 27" in height.

The graceful Wilmington has 100 square inches of shelf space, concealed front overflow, splash guard, built-in soap dish, two styles of trim. (Patented).

From the threshold of a new decade, Case glances back on its past ten years of pioneering the importance of the bathroom. It has been a period of progress in the beauty, utility and mechanical excellence of higher-quality plumbing fixtures. Noteworthy among its achievements have been the developments of the T/N one-piece water closet, illustrated above. Compactness, quiet operation and non-overflow have won wide renown for the T/N. Today it is, in fact, America's most famous plumbing fixture. Other Case achievements have been no less outstanding. As a result, Case fixtures have been specified for thousands of residences and public buildings where only the finest would do. It is gratifying to us to have helped you in adding beauty through design and color, and health protection through mechanical improvement, to the modern American bathroom. Case fixtures are on display in distributors' showrooms everywhere. For information, write Dept. E100, W. A. Case & Son Mfg. Co., Buffalo, N. Y.
AWARDS
To the following, all graduating seniors, from schools recognized by the A.I.A., the Alpha Rho Chi Bronze Medal for leadership, service and merit. This national social fraternity, limiting its membership to students of architecture and the allied arts, awards annually the Alpha Rho Chi Medal to men selected by the faculties of the respective schools.

James B. Addy, Georgia School of Technology.

John V. Hamill, Alabama Polytechnic Institute.

John H. Farrens, University of Michigan.

John P. Hamill, Alabama Polytechnic Institute.

Tallie B. Haule, Oklahoma A & M College.

Thomas S. Jones, Columbia University.

Herbert F. Heidt, Carnegie Institute of Technology.

Charles E. Hughes, III, Harvard University.

Charles Gordon Lee, University of Pennsylvania.

Manuel Morris, Kansas State College.

Leif E. Olsen, University of Illinois.

Ieoh M. Pei, Massachusetts Institute of Technology.

Lawrence M. Pleasant, Ohio State University.

Kenneth M. Schaefer, Washington University.

Rolland O. Simpson, University of Washington.

T. Freedland Sims, University of Southern California.

Robert C. Taylor, University of Illinois.

John B. Thomas, Syracuse University.

J. Lee Thorne, Pennsylvania State College.

John G. York, University of Texas.

THE SCHOOL OF DESIGN IN CHICAGO. On the basis of work submitted by talented high school and college students throughout the country three scholarships for the coming year have been awarded: to Alfonso Carrara of Chicago; Milton Halberstadt of Cambridge, Mass.; and Homer Page of Oakland, Calif. The number of applicants was so great and the quality of the work so high, that the School offered two additional partial scholarships to Louis Signanos of Chicago and to Richard Schofield of Bridgeport, Ill.

COMPETITION
BRIDGE DESIGN. The American Institute of Steel Construction announces another in its series of annual competitions open to registered students of structural engineering and architecture in recognized technical schools of U. S. A. and its possessions. Prizes: $800, $100 and $50. Subject: a steel overpass bridge to carry a single track railroad over a highway. Drawings must be in not later than February 10, 1941 for judgment by a jury of nationally known engineers and architects. Further information from American Institute of Steel Construction, 101 Park Ave., New York.

EDUCATION
FEDERATION TECHNICAL SCHOOL, 116 East 16th Street, New York, began on September 9 its sixth year of operation, adding to its postgraduate courses in architecture and engineering, new courses in naval architecture, marine engineering and aeronautical engineering.

COLLEGE OF THE CITY OF NEW YORK. The School of Technology is offering special

THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

5 Reasons for Using Terrazzo

1. ECONOMY. Initial cost plus no repairs...no replacements...minimum upkeep over a period of years, for Terrazzo equals...usually is less than—initial cost plus repairs...and replacements...and higher upkeep for other types of floors.

2. COMFORT. Finished Terrazzo is easy to walk on. It is less slippery than any waxed surface. Furthermore, Terrazzo can save you enough money to_acousticate your ceiling, thus giving you a very low noise level.

3. CLEANLINESS. Terrazzo can be scaled so as to be practically non-ab sorbent. Its smooth, junctional surface cleans easily...can harbor no accumulation of microscopic or microscopical germs. It is aseptic.

4. COLOR AND DESIGN. Terrazzo has warmth and beauty. You may specify any design you wish—pictorial or geometric—in virtually any combination of colors.

5. DEPENDABLE INSTALLATION. This Association's objective is to see that your Terrazzo installations turn out exactly as you want them. Write us today for complete information on the above points or see our advertisement in Sweet's Catalog for basic technical data.

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THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION
"Why is it—the old Blake Home looks better than many houses built only a few years ago?"

WEATHER IS HARD on most painting materials. But Eagle White Lead mixed with linseed oil makes a weather-resisting paint. It has been preserving the beauty of American homes since 1843. This tough, time-worthy paint doesn't crack — doesn't scale. Play safe — specify Eagle Pure White Lead.

REASON NO. 1—It was designed by a good architect.

REASON NO. 2—It has always been painted with a pure pigment paint — Eagle Pure White Lead in oil.

Do you specify two-coat paint jobs? If you do, you'll want the new booklet, "Quick Facts about Two-Coat Painting." Write for free copy.
NEW beauty and utility distinguish modern MIAMI Bathroom Cabinets and Accessories—reflecting over two decades of design improvement during which MIAMI has become the industry’s dominant factor—pioneering new ideas and setting the standard of highest quality and craftsmanship.

MIAMI leadership began 22 years ago when we popularized the all steel cabinet in “Crystal Snow”—a beautiful finish that would not retain stains. In succeeding years, MIAMI pioneered the Venetian all-over, glass door . . . the mirror clips that replaced the unlovely rosettes . . . the razor blade drops . . . the round mirror cabinet . . . the electric-lighted cabinet completely wired at the factory, the ensembles for deluxe bathrooms and many other betterments.

EVOLUTION OF THE MODERN BATHROOM CABINET

The wood cabinet of 21 years ago.
All-steel bathroom cabinet, popular in 1923.
MIAMI’S first lighted cabinet introduced in 1925.
The Imperial—one of MIAMI’S newest, chromium trimmed, indirect lighted, bathroom cabinets.
MIAMI DESIGN IMPROVEMENT of CABINETS

MIAMI today offers a distinguished selection of modern cabinets and cabinet ensembles for glorification of the bathroom...original creations with sparkling plate glass mirrors...brilliant chrome frames...artistic lighting...recessed shelves...cabinets that lead the world in advanced design and reflect the highest type of craftsmanship.

Build your bathrooms “UP” with MIAMI CABINETS

For only a few dollars more than the cost of a cheap cabinet, you can equip any bathroom with one of MIAMI’S finer creations that will add immeasurably to bathroom beauty, convenience and luxury.

Answer the clamor for bathroom glamour by specifying MIAMI Cabinets and Accessories. See our Catalog in Sweets.

The Moderne (above)—a spacious cabinet concealed behind a beautiful, circular mirror. The ingenious hinge, on which the door is swung, permits the door to be pulled outward over the lavatory—an ideal arrangement for shaving or dressing the hair.

No. 905—This unit is the first complete hotel bathroom cabinet. Wired at the factory, and includes lights and all necessary accessories. Saves about $5.00 per bathroom.

Gothic-top model equipped with No. 1 tubular light brackets. Only one electrical outlet is required. The cabinet is wired complete at the factory.

SUGGESTED LAYOUT FOR MASTER BATHROOM

Extreme left—Towel Supply Cabinet No. 320-A; Back wall of alcove above tub—Octagon Towel Bar No. 5001 and Recessed Shelf No. 904; Side wall of alcove above tub—Recessed Soap Holder No. 6000; Over the lavatory—Miami Louis XIV Cabinet-Mirror Ensemble; Recessed Tumbler Holder No. 6001; Recessed Soap Holder No. 5000; Side wall of alcove above toilet—Recessed Paper Holder No. 6002.
evening courses in architecture and building construction. These deal with materials, plan reading and estimating, structural design, reinforced concrete, drafting, heating and ventilating and air conditioning, supervision, and a review course for State licensing.

COLUMBIA UNIVERSITY, New York, offers in its late afternoon and evening courses ten devoted to various phases of architecture, including regional planning, housing management, and two courses on the small house.

HARRY CARNOHAN, well known for his paintings of Western landscapes, who was awarded the 1935 Purchase Prize by the Dallas Museum of Fine Arts, has been appointed to the teaching staff. He will direct studies in the drawing, painting and sculpture department of the School of Architecture, afternoon and evening studio classes in drawing, and morning and evening classes in painting.

PECORA CALKING DECADE
ILLUSTRATING A FEW OF THE THOUSANDS OF BUILDINGS OF ALL TYPES—LARGE AND SMALL—CALKED WITH PECORA

PECORA invites your specifications and request for details
PECORA PAINT COMPANY, INC., 4TH & VENANGO STREETS PHILADELPHIA, PA.
MEMBER OF PRODUCERS' COUNCIL, INC. ESTABLISHED 1862 BY SMITH BOWEN

PECORA CALKING COMPOUND
ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING • PECOMASTICS

CALENDAR

October 16-28, Porcelain Enamel Institute's Annual Forum, University of Illinois, Urbana.

October 29, Exhibition covering 50 years of Frank Lloyd Wright's work. The Museum of Modern Art, New York.

November 1-January 2, 1941. "Art Finds a Way" an exhibition in the Brooklyn Museum demonstrating the origin and development of production techniques in several fields.

DIED
LYMAN W. BRIGGS, architect, 74, in Worcester, Mass. Spanning an architectural career of more than half a century, the architectural monuments designed and carried into execution by Mr. Briggs dot conspicuously the map of his native city. He was educated in the public schools, took a special course in architecture at the Massachusetts Institute of Technology, and gained a practical knowledge of his profession in the services of local architectural firms.

He established his own practice in 1890, and three years later organized the firm of Frost, Briggs & Chamberlain which designed many important structures in Worcester County over many years. In 1912 he withdrew from this firm and established the L. W. Briggs Company. One of the most important of his works was the Worcester Memorial Auditorium, in the design of which he was associated as local architect with Frederic C. Hirons of New York, winning a national competition.

Mr. Briggs had been a member of the A.I.A. since 1902; a member of the Boston Society of Architects; and a member of the Planning Board of Worcester for ten years.

FRANK W. S. KING, architect, 70, at Springfield, Mass. Mr. King was chairman of the Board of Appeals of the Municipal Building Department. He had served as a former president of the Architectural Society of Western Massachusetts. Among the buildings he designed were a number of Springfield's schools, court houses, and churches.

