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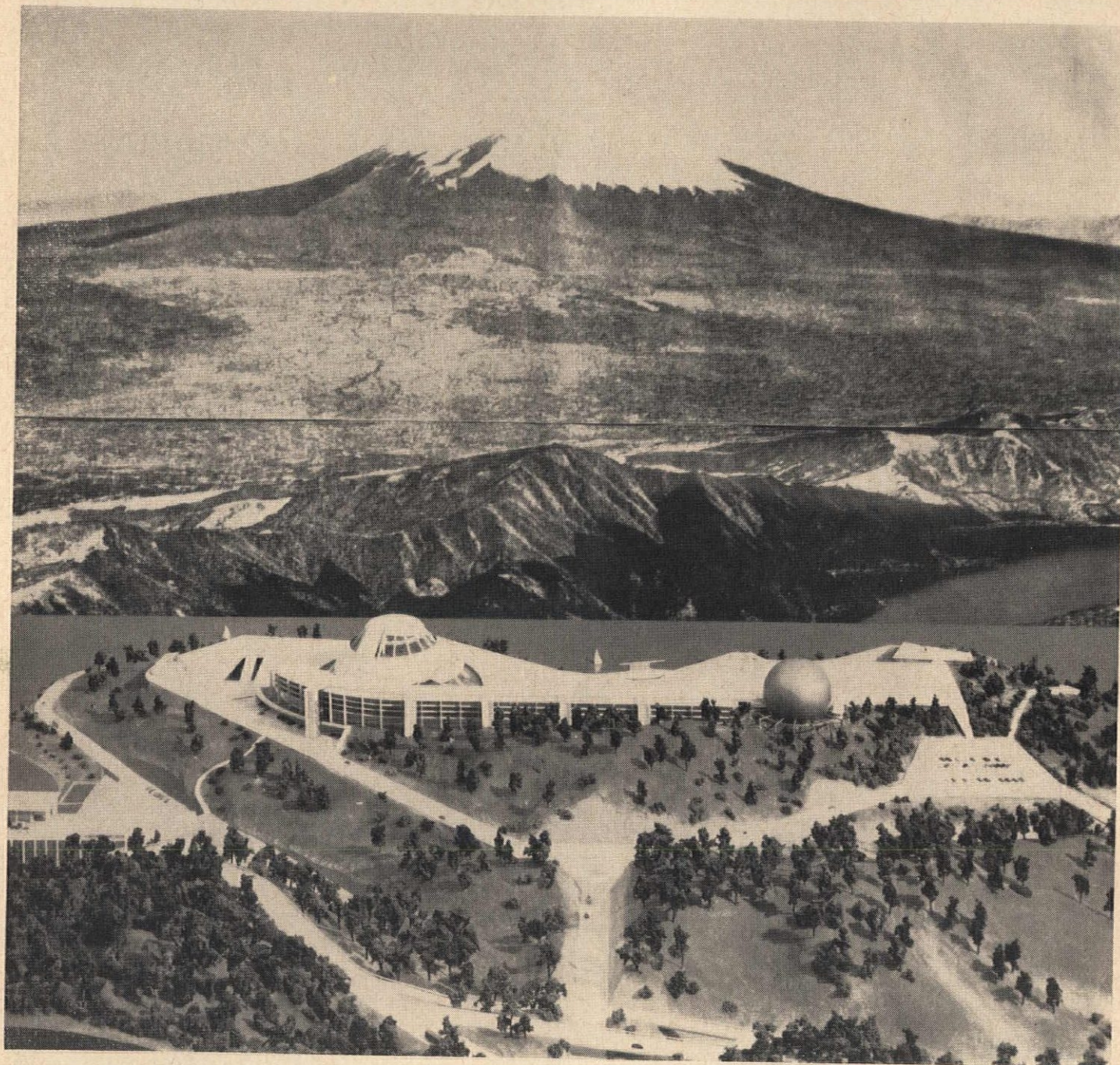
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**PROGRESSIVE ARCHITECTURE AUGUST 1963**

# NEWS REPORT

*Architecture's Monthly News Digest of Buildings and Projects, Personalities, New Products*



*Shape of Hakone International Congress Palace by Brazilian architect Netto recalls shape of Mount Fujiyama.*

- |    |                                      |    |                                  |
|----|--------------------------------------|----|----------------------------------|
| 45 | INTERNATIONAL HALL IN JAPAN          | 49 | NEW URBAN HOTEL FOR NEW YORK     |
| 46 | PCI GIVES FIRST DESIGN AWARDS        | 56 | WASHINGTON/FINANCIAL NEWS        |
| 48 | TWO BIG ONES OPEN IN BALTIMORE       | 63 | PRODUCTS: LATHING FOR DOME HOUSE |
| 48 | TANGE DESIGNS BUILDINGS FOR OLYMPICS | 67 | MANUFACTURERS' DATA              |





Architects/Engineers: Skidmore, Owings & Merrill  
 Landscape Consultants: Sasaki, Walker & Associates  
 General Contractor: O. W. Burke Company  
 Sound Engineer: Kuiper & Warfield Electronic Service Co., Kalamazoo

Photo: Ezra Stoller Associates

## New general office for Upjohn Company

... sound planned with

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**Teletalk**®



The Upjohn Company's striking new administration center at Kalamazoo reflects the Michigan lake country nearby. Designed in the pavilion concept, it faces three man-made lakes and has nine interior courtyards.

And, it's *sound planned* with one of the most complete Webster Electric Teletalk intercommunication systems ever installed!