FREDERICK JUDE WAUGH, internationally known as a painter of marines, 78, at Provincetown, Mass. Mr. Waugh was probably the only artist who gained the (Continued on page 72)
JUST WHAT THE FUNCTIONAL DESIGNER ORDERED!

...a metal that combines permanent beauty with structural strength

U.S.S STAINLESS STEEL has exerted a profound influence on design in the past decade. Its high strength permits lighter, more graceful sections, without sacrifice in safety. Its ability to retain the original bright surface makes bright metal work both practical and permanent.

An attractive surface used to be something put on after the structure was complete. U-S-S Stainless Steel lets you build permanent beauty into the structure. But U*S*S Stainless Steel, in the hands of an ingenious designer, is far more than a mere means of enhancing beauty. It saves weight, increases strength, prevents corrosion. In every way, it increases structural efficiency and adds utility value.

Opportunities abound. All the interesting innovations made with U-S-S Stainless Steel during the last ten years are only a beginning. It's highly probable that some design on which you are now working can be materially improved through judicious use of this metal. New applications are discovered every day.

Are you taking full advantage of the properties of U-S-S Stainless Steel in your designs? Write today for complete information.

U.S.S STAINLESS STEEL

AMERICAN STEEL & WIRE COMPANY, Cleveland, Chicago and New York
CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago
COLUMBIA STEEL COMPANY, San Francisco
NATIONAL TUBE COMPANY, Pittsburgh

United Steel Products Company, Chicago, Warehouse Distributors

UNITED STATES STEEL

OCTOBER 1940
DECADE OF DESIGN

WITHIN the last decade, Crane plumbing products for bathrooms and kitchens have established new and important design trends which offer architects greater scope in planning.

The Crane Neuvoage style, for example, has introduced an entirely new conception of functional beauty. Crane has made significant contributions in lavatory, bathtub and closet design. In Crane panel-design plumbing fixtures, the architect finds the means of providing matched bathrooms in a wide price range.

In kitchen equipment, too, Crane has gained nation-wide interest by developing still further the porcelain enameled sink. Crane sinks today deservedly rank as America's finest.

It is a matter of pride with Crane Co. that these improvements in design are not intended for the few but for the many... that Crane Quality is available for every size of house, no matter how small.

You will find it a rewarding experience to visit a Crane Display Room. See for yourself why Crane design can serve you better.

CRANE

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO
VALVES • FITTINGS • PIPE PLUMBING • HEATING • PUMPS

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

The Architectural Forum
NINE "DESIGN DECADES"

Alexander Smith has been weaving carpets for more than nine decades. From each decade it has carried forward something of value to build up a cumulative experience which has been immensely helpful to architects who regard carpet as an integral part of interior design rather than a mere adjunct to it. The nature and quality of the service we offer may best be gauged by the number of outstanding architects with whom we cooperate. This service is available to you at any time without cost or obligation. Whenever you encounter a problem which involves carpet just write us. When we answer your letter we shall also send you our comprehensive book, "Nearly Right Won't Do in Contract Carpets." Contract Division, Alexander Smith & Sons, 295 Fifth Avenue, New York.

ALEXANDER SMITH CARPET
popular prize in the Carnegie International Exhibition in Pittsburgh five times in succession.

Mr. Waugh also tried his hand at writing boys' books and at architecture. He designed some eight years ago the Episcopal Church of St. Mary's of the Harbor, Provincetown, Mass.

MISCELLANEOUS

FOR THE CARE OF EUROPEAN CHILDREN.

For the organization of solicitation in the building trades and professions, an Architects' Division has been formed to cooperate with the U.S. Committee for the Care of European Children, Inc. J. André Fournoux, New York architect, is serving as chairman.

ROCKEFELLER HOME CENTER, through its president Edwin K. Simpson, announces the appointment of Walter Sanders of Sanders & Breek, architects, as Director of Design. Mr. Sanders' experience at Pratt Institute where, as an instructor, he was incidentally engaged in promoting the special clinic for small house service, will be an aid in carrying out the Center's purpose of offering the public authoritative information about building houses.

BUILDING AND WAGES. Following some months of discussion in the Boston Building Congress, President William Greeley (of Kilham, Hopkins & Greeley, architects) made a report to his organization in which he pointed out what seemed to him to be the key log in the nation's building jam. Excerpts from the report follow:

We are met again to consider conditions in the construction industry in Boston. We represent all the elements of that industry. We are together as friends, and we desire to go forward in full cooperation upon some plan that will encourage the building of those structures of all kinds so much needed today in our community.

Briefly the situation which challenges us is this: A—There are practically no buildings being built for investment; B—There are no buildings being built even for speculation except at wage levels below those recognized by Government as minimum; C—The limited activities which exist in the construction industry are practically restricted to five items: 1) Speculative Building—houses and apartments on reduced wage scale; 2) Public Building—housing, schools, municipal structures, under a program of Government spending for which all citizens are taxed for the deficits; 3) Private corporation quarters, for companies forced to expand their space, and provided with large surplus funds—largely insurance and industrial firms (the construction cost is so great that buildings are commonly charged partly to advertising); 4) Private improvements to useless and unsalable properties; 5) Private houses for a scattered few, by the use of open shop contractors.

This is the shrivelled remainder of a once thriving industry. Along with this inactivity there is a condition of disrepair and shabbiness in our city that cries out for thousands of mechanics with hammers and trowels and paint brushes to get to work. And the thousands are here with us, waiting for employment, but they sincerely believe that the wage rates of the period of riotous prosperity of the 1920's will be paid by present impoverished and overtaxed owners.

There is only one way to be steadily employed, and that is at the market rate. If the market rate is too low, as in many industries, such as agriculture, it is a long, hard, puzzling problem to do anything to improve it. Pushing up the

(Continued on page 76)
The past decade of design has chosen Medusa White as one of its outstanding building materials. But Medusa White was also selected by the previous ten years of design and by the decade before that. Architects, for more than 30 years, have selected Medusa, the original white Portland cement, to create buildings in stucco and cast stone that have outstanding individuality and charm.

On this page are shown two examples of the use of Medusa White stucco in the past design decade, one the beautiful home of the radio comedian and movie star, Bob Burns. Architect H. J. Knauer, contractor James E. Denham and plastering contractor Ross Green utilized Medusa White stucco manufactured by the Standard Stucco Co. of Burbank, Calif. . . A. N. Gaepler recently remodeled his Hollywood Terrace, using Medusa White stucco applied by A. D. Hoppe, plastering contractor and supplied by the Blue Diamond Co. of Los Angeles.

Medusa White stucco is the most versatile of all building materials. It meets all color and texture requirements for stucco and creates marvelously beautiful cast stone trim. In the next design decade, use Medusa White, that has so faithfully served during the past 30 years. Send the coupon below for the Medusa White Stucco book.
Illustrating a pronounced departure from the premise that all pine paneling is, per se, "knotty pine." This installation demonstrates the delicate, natural figure, with its absence of bold contrasts, characteristic of clear Arkansas Soft Pine. The species is distinguished by close grain, soft, uniform texture and freedom from pitch and hard streaks. As shown above, the figure's decorative value is retained with a transparent finish only slightly off natural in tone. The wood is equally well suited to paints and enamels, because of its uniform absorbing qualities and freedom from any risk of raised grain or discoloration. . . . Arkansas Soft Pine paneling is produced in this and other patterns appropriate to modern design, as well as in those suited to Early American and period treatment; also in AIA-approved patterns for door and window trim. Complete instructions for simplified practice in specification writing, including Don Graf Data Sheets, detailed cross sections, etc. will be mailed promptly on request. (See also Section 8/9, Sweet's Catalog, 1940.)

Arkansas Soft Pine Bureau • 723 BOYLE BUILDING, LITTLE ROCK, ARKANSAS
for a tip on ELEVATOR ROPE

If you’re specifying elevator rope for any building, large or small, consider the example of Chicago’s famous Wrigley Building. Here, a large percentage of hoisting, compensating and governor ropes are made by Bethlehem.

Bethlehem’s New Elevator Rope is a quality product, embodying the improvements made during a 2-year, $1,000,000 mill-modernization campaign. Only special steel is used in these new Bethlehem Elevator Ropes. Each wire is drawn to precision tolerance. The rope is properly lubricated, from core to crown, and fitted together as accurately as a fine watch.

The new Bethlehem Elevator Rope is being used in a large and steadily increasing number of buildings from coast to coast. It’s safe, efficient and economical.
rate, above the market, has proven to be a means not of enriching the worker, but of killing the industry. New England now knows that its most humane and well-meant insistence on higher wages in its textile industries, instead of enriching the operatives, starved them and their industry out of New England. The market will not be beaten. It will stand for prices that purchasers of goods will pay, and if the goods to be sold cost more than purchasers will pay, the market ceases to be a market, and everyone concerned loses—producer, middleman, retailer, consumer, community, yes and nation.

If the farm hands were to demand for their long, tedious, exacting day's work as much money as the building mechanic now insists on getting for his, the latter would starve on his $10 per day.

As in time of prosperity all wages go up, so in periods of adversity all must come down, if people are going to continue to exchange goods.

**AZROCK means quality!**

Demanded from every floor covering is one prime qualification—long life and the ability “to take it.” AZROCK Floor Tile has this qualification. Its basic ingredient is Uvalde Rock Asphalt, a product famous the world over for exceptional service wherever used.

AZROCK is beautiful, too. Available in many sizes and varied colors, both plain and marbleized, it offers unlimited scope for individual, striking patterns and designs. Colors never fade for they go all the way thru each tile.

The gentle resiliency AZROCK furnishes—making it comfortable to walk upon, quiet, easy on nerves—comes from a random interlacing of cotton fibers thru-out the tile. AZROCK is fire-resistant, insulates against extremes of temperature as well as electricity. And, for simplicity in cleaning, each AZROCK Tile (1.) is micro-cut, fits so close there are no cracks for dirt to collect in; (2.) contains an integral wax finish, makes waxing easier.

Whatever the problem in floor covering—home, commercial or industrial—there is a proven AZROCK Tile to serve you.

The price of labor like that of materials must be sensitive and responsive to the market, if there is to be a healthy market. This means that the price is bound to fluctuate. There is, however, always a price at which labor will find a market. Today in any of our villages there are a hundred house owners doing their own carpentry, painting and general repair work, while their neighbors—the plumber, mason and painter—are on relief. The average householder doesn’t paper his parlor himself, nor does his wife, if they can afford a paperhanger.