The Upjohn Teletalk system interconnects all departments with fast voice contact. Executive stations operate "hands-free" and have light annunciators to indicate calling station. Many units are built into office furniture — or electronic control panels in each office. "Total" wiring throughout the building permits executives to move to different offices and still retain complete service without need for additional wiring.

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\* Listed in the Yellow Pages under "Intercommunicating Systems"

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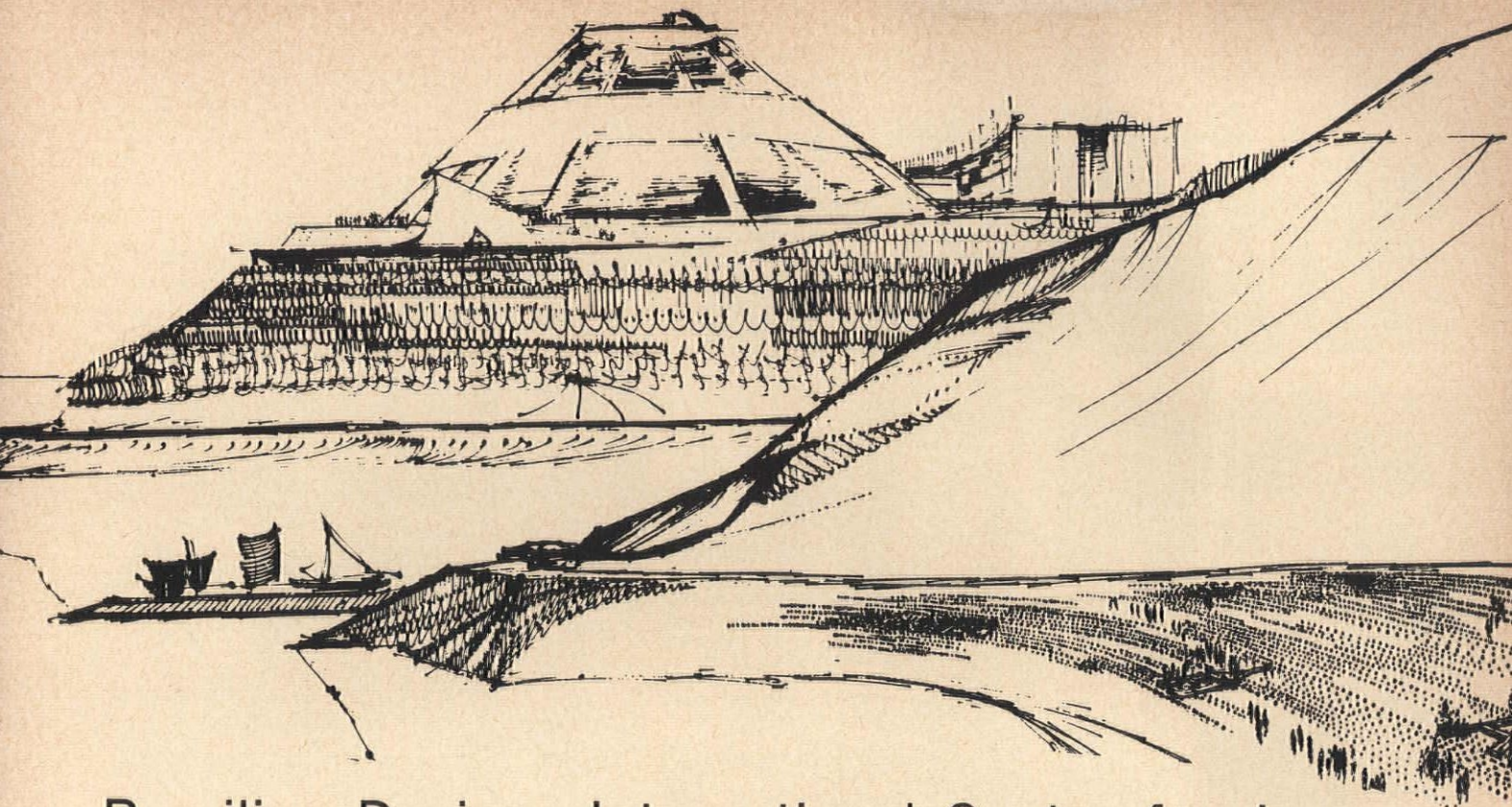
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## Brazilian Designs International Center for Japan

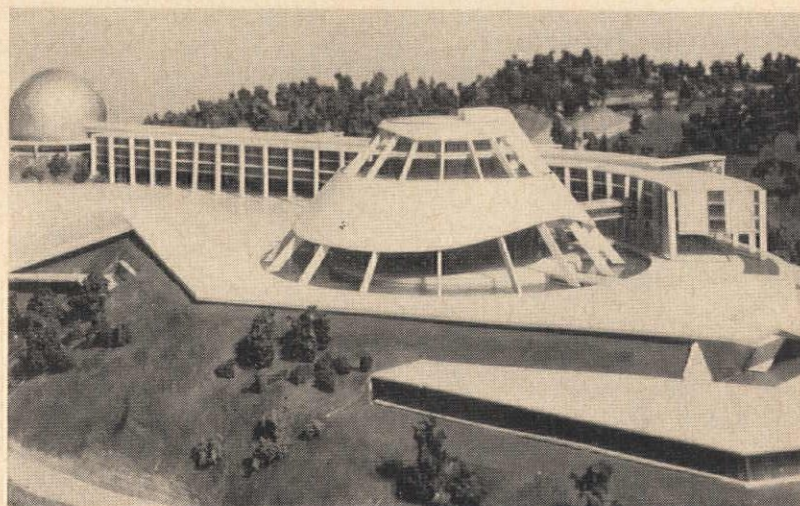
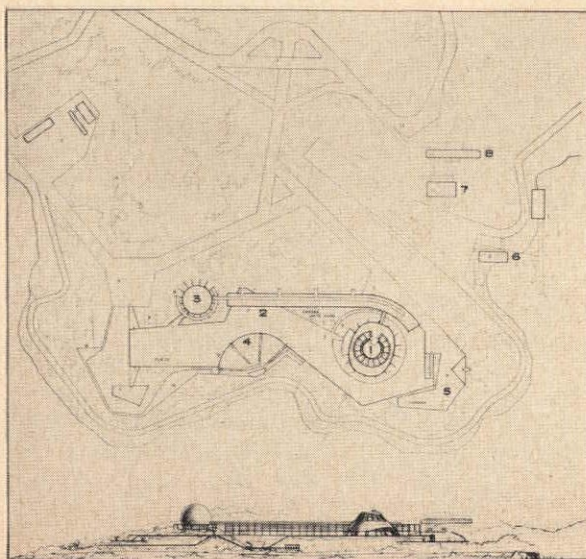
Wilson (after Woodrow) Reis Netto is a young Brazilian architect who was assistant to Oscar Niemeyer on Brasilia and who designed a noted school there on which he was assisted by several young Japanese architects. During a tour of Brasilia, Iwataro Uchiyama, Governor of Kanagawa Prefecture in Japan, had Netto as his guide and was impressed with the architect's talent and sincerity. The Japanese statesman began to think of Netto as the ideal designer for one of his dream projects: an international congress palace on Lake Ashi in the foothills under Mount Fujiyama. This idea came to fruition, at least in project form, when Netto journeyed to Japan and designed Hakone International Congress Palace, a complex dedicated to world peace, for the site. Governor Uchiyama

reported early this year, in presenting Netto's design, that both the Japanese House of Representatives and House of Councilors have adopted the petition for the construction of the palace, and that public opinion is strongly in favor of it.

In striving not to fight the dramatic natural scenery of the area, Netto in his design uses the profile of Fuji as the shape of his congress hall. This building, and the dome of a planetarium in the complex, will be the major "exotic" forms in a scheme the architect has tried to treat with the simplicity that is traditional to Japanese design. (He has had practice in this field, having been commissioned to design a vacation house by a leading Tokyo builder.) A vast open plaza will support five major struc-

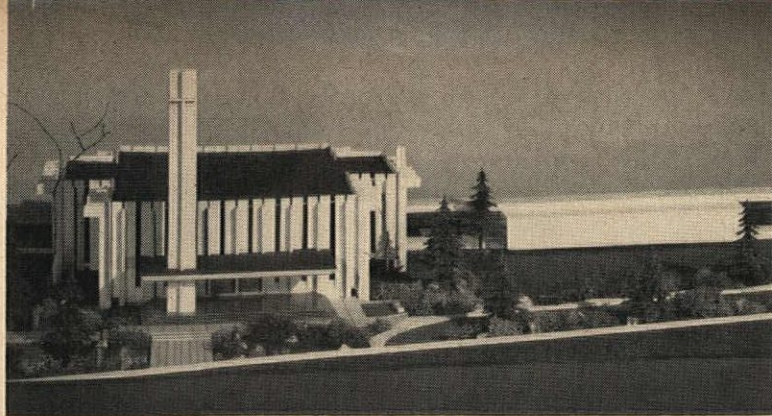
tures: the congress hall, the planetarium, an office annex, an amphitheater overlooking the lake, and a chapel and meditation terrace. Behind this ensemble, in the hilly area, will be located a sports center, youth hostel, medical building, parking areas (there will also be a garage under the annex), and wooded promenades and gardens. There will be a yacht club on the lake, and a heliport and bus station will service ground and air transportation.

The hall itself will rise from a circular reflecting pool and will be approached over a bridge. In addition to the great second-floor meeting hall, whose shape will be expressed on the exterior as an opaque band, there will also be public foyers and terraces and an exhibition hall. Uchiyama's dream may yet become Netto's realization.

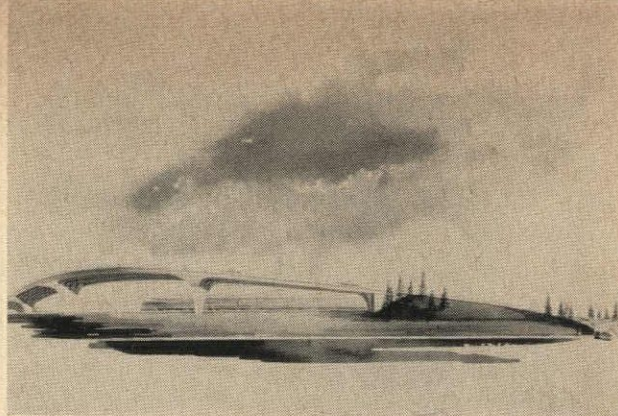


(1) Congress Palace; (2) annex; (3) planetarium; (4) amphitheater; (5) chapel; (6) yacht club; (7) sports center; (8) youth hostel.