Let me take you to the end of the street upon which I live and show you two men, each the head of a family. One is a young college man who is getting $18 a week for collecting garbage. He does not wish to be on relief. The other is a plasterer who is idle at $8.50 per hour, and is being supported by taxes laid upon others, among whom is the student-garbage-man. Is this plasterer wise? Is he not helping to starve himself and his neighbor too? Even so, he is not to blame, and this is why. Too many American business men in the past exploited human labor and reduced their employees to economic slavery. These employees and their colleagues, like normal red-blooded men, have reacted against such oppression. They have lost confidence in their employers and have chosen new leaders, who, with enthusiastic but warped vision, have led the confiding workmen from the frying pan into the fire—from economic slavery into economic suicide. The false standard of an adequate hourly wage has been set up as a road to prosperity for the worker. This worker is slowly learning to his dismay that one dollar an hour is no panacea when you are unemployed. To work and be paid an actual fifty cents an hour would buy him more potatoes than to loaf at a theoretic rating of one dollar—fifty cents that he gets is better than a dollar that stays in his employer’s pocket. If we are to save the situation for him and for ourselves it must be by persuading him that if he will work on a basis that will give him a fair annual income, he will be employed more steadily than he has been, and will help to create prosperous conditions.

The active part of the building market today is the small house ranging in cost from $4,000 to $6,000. This is the part of the market that is controlled by non-organized building mechanics. Those who are building these houses are asking for wages that they can get. If they were asking more they too would be idle.

It has been claimed that because bricklayers will work in Los Angeles for $81 per hour, while demanding $8.65 in Cleveland, they have been fourteen times as busy as in...
Every architect has his own individual ideas when window designs are under consideration. Well-proportioned glass areas, attractive dividing lines to harmonize with the building design... an abundance of daylight... controlled ventilation... are a few of the important architectural demands.

With all of the Fenestra Steel Window types and sizes the widest possible choice is available for every window opening in every kind of building. A typical example is illustrated above, where Architect Hubert Burnham has specified Fenestra Fencraft Steel Windows.

This heavy casement-type steel window provides these ten important features:

1. Increased Beauty.
4. Easy Opening.
5. Safe Washing.
8. Added Fire Safety.
9. Reduced Maintenance.
10. Lower First Cost.

Complete details furnished upon request. See Fenestra Catalog in SWEET'S for 1940 (31st consecutive year) or use coupon below.
THE SHADOWGRAPH TELLS THE STORY
by amplifying distortion and defects 20 times

(1) This is high quality cylinder drawn window glass. The bent and twisted lines shown by the shadowgraph testing device indicate the presence of considerable distortion. This glass became obsolete in 1928.

(2) Here is what most manufacturers offer today as top quality window glass . . . Made by the sheet drawn process, it shows a characteristic distortion in the waviness of the black lines.

(3) Now look at this “shadowgraphed” sample of the new Lustraglass. Obviously an important improvement. The lines are straight showing relatively perfect vision—freedom from distortion.

• Write for the new Windowgraph Slide Rule Chart and a sample of the new Lustraglass. Examine both—then tell us what you think.

WHAT WOULD YOU CALL IT?

...“but it can’t be window glass,” they said, “because the distorting waviness which identifies all window glass has been practically eliminated... and if it sells at the price of window glass, it certainly can’t be plate glass” . . . Here is a problem—the modern marvel of the window world—a new Lustraglass with amazing “whiteness of metal,” with greater tensile strength, with a diamond-like luster never seen before, with important ultra-violet ray transmitting properties, plus a plate-like clarity at window glass prices . . . This new Lustraglass is so revolutionary in its perfection that we really don’t know how to classify it. What is your answer?

AMERICAN WINDOW GLASS CO., Pittsburgh, Pennsylvania

Manufacturers of Plexite, the safer safety glass; Lustrablue and Lustragold for ornamental uses; Crystal Sheet, Chipped and Special Glass for industrial purposes.

THIS NEW TYPE OF LUSTRAGLASS
The Ultra-Violet Ray Sheet Glass
LOOKS LIKE PLATE GLASS—SELLS AT WINDOW GLASS PRICES
Because it has the wanted features, KIMSUL* Insulation is specified by an ever-growing list of architects, builders and contractors. One of the many recent developments using KIMSUL is "Charette Homes", a group of 20 homes for discriminating people in the Borough of Sewickley, Pa. This development is being built by the owners, Ackley, Bradley & Day, under strict architect supervision.

KIMSUL’s popularity is a result of its many advantages. KIMSUL is clean, light in weight and installs with remarkable speed and ease. Furthermore, it is highly resistant to fire and moisture. And because of the unique stitching feature which holds it in place, KIMSUL stays put—won’t sag, sift or pack down inside walls. Before you decide on any insulation, find out how little it costs to insulate with KIMSUL!... Dealers are invited to investigate the profit opportunities in KIMSUL.

SEE HOW QUICKLY AND EASILY KIMSUL INSTALLS

1. Attached to top plate with lath and nails... widths of stud spacing...
2. Exactly fits standard
3. KIMSUL is nailed at bottom—cut off—that’s all!
Within the past four years, $4,000,000 of architect-designed homes have been erected—with Precision-Built Construction. These homes are of all sizes, all types; they are in all parts of the country.

The whole story is told in complete detail in tomorrow's homes—a book of nearly 400 pages, which we would like to send you. This book tells of shop fabrication, of field erection, of exclusive wall-size panels, of estimating—shows how the architect can be sure of profits on small homes as well as large; shows how to save time in planning, drafting, estimating and supervising the job. The finished house is ready for occupancy, 30 days after your plan is approved.

The Precision-Built method employs the Bemis 4" module—the most frequent increment occurring in the wood frame house. The use of this module means standardization, integration, simplification and time-saving—but it does not in any way restrict the flexibility of your design.

Precision-Built Homes are built of standard materials and with quality construction throughout. They are doubly insulated; they stay "new" longer; they are eligible for F.H.A. Insured Mortgage Loans.

TOMORROW'S HOMES is privileged to architects (in the U. S.) without charge. It is profusely illustrated with photographs, working details, rafter tables, area, lineal foot and cubic yard tables. It shows you how to build even low-cost houses at a profit. We invite you to write for your copy, using your firm's letterhead. Only one copy to a firm.

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TRENTON • • • NEW JERSEY
EFFICIENCIES OF 80% AND MORE

Kelwanee 83-R STEEL BOILER for Oil, Gas or Stoker

Expressly designed and built for the purpose, the 83-R is a perfect team-mate for oil or gas burners or coal stokers in heating large residences and smaller buildings... it meets the need for a steel heating boiler, of unusual efficiency, in jobs requiring from 900 to 2900 sq. ft., steam capacity.

All equipped with insulated steel jackets and steel base of new improved style. Covered coil box, welded to front head, makes easy installation of indirect hot water heating coils of any capacity.

All Kewanee products may be purchased under F.H.A. terms through our Finance corporation. Write... or ask our nearest office.
CHATHAM PARK'S PLAN FOR BETTER LIVING—
Includes Clean, Automatic COAL heat

Chatham Park, Chicago's new village of apartment homes, is composed of 554 Duplex houses, garden apartments, and suites grouped along beautifully landscaped, private roadways.

The atmosphere of quiet charm and good taste seen in this living room typifies the conservative, modern design of the entire community.

CHATHAM PARK'S every feature stresses the cherished attraction of the home... soundproof suites, individual garages, pleasant recreation rooms, protected play areas for children... a far cry indeed from old-fashioned "flats" with their back yards and rows of eyesore porches.

The community has a hot-water heating system that's far from ordinary, too. Boilers below ground level in a central heating plant are fed by four ram-type stokers, and this proper automatic combustion eliminates smoke. The heated water is distributed through seventy-two buildings to convectors hidden behind decorative screens. Tenants simply turn a knob for clean, healthful heat from COAL, the fuel that fits the plan.

HAVE YOU A heating problem requiring a modern solution? This railroad's Fuel Service Engineers will gladly work—at no charge—with architects, owners and engineers, to develop heating plans to fit specific needs. Further help—meeting precise fuel requirements—is offered by the modern mines along the Chesapeake and Ohio Lines.

May we help you? For information or the assistance of our Fuel Engineers, write GEORGE H. REINBRECHT, Coal Traffic Manager, Chesapeake and Ohio Lines, 2909 Terminal Tower, Cleveland, Ohio.

CHESAPEAKE AND OHIO LINES

YOU'LL DO IT BETTER WITH COAL

THE ARCHITECTURAL FORUM
How the design decade has improved public seating

While architects have been bringing about vast improvements in the appearance and utility of public buildings, the American Seating Company has been keeping pace in the designing and building of public seating.

Through research, engineering and testing; in closest harmony with architects and builders, new ideals have been attained in functional beauty as in serviceability.

As always, our engineering department is ready to cooperate in working out details of seating problems.

American Seating Company
GRAND RAPIDS, MICHIGAN
Pioneers and pacemakers in theatre, auditorium, school, church, stadium and transportation seating
Branch Offices and Distributors in Principal Cities

American Bodiform Restful Chairs
MORE LIGHT—WITHOUT
GLARE OR SHADOWS—
75% COOLER!

That’s what you get with those complete, sensa­tional new fixtures of Fluorescent at its finest—
HYGRADE MIRALUMES!

Miracles in lighting modernization can be achieved with these “packages” of daylight!

IT'S a story of immediate interest to every Architect—Hygrade Fluorescent Light!

For with MIRALUMES, you can modernize lighting overnight! Interiors become more efficient—and more beautiful. People see better—work better—feel better!

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IMPORTANT!

Hygrade MIRA­LUMES are quality manufactured to meet the approval of Underwriters Labora­tory, Inc., and are protected by exclu­sive HYGRADE patents.

MIRALUMES provide 25 FOOT CANDLES of illumination in Union National Bank, Wichita, Kansas.

FORUM OF EVENTS

(Continued from page 80)

could understand why they would be idle. Why is it not easy to see that they will be idle at any price above the market level, whether that price is $1,000 per day or $10 per day? It is only at the market price that men can be continuously employed. If the market for houses is $83,600 per house, then mechanics who will build such houses will be busy...

Our only source of wealth is productive labor. This comes first, wages come afterwards and are secondary. A society or community of people can live without wages, and live well. They cannot live without working. Can we unlearn our hatreds and jealousies and political pulling and hauling, and get down to the A, B, C’s of a successful industrial people?

IN RESPONSE, Ernest A. Johnson, vice president of the Bos­ton Building Congress:

We have had an opportunity of perusing Mr. Greeley’s submission as it relates to the construction industry in Boston and we agree that the summary he makes as to the present situation is essentially correct and contains the meat of the problem around which discussion should take place...

We point out that in 1931-32 a great deal of agita­tion and publicity was given to a proposal made by the Building Trades Employers’ Association and miscellaneous employers that led the general public to believe that a reduction in wages by the building trades unions would create a tremendous demand for new building and stimulate the construction industry. Many conferences were held be­tween employer and labor groups at that time. Our trade unions decided to voluntarily reduce their wage scales, and stated at that time: “Labor seeks relief and has done its share in an effort to stabilize wages, stimulate construction and provide employment opportunities. We await results.”

The results were, no stimulation occurred. There was no urge on the part of property owners and managers of real estate, chain stores, retail stores, utilities, in fact, in no direction did we find that reductions ranging from 15 to 20 per cent in wage scales had any effect whatsoever in stimulating new building. In fact, we circumscribed large corporations and industries that held on lease or were direct property owners of large investments and that were con­stantly engaged in building or extensive alteration and re­modelling jobs, and the answer in every instance was that wage scales in the construction industry were not a deterrent to the going ahead in the building of new properties, and their program only took into consideration the demands made upon their business.

We ask, however, the same questions we asked in 1931-32, which are just as pertinent today as they were then, and we expect that you gentlemen have the answer: If you feel that wage scales are too high, are there any building proj­ects contemplated that are being held up because of the present wage scales in the building industry? In the event of a wage reduction, what projects involving the construc­tion, addition to and repairs of buildings will go ahead?

If these questions can be answered then we have no doubt that we could have a sane discussion of this most important subject.

Reference and comparison is made to the price of labor and the price of materials. We point out that labor in the last ten years has signed agreements running over a period of two and three years. If in that period a demand for labor
TODAY, industry and commerce are more conscious than ever before of the need for quality products . . . products which offer all important operating advantages and economies . . . products which will carry on without the frequent attention and repairs so certain to delay production and business.

Briefly, this explains the growing trend toward installation of Herman Nelson hijet Heaters in new and remodeling projects of all sizes and types. There's a reason why greater dependability, longer life and operating economy can be obtained with Herman Nelson hijet Heaters. The Propeller-Fan Type, Blower-Fan Type and De Luxe hijet Heaters have all been designed and constructed to provide superior heating results and greater economy of operation than any other unit heater of the same type and capacity.

The complete line of Herman Nelson hijet Heaters answers today's demand for a method which provides heat where it is wanted, when it is wanted, without waste of fuel or space, in all types of industrial and commercial buildings. A wide range of sizes and capacities in each type of hijet Heater permits selection of the proper unit for every industrial and commercial heating application.

A COMPLETE LINE OF HERMAN NELSON hijet HEATERS

A complete line of Herman Nelson hijet Heaters answers today's demand for a method that provides heat where it is wanted, when it is wanted without waste of fuel or space.

Like all Herman Nelson hijet Heaters, the Propeller-Fan Type incorporates many exclusive features. A few of those outstanding features follow: 1. Loops in heating element absorb difference in expansion and contraction between individual tubes. ... 2. Tubes project from side of supply header, above center line, assuring proper distribution of steam. ... 3. Streamline fan with wide face area operates most efficiently and quietly. ... 4. Het-Nel-Co Motor for single, 2 or 3-speed operation. ... 5. Patent, extra heavy, red brass stay tube maintains proper relationship between headers without increasing strain on loops. ... 6. Steel arms absorb and dissipate torsional vibration.

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OCTOBER 1940
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Propeller Fans for Office and Plant

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Professional, experienced, talented engineers are available to you in each of ILG's 42 branch offices for consultation on simple or complicated ventilating, heating or air conditioning problems. Feel free to call on them at any time—consult your classified telephone directory or write today for address of our nearest office.

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LCN during the Design Decade has devoted a major part of its engineering effort, not to "streamlining" visible equipment, but to developing door control machinery which does a superior job from concealed positions, thus preserving the architectural designer's work intact. This we think is the most important contribution a manufacturer of operating equipment can make to the progress of design, as it benefits all work, traditional or contemporary. There are many places, however, where exposed door closers must be used. For these The LCN "Miracle," a standard closer in streamlined housing (shown above), is a Design Decade product which has proved the answer to many a designer's need. Norton Lasier Company, Chicago.
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COMMERCIAL INTERIORS must enliven the desire to spend . . . keep customers appreciative of the managements' efforts to please. Smartly modern, thrillingly beautiful . . . Marlite will enable you to originate store, hotel, restaurant and other interiors that will give your clients that business advantage. Marlite affords you more scope . . . more freedom . . . to plan "vogue-creating" environments.

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The convenient coupon below will bring you a colorfully illustrated book of inspiring interiors created with Marlite. The local Marlite representative will be glad to consult with you.

MARSH WALL PRODUCTS, INC. • 61 Marsh Place, Dover, Ohio
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Marlite . . . The Deluxe Wall Material of a Thousand Uses.
Today's architecture demands that every interior appointment be in keeping with the general scheme. In Auer's complete line of Air Conditioning Registers and Intakes, the modern note prevails, and interesting effects are created with utmost simplicity. By construction which permits easy adjustment, all air directional objectives are achieved. Bar and fin type models yield high percentage of open area.

Auer also makes a varied line of patterns in Metal Grilles for concealment and enclosure purposes, and is experienced in cooperating with architects to accommodate the design to the requirement.

List us supply you with Register Book 40 on Air Conditioning and Gravity Registers—and Catalog "G" giving full-size details and range of sizes on Auer Grilles.

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RECOMMENDS Brunswick
WHALE-BONE-ITE SEATS

No seat has been replaced for any reason. We have no seat troubles. The world's tallest Hotel takes pleasure in recommending your product.

SINCE 1915, when Chicago's popular Morrison Hotel was built, not one penny has been spent for replacement of the Whale-Bone-ite closet seats installed throughout.

After 25 years, they still look as good as new!

It's the tough, thick hide of molded Whale-Bone-ite that resists severe abuse. It has no surface coating to wear off; no cracks where dirt can hide or moisture penetrate. Smooth all over, Whale-Bone-ite Seats clean with ease. Strong antiseptics don't mar the glossy, non-fading ebony finish. Even the hinges are molded-in—leaving no metal exposed to corrosion.

In hotels, hospitals, schools, on ships and railway cars, in industrial, commercial and public buildings everywhere, Whale-Bone-ite Seats are giving the same satisfaction. Though installed five, ten, twenty or more years ago, none has ever worn out.

With testimonials like this to back their judgment, is it any wonder that architects seeking soundest dollar value for clients write "Whale-Bone-ite Seats" on plumbing specifications? They're priced competitively. Refer to your Sweets Service for typical models, or write for free catalog showing full style range, specifications, and prices.

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For homes, Brunswick offers a full line of DuPont Pyralin sheet-covered seats
CONVECTOR ENCLOSURES

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RUST PREVENTION BY BONDERIZING

For thirteen years architects have specified Modine Convectors as standard equipment in some of America's finest homes. Simplification and standardization, plus new design features, have brought lower initial and installation costs.

Modine Copper Convectors assure room beauty and comfort in heating. Placed within decorative enclosures, recessed in the wall or openly installed, the smartly styled units impart a distinctive beauty to any room interior.

As the enclosures are exposed to humidity, they are Bonderized, to assure positive paint adhesion and protection from corrosion. Bonderizing seals the metal from moisture, bonds the finish to the metal and prolongs the life of the enclosures. Should the finish become nicked or scratched, the Bonderizing prevents the spread of rust around the injury and eliminates this major cause of finish failure.

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This label is a guarantee of an invisible quality. It indicates conscientious building of a complete product, as well as assuring rust proofing and finish stability.
You can depend upon Janitrol units to give your clients complete heating satisfaction. All include outstanding engineering designs—the result of 34 years of research devoted exclusively to gas equipment for industrial, commercial and residential use.

**JANITROL UNIT HEATER**

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A size and type for every space heating need, from small stores to large industrial plants. Send for Specification Sheets on blower, propeller and floor types. Ask about the blower type for attic installations.

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For any type home or individual apartment heating, this compact unit, completely assembled in the most popular sizes, will satisfy most exacting clients. You should have Janitrol FAC Series Specification Sheets.

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FOR THE DOLLAR-A-DAY HOME

Ideal for projects, where heating costs must be kept in line with the $4000 home, but where you want satisfactory long-life equipment. Janitrol GAC Series Specification Sheets will give you complete information.

**FORUM OF EVENTS**

(Continued from page 91)

came, the price of labor contracted for in the agreements would continue. Not so with materials however. If the demand is weak, we admit that material prices fall off, but the minute the demand steps up, we find that material prices step up correspondingly. Materials are quite sensitive to the market. We have never heard of any plan from any of the component parts of the construction industry to bring about a regulation of their prices for any given period.

A great deal has been said about small house construction and general building trades work in and around residential properties. It must be obvious to you gentlemen that are engaged in this industry that in the field of house construction where sales prices range from $8,500 to $81,000 per dwelling, union wage scales do not prevail, and today the wages paid to workers engaged in this class of work are on the basis of the 1914 union wage scales. If we are to proceed on the premise that a drastic reduction in wages should take place to encourage construction of homes at lower prices, here is a definite example where it does not work...

The construction industry would render a service to itself and help the general economic situation, if it could determine and adhere to a definite decision in regard to building tradesmen’s wages based on a long range plan.

We point out further that those of us that are affiliated with the Building Congress, particularly, do not initiate building programs. We have no control over the economic situation that governs a building program. We are at the whim and mercy of the investor who is confronted with other factors which lead him to the decision as to whether he will build or will not build. In the meantime, awaiting such decision, we are expected to maintain a standing army of properly trained and skilled workmen, and labor is expected to refrain from asking for the top dollar during periods of boom building, and then during absolute prostration in the construction industry, it is expected that they will take up the slack and suffer wage decreases all out of comparison to the volume of work in the market.

AMERICAN DESIGNERS INSTITUTE. In process of formation is a New York group, eventually to join the A.D.I. as its New York Chapter. A.D.I. has members from all States in the Union, and meets twice a year in Chicago during the Home Furnishings Market. Organization Committee for the New York group: Alphonson Bach (chairman), Leo Jiranek, Ruth C. Kosmak, Tom Lamb, Ben Nash, John Vassos, Walter Von Nessen; Membership Committee: Paul Lobel (chairman), G. W. Blow, George Cushing, Belle Kogan, N. P. MacGregor.