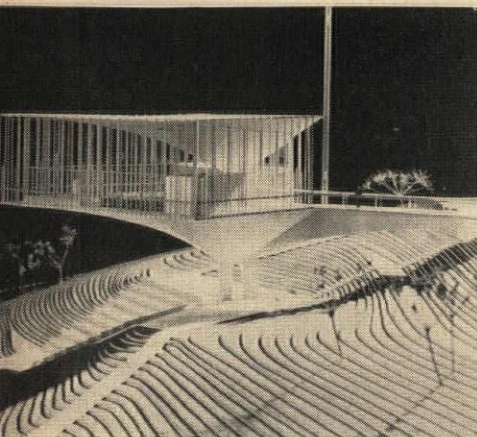




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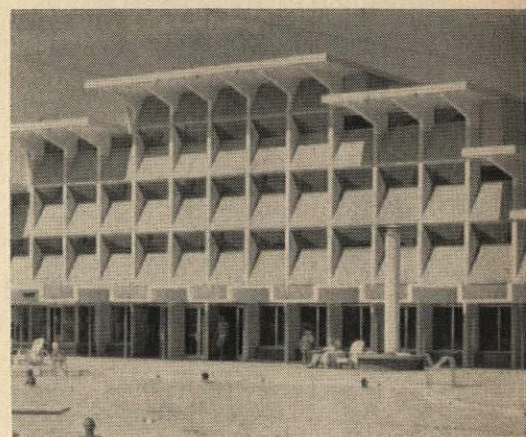
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## PRESTRESSED CONCRETE INSTITUTE HAS FIRST AWARDS PROGRAM

A little-known Canadian architect has won top honors in the first annual awards program of the Prestressed Concrete Institute. Awards of merit—for excellence of designs using prestressed concrete, of course—were also given to eight other structures by a jury consisting of Architects Harry Weese, Vincent G. Kling, and John Graham; and Engineers Fred N. Severud and Thomas C. Kavanagh.

First award went to Maurice Robillard of Beloeil, Quebec, for his St. Richards Church in Côte St.-Luc, Que. (1). Merit awards were won by John Carl Warnecke & Associates for the Oakland 23rd Avenue Bridge (2); Kirk, Wallace & McKinley for the Church of the Good Shepherd in Seattle (3); the County of Alameda, Calif., garage and heliport by Van Bourg/Nakamura and Ratcliff & Ratcliff, Associated Architects (4); Happy Valley indoor swimming pool in Calgary, Alberta, by G. R. Beatson & Associates (5); Capps Tower Motor Hotel, Minneapolis, by Ackerburg & Associates (6); Famous Barr Parking Garage in St. Louis by Engineer Kenneth Balk & Associates (7); the American Republic Insurance Company building in Des Moines by Skidmore, Owings, & Merrill (8); and Yamasaki's U. S. Science Pavilion for Century 21, with Naramore, Bain, Brady & Johansen (9).

In an exclusive interview with the jury immediately following the judging, P/A obtained the opinions of the jurors on present trends and future possibilities in design and construc-

tion using prestressed concrete:

**P/A:** Practically all of the winners are of an architectural nature. What, in looking over all of the entries, is being done in the nonarchitectural field, such as bridges, roadways, etc.? Are they becoming better designed?

**WEESE:** We didn't have enough of those. They were outnumbered by buildings; about what ratio would you say?

**KLING:** At least ten to one. There were some bridges that started to use prestressing in curvilinear forms. You notice most of the awards were given for straight linear stressing. I found one that I thought was coming close, but then we examined it more carefully and it didn't seem that the architectural and engineering concepts ever got together. But I think that the expression of prestressing in the form of structures such as bridges, if they got more sweeping, could have some three-dimensional curvilinear movement. We picked one building that has nice curved form—the garage.

**P/A:** How about the generally successful integration of architecture and engineering throughout the competition? All the winners did this very well, presumably.

**KLING:** That's true. I think the winners were picked mainly because the architectural and engineering concepts were one and the same in the unfolding of the solution. There were some projects we saw in which the "in-progress" construction pictures showed some fascinating structures.

But the final results, when clad with architectural closure, became so diluted that they were really not a good amalgamation of the two.

**WEESE:** We also saw frank examples of styling, where the architect was obviously called in and asked to dress up the situation—which he promptly ruined.

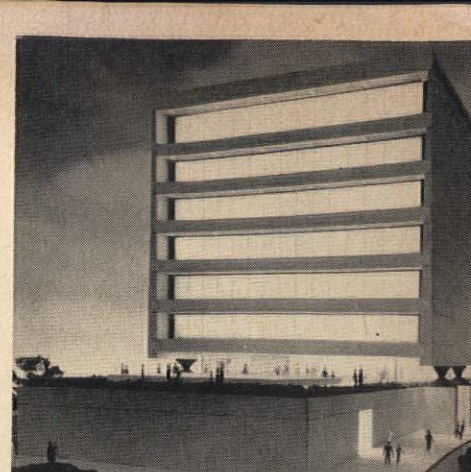
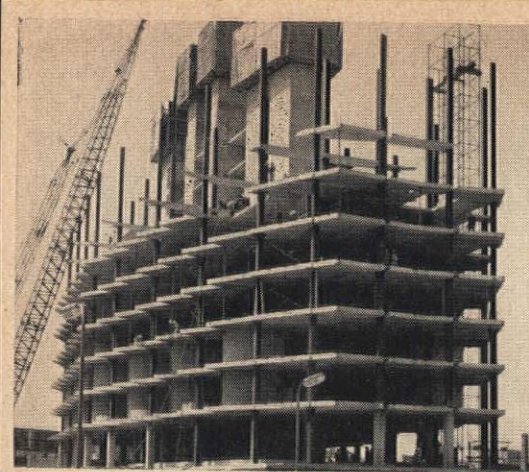
**P/A:** What about the tricky, clever roof architecture of a couple of years ago? Do you find that it is declining and that there is a return to stronger basic forms using prestressed concrete?