TALIESIN. Beginning with the October issue, Taliesin will appear as a bi-monthly publication of the Taliesin Fellowship, edited by Frank Lloyd Wright. This forthcoming issue will talk of Broadacre City. The models will be illustrated, the philosophy set forth, and there is to be explanation of the new production and distribution systems involved.

Each issue of the magazine will contain an article from the series “The Nature of Materials,” written by Frank Lloyd Wright, in addition to special articles concerning the practice of architecture as a scientific art by members of the Fellowship or interested friends. The subscription price is $2.50 yearly; single copies 50 cents. Further information may be had from the Secretary of the Taliesin Fellowship, Taliesin, Spring Green, Wis.

(Continued on page 92)
counting Electrical Equipment Salesmen?

We know how you've felt about it and we, too, have done some tossing and turning. But with a company such as ours making something like 30,000 different electrical products, it's pretty difficult preventing our various division representatives stepping on each other's heels in their eagerness to keep you posted on latest developments.

We think we've got the answer. It's a plan to simplify your work, conserve your hours, yet provide you with all the essential electrical data you need in buttoning up a job.

We think we've got the answer. It's a plan to simplify your work, conserve your hours, yet provide you with all the essential electrical data you need in buttoning up a job.

We think we've got the answer. It's a plan to simplify your work, conserve your hours, yet provide you with all the essential electrical data you need in buttoning up a job.

Here's the story briefly. Starting immediately, a Westinghouse representative will be delegated to serve your office.

Behind this contact man is a fully equipped, fast-action clearing house. From this centralized source you can obtain quickly all the information you want about Westinghouse products, supplies and services related to the building field.

In constant touch with this clearing house is a staff of product specialists readily available whenever you need them.

We believe you're going to like this new arrangement even though we have only high-spotted its advantages. You'll get the complete story when our representative calls. Meanwhile, if you want to see how responsive, thorough, helpful this Clearing House Service is, just pick up the phone and call your nearest local Westinghouse district office.
Prime paradox is the fact that those whose lifework is to record the features of other men and their works might themselves still be hidden under the black baize, once the symbol of the professional photographer. So, belatedly but pleasurably, THE FORUM presents some of the artists whose great skill and taste enable this journal each month to offer the best in architecture through the best in photography. In this salute we venture to include 40,000 FORUM subscribers.
That man! I told him I had spent all my money on the rest of the house and that I'd have to save on my window treatment. "Then, Mrs. Wilcox, you'll want Wood Venetians," The Architect replied. "Venetian Blinds!" I stormed. "I know they're beautiful, but I know very well only rich people can afford them."

"That's where you're wrong," he said, very calmly. "Over a period of years, no window treatment could be more economical than Wood Venetians. With the proper amount of care, cleaning once a year and painting every five years—your Venetians will last as long as your house."

"Well, they look expensive," I said, weakly. "Just think how much more pleasant and livable your house will be with Wood Venetians," The Architect continued, without even taking a breath. "A touch of the cord will bring in light and breeze your house will be with Wood Venetians," The Architect replied.

"Do you mean all Venetians?" I interrupted. "I'm talking about Wood Venetians, Mrs. Wilcox. I've noticed all your furniture is wood, so for the sake of harmony you'll naturally want wood blinds. Only wood blends with wood."

I sighed. "All right, have it your own way. Specify those Wood Venetians if you like." Then I tried to look a little indignant, but I'm not a very good actress. I was glad my architect had been so bull-headed, and be knew that I knew he was right!

All practicing architects are invited to write the Wood-for-Venetians Association for the Wood Venetian Primer, "Only Wood Blends with Wood." It contains much valuable information you'll be glad to have.

Wood Venetians
WOOD-FOR-VENETIANS ASSOCIATION
939 Russ Bldg., San Francisco, Calif.

DESIGN DECADE (cont'd)

HIGHWAY HOTEL BY HARWELL HAMILTON HARRIS

The highway hotel is an ideal subject for standardization. Standardized accommodations and service in a cross-country chain would provide the certainty the average motorist craves. Travel service could be included.

The restaurant might be only an accommodation to overnight guests or it might be made an attraction to the sleeping facilities as well. Likewise gas and lubrication service might be limited to guests, or it might also serve passing traffic.

The private unit is laid out in 10-foot 8-inch horizontal units which subdivide into 32-inch units. The shape of the rooms and the arrangement of the openings allow a variety of furnishing schemes. In rainy sections an overhang of the roof provides covered passage from car shelter to interior.

MECHANICAL WING BY BUCKMINSTER FULLER

are separate, and locked together for transportation when all three or any two units are required by the customer. Individual units could thus be delivered, or a complete ensemble including trailer and reinforced translucent celloglass upper wall sections and roof.

Roof of fabric and plywood, airplane wing construction. Used as a lid over lower wall sections during transportation. When set up at site would be raised on tubular uprights at corners with diagonal wire bracing. Upper sections of partitions, doors and windows would be stored on floor during transportation.

The compact unit on the highway would afford little wind resistance, a low center of gravity and full rear-window view for the driver.

ALLERGY CLINIC BY THE OFFICES OF W. L. PEREIRA

(Continued from page 248)

(Continued from page 273)

(Continued from page 282)
Designed for EFFICIENCY

THIS IS THE DOOR for YOUR GARAGE... a modern door, expertly installed to give years of efficiency and convenience.

This is the door with the weathertight MIRACLE WEDGE closure. It wedges tightly, yet opens easily, blends with every type of construction, works in any kind of weather!

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FOR SMALL HOMES, LARGE HOMES, FACTORIES, WAREHOUSES, SERVICE STATIONS
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MORE and more you hear leading architects and builders acclaim the service and equipment offered by this long established firm. Most helpful to you is the fact that every Coppes NAPANEE representative is a thoroughly trained specialist in kitchen planning and installation. You can depend on him to help you develop kitchens that for efficient planning, distinctive beauty, utility, and obvious quality, have no equal.

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Detailed specifications and drawings promptly submitted along with all the personal service you desire.

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Attached to your letterhead—for General Specification Sheets—also new Brochure showing a variety of interesting kitchen arrangements. 5–10

Name

Address

City ______ State ______

DESIGN DECADE (cont’d)

(Continued from page 92)

5. The two wards on the South are for research on accepted cases. Either one can also be used as a small dining room for patients whose diet is part of the Clinic’s work.

6. The small Mechanical Research Room is for the study of atmospheric conditions, filters, temperatures, etc. The ducts from this room will go to the two wards, where the research will be done. It will also be possible to eliminate all air from these two rooms except that which is brought in mechanically.”

(Continued from page 305)

M I C R O F I L M L I B R A R Y  B Y R I C H A R D  M. B E N N E T T

Drawing 2

1. Projector (independently ventilated).

2. Screen.

3. Cards and control buttons. Except in the largest libraries the entire index can be on one film. Weekly additions can be spliced on the end and entire new index film made at convenient intervals.

Drawing 3

1. Projector on stack side of the partition. Film and servicing of machine kept away from public.

2. Screen (Similiar to present commercial models).

3. Writing shelf.

4. Opening to control and stack room.

5. Plastic form fitting chair.

(Continued from page 306)

G R A D E S C H O O L  B Y L Y N D O N, S M I T H & W I N N

frame, floor and ceiling with utility stacks located at regular intervals along the corridors. Further division of the space would be entirely by movable partition units working to a module of 3'-0" to accommodate an ever-changing space requirement in varying curricula. This particular item seems to us the most important need for a school of this type and we believe the arrangement indicated would work very satisfactorily. The partitions can be arranged to form storage closets, toilets, preparation rooms, book shelves or glass display cases exposed to both the corridor and classroom sides for exhibition of current work.

"The principal entrance in lobby has a large display case for exhibition of premium work, with four sides of glass visible from both inside and outside of the building.

"The covered play area indicated is badly needed in most school plants to provide some shelter for play activity in rainy weather or in sunshine which is too bright.

"The gymnasium is separated as much as possible from the rest of the building to permit its independent use in the evenings by groups. Detailed division of locker facilities here probably should provide accommodations for adult groups from the community who might use the gymnasium.

"Orientation has been carefully considered in the light of our experience with difficulties controlling sunlight in study areas. The northeast and northwest exposures will permit a little sun to enter the room at the early and late hours of the day, but will eliminate the strong rays during school periods.

"The exterior wall of the classroom units presents an arrangement which we feel would be an improvement over usual design. The use of light directional glass blocks above the 7'-0" line would provide good distribution of light from the sky at the far side of the room without the intolerable glare of ordinary block. By introducing a continuous row of clear glass windows protected by a narrow projecting aluminum shade, we would destroy a large part of the room at the early and late hours of the day, but will eliminate the strong rays during school periods.

"The covered play area indicated is badly needed in most school plants to provide some shelter for play activity in rainy weather or in sunshine which is too bright.

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"Considerable improvement in the noise problem within the study areas should result from the plan proposed. Most study areas will be removed from the noise of shops, music rooms, and street traffic."
No one would think of nailing flooring at the ends only...

Warping can be eliminated in doors, too

...use a third butt

Don't blame green lumber for warped and twisted doors. No door can be expected to remain true when supported at top and bottom only.

Light interior doors (1 3/4") warp more quickly than heavier doors. The third butt will keep them in line, keep them swinging freely with latch and lock clicking smoothly.

Figure your jobs with "Three Butts to a Door"—avoid the necessity of costly re-hanging later. The Stanley Works, New Britain, Connecticut.

[STANLEY]

Remember 3 Butts to a Door

OCTOBER 1940
Throughout these past ten years of sweeping architectural changes, PORCELAIN METALS, INC., has maintained its position as a leader in store and building fronts and interiors because SUPORCEL—produced in its own modern, completely equipped plant by skilled artisans—is the one material that modernizes and provides an unlimited scope in design, innumerable colors and new finishes at the lowest possible cost. Its cleanliness, durability, adaptability and easy maintenance are known the world over!

And yes, you'll want to know about the new SUPORCEL Terra-cotta, Granite and Granitglas Finishes right away—so ask for samples in coupon below!

Here are a few of the many who chose SUPORCEL because they wanted the best value they could get:
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THE ARCHITECTURAL FORUM
TIME & LIFE BUILDING, ROCKEFELLER CENTER, N. Y.
For Large Installations or Small Sloane-Blabon Linoleum

Whether it's a small sailing craft or a battleship (in the U.S.S. Wasp, above, over 12,000 sq. yards of Sloane-Blabon Linoleum was used), a small service office (Western Union, left) or a huge floor area (Cities Service Company, New York, below) Sloane-Blabon Linoleum meets the most exacting specifications.

There isn't a specification for linoleum that cannot be met with a Sloane-Blabon product.

Where resistance to the heaviest kind of traffic and to severe climatic conditions and changes is paramount, as in the case of our newest plane carrier, the U.S.S. Wasp, Sloane-Blabon meets the specifications.

Where the flooring must complement some unusual decorative scheme, Sloane-Blabon's wide pattern range gives the architect or interior designer complete latitude of selection.

An added reason for recommending "Sloane-Blabon" is the fact that it is the only linoleum that reaches the job mill-waxed, thus reducing your installation estimates.

You can always specify Sloane-Blabon Smooth-Surface confidently for any job—anywhere. It will deliver.

Sloane-Blabon Linoleum is giving satisfactory service in thousands of commercial installations throughout the country. With distributors everywhere carrying complete stocks, it is quickly available whatever your specifications require.

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BY

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OCTOBER 1940
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Every heating job can use a Spencer for there's a size and type for every owner's pocketbook, for every type and size of structure—and for every fuel. And every job will be well installed and will operate efficiently and economically because Spencers are sold only through responsible heating wholesalers and through them to recognized heating contractors. THIS combination gives architect, owner, bank and management company real service—modern heat at low cost.

The Spencer Line

"K" and "C" Steel Tubular Boilers with a range from 400 to 1950 ft. (steam), for heating small and large homes and for domestic hot water.

"A" Steel Tubular Boiler up to 42,500 ft. Ample provision for submerged water heating coils. Special grates for anthracite, coke, and bituminous use.

Magazine Feed Heater in complete range of sizes automatically stokes and burns small sized anthracite or coke without motors or moving parts.

Illustrated: Type "A" Steel Tubular Boiler for any fuel and with a range of sizes from 1800 to 42,500 feet (S.H.B.I.), steam.

Write for new 1940 Catalogue giving complete details.

SPENCER HEATERS, Williamsport, Pa.
A Division of Aviation Manufacturing Corporation.

SPENCER HEATERS FOR EVERY HEATING NEED
Do You Depend on a Bond for Protection at the Flashings?

Don't do it! For no roofing bond covers damage to the building or to the equipment underneath the roof. And remember—the flashings are just one of the five "critical areas" on any built-up roof.

Play Safe! SPECIFY THE ROOF WITH A "SAFETY FACTOR"

There's no substitute for sound built-up roof construction...especially at the five "critical areas" (flashings, drains, copings, skylights, angle supports) where 75% of all roof leaks occur.

That's why specifications for all J-M Asbestos Built-Up Roofs call for a generous "factor of safety" at each of these points. The J-M Asbestile system of flashing, for example, is famous among roofing men for giving maximum protection against the possibility of water seeping in and doing costly damage to the roof deck underneath. In fact, every detail of a J-M Roof is engineered like steelwork or foundations to safeguard both building and equipment—protection that is far more important to your client than that provided by a roofing bond.

Built with Asbestos Felts

Backing up this careful engineering are the toughest, most durable felts that 60 years' experience and development can produce. J-M Smooth-Surfaced Roofs are built up with asbestos felts that can't burn, rot or dry out.

Hundreds of J-M Asbestos Built-Up Roofs have passed the 25-year mark...show no signs of failure. Let the facts convince you that you can give your clients the same continued trouble-free roofing service. For details and specifications, write Johns-Manville, 22 East 40th Street, New York, N. Y.
for November...

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An authoritative manual for all those who are or will be engaged in any phase of building for the Nation’s defense. . . .

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BUILDING FOR DEFENSE • NOVEMBER

THE ARCHITECTURAL FORUM

SEAL-O-SAN’S

DEEP PENETRATION

assures you the best finish to specify for heavy traffic floors

In Seal-O-San you get a floor finish specially prepared to take punishment. Developed more than a decade ago, its use today in countless schools, hospitals, and institutions is proof that Seal-O-San meets every test.

Unlike surface finishes, Seal-O-San will not crack, chip, or peel. Penetrating deep into the cells of the wood, it hardens to become an integral part of the floor and leaves a beautiful, soft-luster natural finish. Mop-applied for speed and economy, it is truly a modern product.

You can specify Seal-O-San for all hard usage floors with the knowledge that no other finish can surpass it for wearing power. For “specs” and details, write today.

The HUNTINGTON LABORATORIES Inc

HUNTINGTON, INDIANA

FOR GYMNASIUMS SEAL-O-SAN HAS NO “OR EQUAL”

More than 5,000 coaches use Gymnasium Seal-O-San. A tough seal and finish, 100% non-slippery, it has no equal for withstanding the punishing effects of basketball or other gymnasium activities.

Both types of Seal-O-San approved by Maple Flooring Mfrs. Ass’n.
The old lobby photographed from the same spot. Comparison of the two photos shows the dramatic result achieved by Mr. Kahn, using Flexglass and modern lighting on the ceiling.

Lobby, Garment Center Bldg., New York, modernized and transformed by Ely Jacques Kahn, Architect. 2,300 sq. ft. of Gray Opal and Gunmetal Mirror Flexglass, (the Glass that Bends), used for ceilings. The first of the three terraces is shown.

The record shows that each year more ornament has been peeled off ... more color and texture used for decoration ... more glass used for styling and for functional purposes ... streamlining has influenced the design of interiors and facades, as well as autos and refrigerators.

Flexglass is news, as well as NEW. It is a dynamic design material ... a fillip to the imagination. It is arresting because in itself it offers decoration without ornamentation, and is real glass in 30 colors and patterns. NEWS ... because it will bend concavely and convexly and can be cemented to any smooth, hard surface with ease. Use it wherever you desire to use glass that will conform to curves, either indoors or out. Available in four types ... opaque, flat mirror, rolled pattern mirror and metallic ... in sheets of gleaming facets remarkably pliable and easily handled. Flexglass is a design material lending itself to a thousand and one applications and combinations.

UNITED STATES PLYWOOD CORPORATION, 103 PARK AVENUE, NEW YORK
Manufacturers of Flexwood

Flexglass is manufactured and marketed jointly by The Mengel Co., Louisville, Ky., and the United States Plywood Corp., New York
Hospitals
Hotels—

HENDRICK FIXED LOUVRE GRILLE

Ideal for hospitals, hotels, bathroom doors, etc., is the Hendrick Fixed Louvre Grille. Built of a series of strips hinged to a fixed angle and rigidly fastened into a band frame, this unique door grille permits free circulation of air but prevents vision from any angle through the grille. Easily installed in any door.

Hendrick Fixed Louvre Grille is usually furnished in No. 18 U. S. Gauge steel, painted, enameled or electroplated. Also available in aluminum, bronze or .05" thick stainless steel. Prices and further data on request.

Hendrick Manufacturing Co.
20 Dundaff Street, Carbondale, Pa.


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All PAYNE house heating equipment is built for year after year of dependable, economical service, under severest weather conditions. Every modern, "streamlined" unit reflects the latest discoveries in heating and ventilating science—actually "years ahead," say many architects. For any size home—bungalow to mansion—specify PAYNEHEAT for lasting client satisfaction.

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Payne Gravity Unit

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NO CLOSET IS COMPLETE—
OR PROPERLY EQUIPPED—
WITHOUT K-VENIENCE
CLOTHES CLOSET FIXTURES

More than 40 modern space-saving fixtures that Double Closet Capacity by making systematic use of closet space—regardless of size or shape. Clothing carriers, extension closet rods, shoe racks, garment brackets, hat, tie, trouser and skirt holders, and many others for all types of wardrobes and all clothing. K-Veniences keep closets orderly, all apparel in quick, easy reach. The ideal solution to the universal demand for greater closet capacity in houses, apartments, hotels, clubs, institutions, etc. Sturdily built, smartly designed, polished nickel or chrome finish, easily attached. Specify and install K-Veniences in every clothes closet... on every job... and make the most of available closet space!

Photo courtesy Architectural Forum

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KNAPE & VOGT MANUFACTURING COMPANY
Dept. 7—Grand Rapids, Mich.
THINK ABOUT TRADE-IN VALUE WHEN YOU SPECIFY PAINT

DID YOU KNOW that the trade-in value of two different paint jobs can be very far apart?

The property owner can have a "wreck" on his hands—or a job that nets him a generous allowance! Trade-in value is whatever money the owner saves when he "turns in" the old paint—in other words, when it's time to repaint.

When the previous painting was done with Dutch Boy White-Lead, the property owner gets a very advantageous trade. This fine paint cuts down the cost of the new work in two ways:

1. **No old paint to be removed.** Dutch Boy does not crack and scale. There are no scaly surfaces that have to be burned and scraped off (that's slow, costly work) before they can be repainted.

2. **No new priming coat.** Since the Dutch Boy is smooth and unbroken, it is not necessary to reprime the surface before applying the new paint.

Make sure that your clients get the most of the national advertising campaign on white-lead now being conducted by the Lead Industries Association. The purpose of this campaign is to promote a wider understanding of the advantages of white-lead paint.

NATIONAL LEAD COMPANY

111 Broadway, New York; 126 Oak St., Buffalo; 809 West 18th St., Chicago; 650 Freeman Ave., Cincinnati; 1213 West Third St., Cleveland; 775 Chestnut St., St. Louis; 2240 30th St., San Francisco; National-Boston Lead Co., 806 Albany St., Boston; National Lead & Oil Co. of Penna., 1376 River Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Building, Philadelphia.

This is the slogan of the national advertising campaign on white-lead now being conducted by the Lead Industries Association. The purpose of this campaign is to promote a wider understanding of the advantages of white-lead paint.
LETTERS

(Continued from page 42)

ities in art. Beginning with Cezanne artists found that abstract art could be enough in itself. Nearly half a century of experimentation with abstract art evolved and reawakened in men the fundamental principles of design.

The past decade has seen these principles adapted to mass production so that every citizen is familiar with the advance, and in a sense there is art in every home.

The Architectural Forum's "A Decade in Design" issue and exhibitions by collaborating museums and stores should make the average layman aware of the importance of art in the modern world.

ROBERT J. M. STEWART, Director
Memphis Academy of Arts

CHICAGO

Forum:
Forum's Design Decade idea is exactly in line with the program of information and education that we are in the process of developing in this field at the Chicago Art Institute.