**KLING:** Obviously.

**P/A:** Do you think the folded plate era is on the wane?

**SEVERUD:** I think it is on the wane insofar as the straightforward covering of a roof is concerned. But I certainly think that it still has many possibilities that are unexplored in larger scale. One of the things that I'm disappointed about is that we did not have a submission of a large folded plate covering a large area, which would lend itself beautifully to post-tensioning. Because in these large areas, where you have considerable temperature variations and shrinkage, is where post-tensioning is admirably suited. I know of some designs where that is taken advantage of and I'm absolutely certain that in the future we will get many more, not only folded plates, but double-curvature shells and many other sections that are going to be readily analyzed by computers. Previously, some of those forms were possibly attractive,





PCI luncheon conference: clockwise: Kling, Weese, Graham, P/A's Burns, Severud, Kavanagh, PCI's D'Arcy and Scott.

but they were almost impossible to analyze. But nowadays, you could take practically any shape, and I think that when that becomes more generally realized by architects, we'll see a great upswing into folded plates and shells of larger dimensions. But the technique of just getting saw-toothed roofs on a smaller scale has given way to simpler forms, I think.

**KLING:** You have a hard time roofing a small-scale corrugated deformed roof. How do you keep the water off? How do you keep it from breaking up, freezing and thawing, and also the basic proposition that the expression of the roof on some buildings is an important part of the architecture. It gets too gingerbread, and it overtakes the main point of the design.

**P/A:** In the last go-around of judging, you eventually discarded the only small building. Do you think that prestressed concrete construction and design is mostly amenable to, say, the larger, more Brutalist type of structure or not?

**SEVERUD:** I would say that the only reason this was discarded was that advantage had not been taken of the handsome technique of building a large, square, good, flat surface on four columns. If the designer had followed through, taking full advantage of it, that would have been one of the entries near the top of the list.

**P/A:** Looking over the whole submission list, do you think there now are new unknown firms contributing just as much, more, or less, than the more famous firms?

**KLING:** The good firms are maturing and still doing good things. But there's an equally encouraging assemblage of unknowns in this group of entries. The firm that took the first award is someone we never heard of before. And one of the runners-up, another Canadian, is an unknown as far as we in the States are concerned.

**P/A:** What do you think about the quality of the entries on the whole? Do you think this would have been possible, say, four or five years ago?

**SEVERUD:** No, certainly not four or five years ago. I think there has been considerable progress, but I believe it is somewhat disappointing to see that the advantage has not been taken in other fields. I can think of several examples where prestressing is a very useful technique, but none of these were among the entries.

**WEESE:** Four or five years ago, what was it like? At that time, Skidmore, Owings & Merrill were doing steel architecture. Now they are in hot pursuit of the precast and the prestressed. Their young designers are all hepped up about it and are more knowledgeable, and this allows them to break new ground.

**KLING:** Every design that has received an award indicated a very special talent in structural sense. One award was given to a prestressed foundation, which is rather rare these days. The one we found noteworthy in bridges is a curved bridge, which is also a rarity—particularly in prestressing. This application to curved structures is going to come forward in the future a great deal. It will be an advance, in bridge architecture,

when you fit your crossings to a curvilinear arrangement. One award that impressed me was a lift-slab technique that modifies the lift-slab idea by using a crane to lift the segments and then post-tension them in position. In other words, we can do a lift-slab without using the lift-slab method. This is quite an advance in the techniques of design.

**KAVANAGH:** I found it interesting in connection with the multistory type of design that many of the designs seem to use a block type of construction without taking full advantage of the continuity. They seem to apply this block idea—putting a beam on top of a column—without taking through moments. In the future, you're going to see many multistory buildings in which the moments are carried around the ends. In other words, the field of frame analysis in prestressed work is still highly undeveloped at the present time, but the evidences we have here are an indication of progress. Also, I don't think we've seen the end of folded plates. We're just starting on that. A structure could be done by means of folded plates as floor slabs. There's nothing lighter than a folded plate. It could also be tees on a really long span. But every one of these winners has structural significance. Four years ago you would not have seen this type of advancement.

**GRAHAM:** We're opening our vocabulary to the point where the folded plate is used in its proper place, and each of the other techniques are used in their proper order, at the same time allowing a greater freedom.



## Two Buildings Ready in Charles Center

BALTIMORE, MD. Two of the most important high-rise buildings in Charles Center, Baltimore's 22-acre downtown redevelopment area, have been completed. They are One Charles Center (*left*) by Mies van der Rohe, and the Blaustein Building (*right*) by Vincent G. Kling. Mies's aluminum-and-glass tower rises from a one-story plaza base reached by stairs from the street. The elevator lobby is glazed floor-to-ceiling in the manner of the Seagram Building. Stores, banks, etc. will occupy the off-the-street spaces under the plaza.

Kling's Blaustein Building, at One North Charles, features slim windows and continuous mullions to emphasize the unbroken verticality of the facade. At ground level, the building is set back from Charles Street to create a 3100', landscaped plaza covering 20 per cent of the site. Sepia, porcelain-enameled steel spandrels are recessed to contrast with the mullions and give variety to the building as the sun plays over it. Typical floor plan of the steel-framed building is open to permit maximum flexibility for varying tenant needs.