As we see it, The Forum's concept offers a great variety of approach to those institutions cooperating, all, however, centering on the tremendously important fact that at last the machine and industrial organization have become potentially and actually constructive instead of destructive forces in the arts of design.

A general recognition of this fact and an understanding of its implications by the public at large are vitally necessary to the healthy development of art as an integral part of our national life. The synchronization of well-thought-out exhibitions on this theme with an issue of a national publication such as Forum should move powerfully to this end.

MEYRICK R. ROGERS, Curator
Dept. of Industrial Art
The Art Institute of Chicago

TULSA

Forum:
The significance of The Architectural Forum's Design Decade program is not only the summing up of the past ten years' accomplishments, but the timely presentation of these accomplishments during a decade pinched by Depression at one end and War at the other. Under the duress of these conditions, good ideas and original thinking have not been stifled, and progress has been made in all fields of design.

The program will also be significant if it effectively distinguishes good design from poor design. We must not forget that some unfortunate, superficial directions have been taken by modern designers as has always been the case in the past. In addition, the program offers an excellent opportunity to compare modern designs throughout the country that have been tempered by local conditions—climate, topography, and the heritage of the people.

Design Decade gives now a significant perspective of the past ten years, as will the future survey of "Design Century" of which it is a part.

EUGENE KINGMAN, Director
Philbrook Art Museum

For subscribers who wish additional copies of "Design Decade" a limited number of copies are available at $1 each. Orders accompanied by remittance, should be sent to Circulation Office, The Architectural Forum, 330 East 44th St., Chicago, Ill.—Ed.

Beg Pondon
Forum:
In the July issue of Architectural Forum you show the floor plan of the new Theater and Art Center for the University of Wisconsin. You indicate a space where Table Tennis will be played but you make the mistake of calling it "ping pong."

Let me stress the fact that "ping pong" is definitely not the name of any sport, but is merely a trade mark name covering (Continued on page 108)
The LIGNOPHOL Facts You Will Want When Specifying A Finish For Wood Floors and Trim

THIS SAMPLE BLOCK SHOWS THE BEAUTIFUL FINISH OF THE WOOD AFTER APPLYING LIGNOPHOL

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IS A ONE APPLICATION WOOD FINISH
For TRIM and FLOORS in residences, schools, gymnasiums, factories.

LIGNOPHOL

PRESERVES
LIGNOPHOL protects your floors and trim easily—economically—and for years.

LIGNOPHOL

BRINGS OUT THE NATURAL BEAUTY OF THE WOOD
Shades—natural, light, medium and dark brown.
See reproduction of various woods in Natural Colors in Sweet's Catalog, Page 17/47.

NOTHING TO WEAR OFF
Shellac and varnish are easily scratched and wear off. LIGNOPHOL leaves nothing on the surface to be scratched or worn off.
It will protect your floors against warping, dry rot, cracking, splintering, pitting, scuffing and burn marks from rubber shoes. All excellent reasons why you should investigate LIGNOPHOL for every wood floor or trim job on your list.

FOR YOUR CONCRETE FLOORS USE LAPIDOLITH LIQUID*

A chemical liquid that will dustproof and wearproof your floors. No retreatment.
The finish is permanent.
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These days, when the American family spends so much of its time in motor cars, few pieces of home equipment get more frequent use than the doors of the garage. Nothing about the place can be a source of greater lasting satisfaction, or more quickly become a sore spot of continual annoyance.

Today, the doors you specify are important... because there is a marked difference in the satisfaction they give your clients.

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Five sound mechanical improvements and refinements back up your judgment in recommending Ro-Way Doors... without adding a penny of extra cost to the finished job.

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table tennis equipment. This trade mark is owned by an American manufacturer. There is no more reason to call our sport "ping pong" than there would be to call golf "Wright & Ditson" and in the future we ask that you eliminate this term of this line of merchandise. Also it does not show respect to this sport which is considered the second fastest on earth (hockey being first).

Many years ago (about 40 to be exact) a little game was played on dining room tables—some people called it “ping pong” others “Klick Klack” while others termed it “pit pat.” Since the advent of U. S. Table Tennis Association “ping pong” has been pushed in the background and Table Tennis has been supplanted in the minds of the players, spectators and newspapers. Associated Press and United Press bar the term “Wright & Ditson” and in the future others “Klick Klack” while others termed a little game was player on dining room tables—some people called it “ping pong” .

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IN the beautiful restoration of Colonial Williamsburg, Virginia, there's a lesson in paint for every architect.

In this work—probably the most famous decorative job in recent years—pure white lead paint was used on the Capitol, the Governor's Palace, Bruton Parish Church and other principal public buildings for two reasons.

First—because white lead, which is made from the durable metal lead, gives paint an elasticity and a toughness that enable it to withstand weather for years without cracking and scaling.

Second—because white lead paint wears away so slowly and evenly it doesn't have to be burned and scraped off when repainting—a mighty important saving.

That's why only pure white lead paint is now being used for exterior work at Williamsburg. The enduring beauty of this restoration stands as a testimonial to the soundness of the rule: The higher the white lead content, the better the paint. You can't get a more durable outside paint than pure white lead paint; that is, one containing one hundred per cent white lead. This is the kind good painters mix from lead-in-oil. In many localities it is also sold now in prepared, ready-to-use form—in white and colors.

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

WHAT RANGE OF COLORS CAN YOU GET WITH WHITE LEAD? This is only one of the many important paint questions you'll find fully answered in the valuable booklet "WHAT TO EXPECT FROM WHITE LEAD PAINT." Send for your free copy today.
The 90 million Americans who may

SOUTH of the isthmus of Panama, like a fat pear hanging upside down from a slender stem, lies a continent inhabited by 90 million people—South Americans who may have to work for Hitler.

Already the conqueror is reaching greedily for the South American pear. Already the Nazi advance agents crawl over it like beetles...searching out the soft spots...nibbling at morale...burrowing tunnels underneath the surface.

► Whether these moves by Nazi Germany mean Blitzkrieg or Handelskrieg—military thrust or trade war—they promise to put Uncle Sam on perhaps the hottest spot of his career.

For although the Americas have, of late years, given the “Good neighbor” idea more than lip-service, they are off to a late start. The two continents in this hemisphere have, for centuries, drawn their oceans about them like blankets...have had for each other that distrust which has its roots in ignorance.

Now, with the clock of Europe striking the eleventh hour, once again it appears that ignorance—like crime—does not pay.

► Colombia, with its two-ocean sea-coast...Venezuela, teeming with oil...Ecuador, whose Galápagos Islands command the Southern approach to the Panama Canal...Bolivia, which may have to become sole U. S. source of tin...Argentina, Europe’s potential breadbasket...Brazil, bigger than the 48 United States and four-fifths as large as Europe...

Through no act of its own, every one of these nations has, overnight, become a potential powder keg under Uncle Sam. With the U. S. still unprepared, with a two-ocean Navy four to six years away, there is good reason for furrowed brows in Washington.

► Should we give up hope? Watch the South American stars drawn into the Nazi constellation? See our trade arteries severed and our life blood drained away?

No. For, in addition to the moves being made in Washington, there exist forces which can help thwart the Nazi pull of gravity. These forces are the newspapers of both continents.

South and Central America have about 750 papers—a good share of which practice top-flight journalism.

► Peru’s El Comercio—101-year-old daily...Chile’s El Mercurio—founded in 1827...Argentina’s La Nación, La Crítica, and the great La Prensa, one of the most influential newspapers in the world...Brazil’s Portuguese-language Correio da Manhã...are newspapers of which any nation could be proud.

And since the Nazi hordes poured into Holland, South American papers have stepped up their U. S. news. The Brazilian or Argentine newsreader can now discuss the Third Term issue as intelligently as he can the Havana conference. Even U. S. comic strips are a daily feature. Popeye the Sailor caused a near-crisis in the spinach market.

► But what’s true south of the isthmus is less true north of it. The average U. S. newsreader, business man, industrialist, knows less about Buenos Aires or Rio, than he knows about Berlin or Battle Creek. But he wants to know more! The U. S. press is now recognizing that it is faced with a tremendous challenge—the discovery of South America.

There are signs that progressive papers, large and small, are accepting this challenge. Crack correspondents—men like William Simms of Scripps-Howard; Walter B. Kerr Jr., of the N. Y. Herald Tribune, and Wayne Thomis of the Chicago Tribune, have been—or soon will be—filing stories direct from the trouble spots. Throughout the country, AP and UP South American dispatches are finding their way into print, instead of into Editors’ wastebaskets.

► And the Weekly Newsmagazine, as the national U. S. newspaper, is in the forefront of this march of enlightenment.

Staff correspondents, researchers, and photographers for the entire TIME family—TIME, LIFE, FORTUNE, and the MARCH OF TIME movie—have all helped to build up a remarkable reservoir of South American facts, contacts, and first-hand experience.
go to work for Hitler

This invaluable background constantly enriches TIME's news from the southern continent. And now TIME is further increasing its coverage... opening a new office in Buenos Aires, expanding its staff in Rio... digging for more and fuller stories from every Latin-American city.

Moreover, TIME's news wires run both ways. TIME now supplies U. S. news to selected South American papers—news that, in these grave new days, makes important headlines.

True words and straight facts are weapons—weapons to be turned against ignorance, indifference, and fear. TIME is supplying these true words and straight facts in a battle unaccompanied by gunfire—but as critical to the U. S. as Saratoga or Gettysburg.

In these days of crisis, the free press is more than ever a vital force in making our democracy a living, working success. Therefore, TIME is seeking, in this series of advertisements, to give all the readers of ARCHITECTURAL FORUM a clearer picture of what the press in general, and TIME in particular, are doing to keep the people of this nation safe, strong, free, and united.

TIME
--THE WEEKLY NEWSMAGAZINE

OCTOBER 1940
WE mean the operation of the new 1940 Jamison-built Cold Storage Doors.

It's effortless! Yet not a whit of famed Jamison door strength and ruggedness has been sacrificed. New hardware does the trick—the new "Model W Wedgetight" Fastener with roller action, and the new "Adjustoflex" Hinge. Both are streamlined.

Modern plants are being equipped with these easy-operating, modern, cold storage doors. Is yours? Send for free descriptive bulletin to the JAMISON COLD STORAGE DOOR CO., Hagerstown, Md. Branches in principal cities.