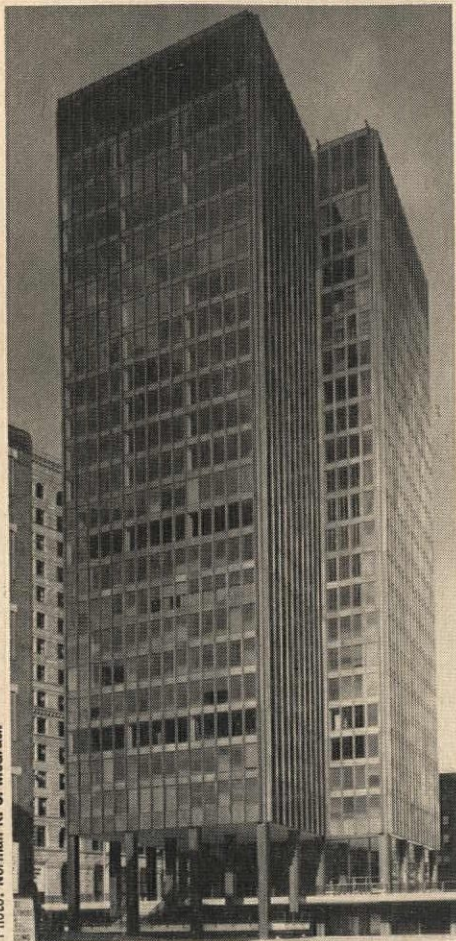


Photo: Norman R. C. McGrath

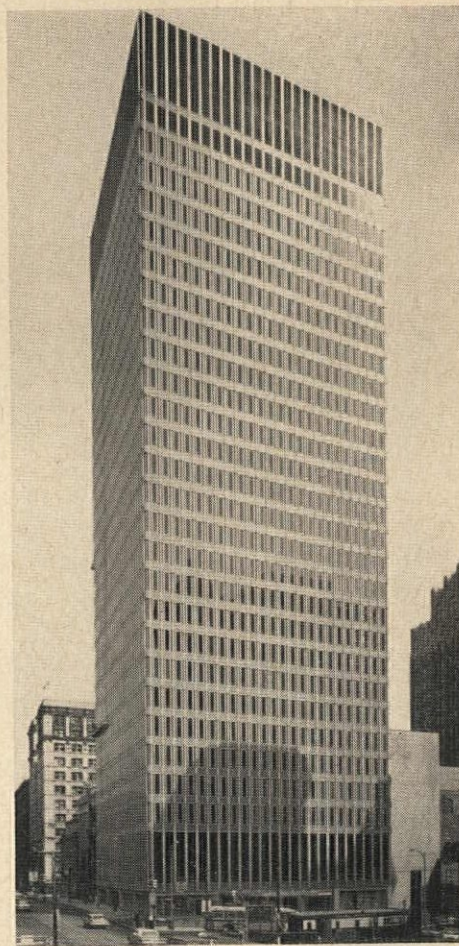


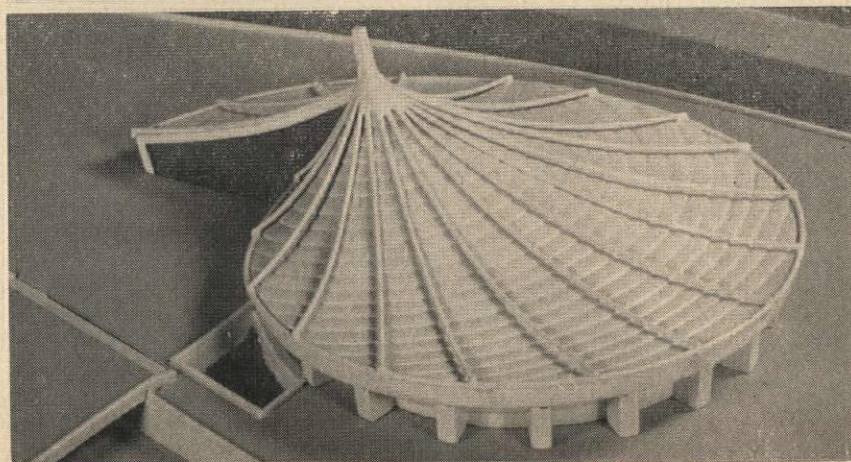
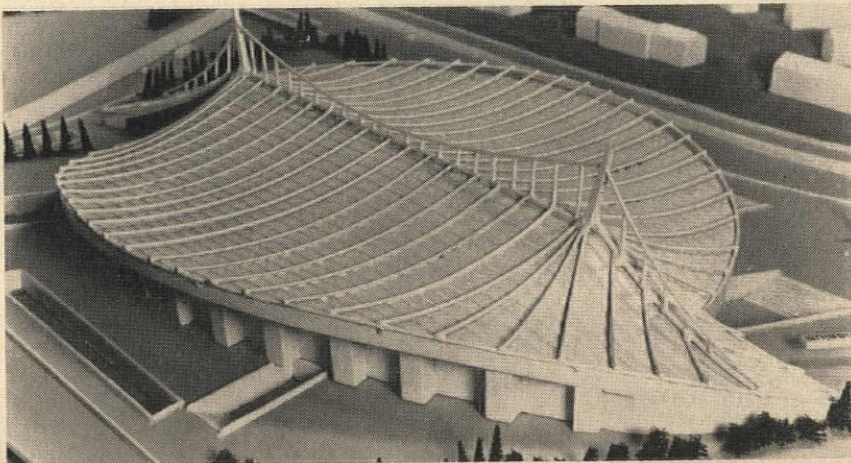
Photo: Lawrence S. Williams

## Tange Designs Cable-Hung Structures for Olympics

TOKYO, JAPAN Architectural winners of Japan's 1964 Olympics are bound to be two structures designed by Kenzo Tange. Slated to be the only permanent buildings on the Olympics grounds, they have been designed to be complementary forms both to each other and to the Meiji Shrine nearby.

The 16,246-capacity swimming arena (*right, above*) will have a roof of steel plates over cables hung from two masts. The two halves of the roof will be offset and light will be permitted to enter through louvers between the exposed support cables. For judo and other sports, the pool will be covered. Measures will be taken to make the shells moisture-resistant, sound-absorbent, and heat-resistant.

The smaller structure (*right, below*), which will seat 3931 for basketball and 5351 for boxing, will also have a cable-hung roof, employing in this instance a single mast. The suspended roof will describe a conch-like orbit around the mast. Both structures, with their exposed-end masts and swooping, upcurving lines, have an eminently "Japanese" feeling.



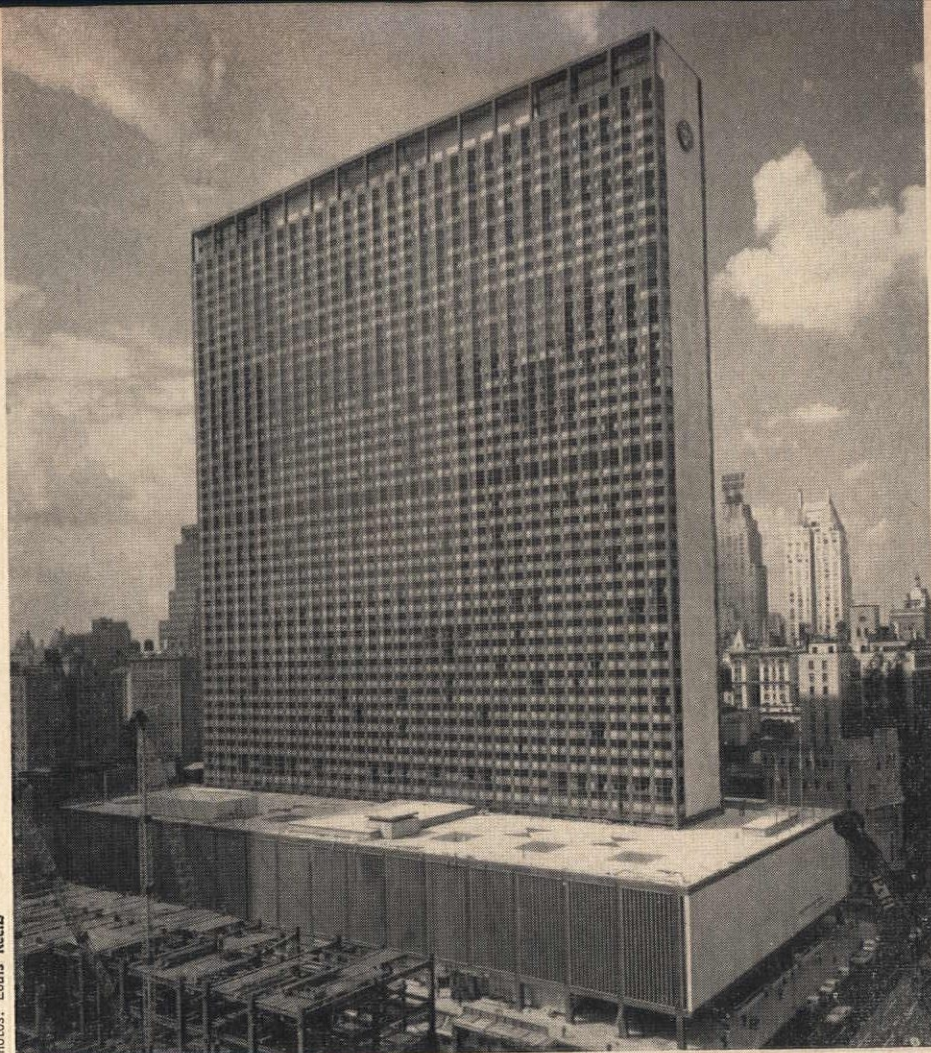
Photos: Orion Press, Tokyo



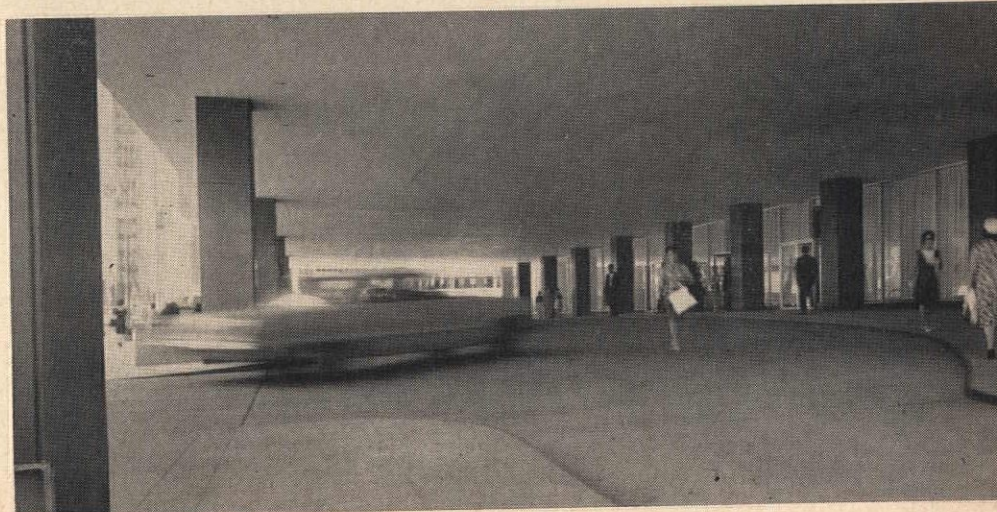
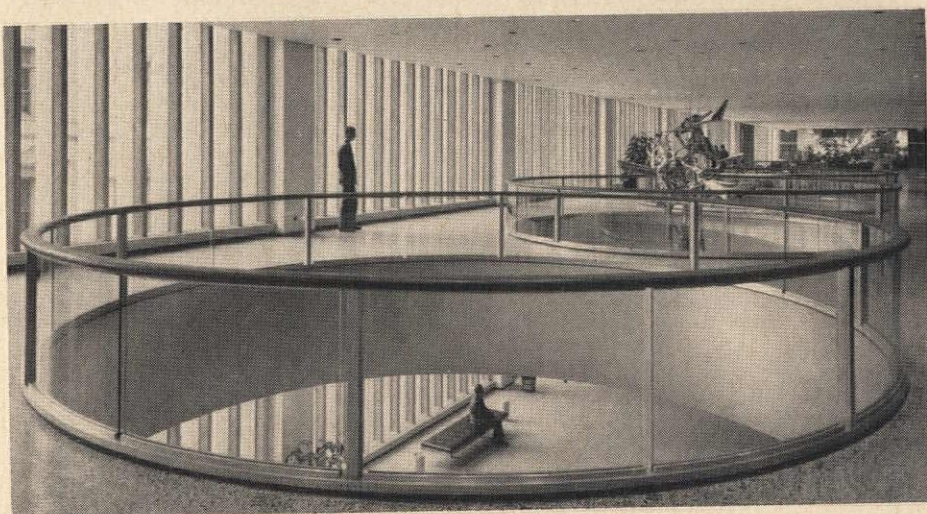
## APPROPRIATE HOTEL FOR NEW YORK