(See our Catalog in Sweet's Catalog File)

Modern design calls for this modern decorative medium. And, with good reason, many of America's leading architects and designers depend upon Kaufmann & Fabry for the production of fine photomurals. Write for illustrated folder showing a number of distinguished applications.

KAUFMANN & FABRY CO.
425 S. WABASH AVE.
CHICAGO, ILL.

PHOTOMURALS  By Kaufmann & Fabry

Ric-wil Standard Tile Systems are furnished with exclusive Drypak Waterproof Asbestos Insulation, or with choice of other insulations, including sectional pipe covering. Ric-wil SuperTile Conduit insulated as desired, is a heavy-duty system for lines run beneath traffic or laid in extra deep and wide trenches. Ric-wil Cast Iron Conduit is built to railway specifications for use under rail traffic. Ric-wil Insulated Pipe Units of pre-fabricated Armco Iron are delivered complete and preseated, including insulation, pipes, and all accessories. Ric-wil Catalog sent on request.

THE RIC-WIL CO.
Union Trust Bldg.
Cleveland, Ohio

Agents in principal cities

THE ARCHITECTURAL FORUM
Steel—FIRST LINE OF NATIONAL DEFENSE

Republic Operates the World's Largest Blast Furnace

Every day more than one thousand tons of iron pours from this blast furnace—the largest in the world.

Add to this the output of sixteen other furnaces and you have a vivid picture of Republic's capacity to produce huge quantities of pig iron—the basic material from which all steels are made.

Compared with ten years ago, Republic's blast furnace capacity has increased 40 per cent. Ore reserves too, have been expanded, as well as open hearth, electric furnace, rolling mill and finishing capacities.

Republic offers its entire facilities—men, materials, machines and morale—to the support of those industries upon which now falls the burden of maintaining America's freedom. Republic is ready with steel—first line of national defense.

The line of steels and steel products manufactured by Republic is so diversified that we have prepared a complete listing in Booklet No. 199. A copy will be sent you upon request.
**New KOLOROX**
A Concrete Floor DYE
For interior or exterior coloring and
sharpening cement elements. Penetra-
tes porous surfaces, becomes actual dye;
will not chip, crack or peel off. For
added beauty and protection apply TAMMS
Self-Polishing WAX (two drops per
square yard) to make surface non-skid.

**FLOORSTONE** the ideal underlayerment for
floor patching, leveling and complete
entertainment of any concrete or
plaster. New material comes in powder form.

**WALLSTONE** for leveling rough walls
Provides smooth hard base for any wall covering. Permits appli-
cation of wall covering in 24 hrs. Comes in powder form, mix with water only! Send for SAMPLES!

**LINDEX** modern, casein flat wall paint
The casein interior wall paint that can be applied equally
well to damp or dry plaster! No size needed! Comes in paint
or powder. Cuts paint and labor costs! Gives modern wall
finishes so much in demand these days. Write!

**WALLSTONE** for leveling rough walls
Provides smooth hard base for any wall covering. Permits appli-
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finishes so much in demand these days. Write!

**for CLAPBOARDS, too**

**Kitchen Maid Cabinetry**
The Original Standard Unit System

For 18 years the leader in design construction public
preference

*Kitchen Maid* developed the modern kitchen and its standard unit cabinetry has continued to set the pace for 18 years. Design is distinctive, yet practical, for kitchens of any size; gives architect and builder unlimited possibilities for planning. Construction is of the finest...

**Cabot's Shingle Stains**

Creosote Heavy-Bodied

**House at West Harwich, Mass. Clapboards and Shinglers stained with Cabot's Creosote Stains. Trim, Cabot's DOUBLE-WHITE. Architect, David J. Abrahams, Boston.**

On clapboards, as well as shingles, you can get striking effects by using Cabot's Creosote Stains. A wide choice of soft, texture-revealing colors with a vehicle of pure creosote, best wood preservative known. Write for FREE BOOKLET —Stained Houses. Samuel Cabot, Inc., 1278 Oliver Building, Boston, Mass.

Samuel Cabot, Inc., 1278 Oliver Building, Boston, Mass.
The WOOD FLOOR of The Decade

FOR EVERY TYPE OF RESIDENTIAL
AND COMMERCIAL LAYOUT

HASKELITE Plank Flooring can be installed economically directly over concrete, sleepers are unnecessary... over wood subfloors only blind-nailing is required. Available with or without plug effects.

HASKELITE Wood Block Floors, unmarred by expansion joints, require only an occasional waxing under the heaviest foot traffic... saves the expense of periodic re-sanding and refinishing of ordinary wood floors.

For decades architects have dreamed of a floor inert to moisture... permanently flat... retaining all the natural beauty, warmth and charm of wood. All of these characteristics are combined in HASKELITE Compound Lumber Flooring. This combination of wood and plastic makes wood floors practical in many locations heretofore requiring the use of materials that necessitated unsatisfactory compromises in architectural design.

HASKELITE Compound Lumber Flooring... available in both wood block and plank... is a scientifically engineered material. Controls as precise as those employed in the steel industry... enabling us to back all HASKELITE Flooring with a 2-year guarantee against separation due to glue failure caused by liquid or atmospheric moisture, hot or cold; and expansion in excess of three-tenths of one percent under conditions of humidity.

This scientific “successor to solid wood floors” provides numerous installation and maintenance economies of major importance. It may be laid directly over concrete slabs... even though they are in contact with or below the grade... saving the materials and labor cost of wood subfloor, screeds and cinder fill. It may be laid over “green” concrete and before plaster is dry... saving time that frequently represents important revenue to owners of apartments and commercial buildings.

For full details, consult Sweets, Sec. 11, Catalog No. 76. Free samples, technical data, etc., sent on request.

HASKELITE MANUFACTURING CORPORATION

OCTOBER 1940
The advertising pages of THE ARCHITECTURAL FORUM have become the recognized market place for materials, equipment and services to be found in any magazine. A house or any other building could be built completely of products advertised in THE FORUM. While it is not possible for a magazine to certify building architects and all others engaged in building. Each month these pages offer the most complete guide to products, it is possible to open its pages only to those manufacturers whose reputation merits confidence. This THE FORUM does.

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Ten years ago construction features were the main arguments used in selling new houses. Mr. America knew good construction (or thought he did) and a well-built house was all he asked.

Today Mrs. America has to be sold, too, and she's far more interested in operating equipment than she used to be. G-E Kitchens, G-E Wiring Systems, and G-E Heating Plants are the sales clinchers with her. That's why Builders and Architects everywhere have found G-E's proved house merchandising plan profitable to them. Why not send in the coupon and see how this plan can work for you? Briefly it consists of:

1. A Tested House Merchandising Plan—An aid in selling which builders everywhere are using successfully.
2. An Architectural Engineering Service—The G-E Home Bureau does not furnish plans, but its staff of experts will check yours and make suggestions — wiring, heating, air conditioning, lighting, kitchens, and laundries.
3. An Advertising Service—Tested advertising campaigns, layouts, and copy adaptable to your use.

GENERAL ELECTRIC

October 1940
Now...

IMPROVED Centrifugal Compressors for Lower-cost Air Conditioning

150 to 650 tons capacity
42 engineered combinations
6 COMPRESSOR SIZES . . . 8 COOLER SIZES . . . 8 CONDENSER SIZES

AIR CONDITIONING engineers have demanded the advantages inherent in the centrifugal type of cooling equipment... and Worthington has responded with a development program which now makes available a standardized line of units whose high efficiencies mark them as an engineering advancement of real importance.

Here is equipment designed and built to handle the heavy loads of present and future air conditioning service... with improved features which give full assurance of long service with low maintenance. It opens the way to air conditioning at lower cost than has heretofore been considered possible.

Electric motor, steam turbine, and gas turbine drives are available. Low pressure characteristics, relatively low operating speeds, and dual lubrication are among the points which invite consideration in the planning of any installation.

CARBONDALE DIVISION • WORTHINGTON PUMP AND MACHINERY CORPORATION
General Offices • HARRISON, NEW JERSEY • Offices and Representatives in Principal Cities

WORTHINGTON
The Truscon “Campbell-type” Double-Hung Steel Window is a development of the original Campbell heavy double-hung window of which there are over a million in daily use. It is smaller, lighter in weight, and lower in price. But in the quality of its construction and ability to meet particular design requirements, they are the same.

The many sizes and types of Series 101 give the architect great freedom in design. Muntins may be omitted entirely, may be vertical or horizontal, or may divide the glass area into small lights. Twin windows offer a distinct saving: they are made in one complete assembly with a specially designed, unusually narrow mullion.

All modern features of operation are incorporated in these windows. Spring balances equipped with tapes of zinc coated steel assure smooth, effortless operation. Spring bronze weatherstripping (factory installed) makes these windows 100% weathertight. Sash members are 14 gauge thickness assuring adequate strength and resistance to distortion. They are Bonderized—rust proofed—and the priming coat of paint is baked on at 300° F. for 60 minutes.

Top hung full screens, fixed half screens, exterior sliding screens or interior full sliding screens are available for all standard sizes.

Complete details and specifications are included in Truscon's 80-page catalog in “Sweet's” or a special catalog will be sent upon request.
DOUBLE COURSING

LOOKS BETTER ... IS BETTER ... COSTS NO MORE

Side-walls covered with double-coursed Certigrade Shingles and given a very wide exposure, create a strikingly attractive appearance ... adaptable to the Colonial style as well as today's modern small home designs.

The deep butt shadows are most effective and give the appearance of a much more expensive construction. The double course adds greatly to the known insulating qualities of Certigrade Shingles.

The exposed shingles in each course should be No. 1 Certigrade—the under-course of No. 2 or 3 grades. Use 5d small head hot-dipped, zinc-coated nails, two nails to a shingle, placed near the edge of the shingle, and not more than three inches above the butts.

The following table shows why double-coursing on side-walls is economical due to the greater allowable exposure of the shingles.

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*Assuming exposed course is face or butt-nailed.

FOR GUARANTEED GRADES AND QUALITY, SPECIFY—

CERTIGRADE

RED CEDAR SHINGLES

THIS HANDBOOK FREE

This Certigrade Cedar Shingle Handbook, prepared by a wood technologist, mailed free on request. One hundred pages detailing the uses, application and technical data. Write the Red Cedar Shingle Bureau, Seattle, Wash., U.S.A., or Vancouver, B.C., Canada.

FOR GUARANTEED GRADES AND QUALITY, SPECIFY—

CERTIGRADE

RED CEDAR SHINGLES

GENUINE CEDAR NOT Imitation

Sold only by established lumber dealers.