NEW YORK, N. Y. The most recent, and most important, new hotel in New York's current hotel-motel-motor inn boom has opened, and the architects (William B. Tabler, with Harrison & Abramovitz) can pride themselves on having furnished a building that is eminently *à propos* to its urban setting. The New York Hilton—The New York Hilton at Rockefeller Center, as the owners insist on calling it (the Center is about a block and a half away)—succeeds on many scores, all of them architectural. The entrances under the four-story base structure recall the *portes-cochères* of the grand hotel days (*right, below*), making it a dramatic experience to arrive at or leave the building. The lobby promenades on the second and third floors, made into one flowing space by the circles that pierce the floor separating them (*right, above*), create something lacking in almost every other newly constructed hotel: a noble "waste" space simply for idling or waiting. The guest rooms, 2153 of them, are more spacious and higher-ceilinged than those in other recent hotels; and the pointed, tinted glass bay windows formed by heating-cooling counters give nicely faceted views of the city.

Where the hotel fails, often seriously, is on the work of interior designers and decorators (eight were employed on various projects in the building). Ranging from occasionally amusing *kitsch* in the "Rue des Gourmets" restaurants (French, Italian, New Orleans, etc.), to bland Hilton-modern in most lobby and public areas, to "decoratory" in the guest rooms, to third-rate Jean Harlow style in the gigantic ballroom, the interiors all represent high hopes for prestigious display dissipated in unimaginative commercial-type interior design. As Ada Louise Huxtable pointed out in her *New York Times* review of the hotel, the tragedy here lies in the client's taking the total responsibility for *all* the building from the architect, and consequently winding up with a too-many-cooks broth. This is all the more disappointing since Hilton obviously meant this hotel to be some kind of monument. Very little expense was spared, the almost \$500,000 spent on art being one case in point. All guest rooms have original works (lithographs, woodcuts, etc.) by modern artists, and the public areas sport works by Lassaw, Pavia, Metcalf, and Dong Kingman. Perhaps in the next Hilton, the architect can take his proper lead.



Photos: Louis Reents





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"Serviceability Study on ALUMINIZED STEEL Type 2," is free to architects, engineering firms and building products manufacturers. Send coupon for your copy. **Armco Division, Armco Steel Corporation, Dept. A-523, P. O. Box 600, Middletown, Ohio.**

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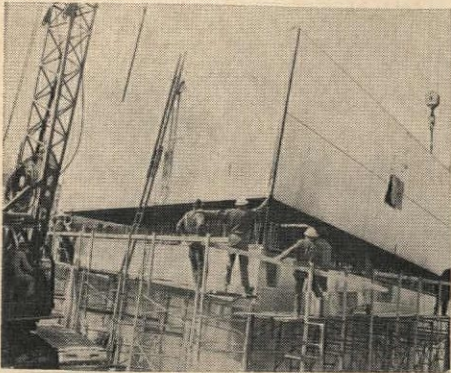
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**Armco Division**





## Saarinen Arch Grows

Saarinen's stainless-steel Gateway Arch in St. Louis is out of the ground over an impressively sized subterranean exhibition center, and, hopefully, will be ready for the 1964 AIA convention in that city. The arch is being put together in immense fabricated sections, as shown, eventually to be joined at the top by use of a great spreader arch that will insure proper jointure of the two meeting halves.

## Corrosive-Resistant Stainless Steel

Recently, the Union Carbide Metals Company conducted a survey that revealed a definite lack of knowledge

among architects, industrial designers, design engineers and even metallurgists, concerning various grades of stainless steels. Specific questions were asked about the 200-, 300-, and 400-Series of stainless steels and their particular properties. Surprisingly, the results indicated that only 37 per cent knew the 200-Series existed, and, in many instances, an even smaller percentage were familiar with the relative properties of the various other stainless steels.

The 200-Series are austenitic corrosion-resistant stainless steels alloyed largely with chromium, nickel, manganese, and nitrogen. They have the same lifetime resistance to atmospheric corrosion as the 300-Series. Specific heat and thermal expansion coefficients of the 200-Series are comparable to those of the 300-Series. Thermal conductivity of the 200's is essentially the same as the 300's.

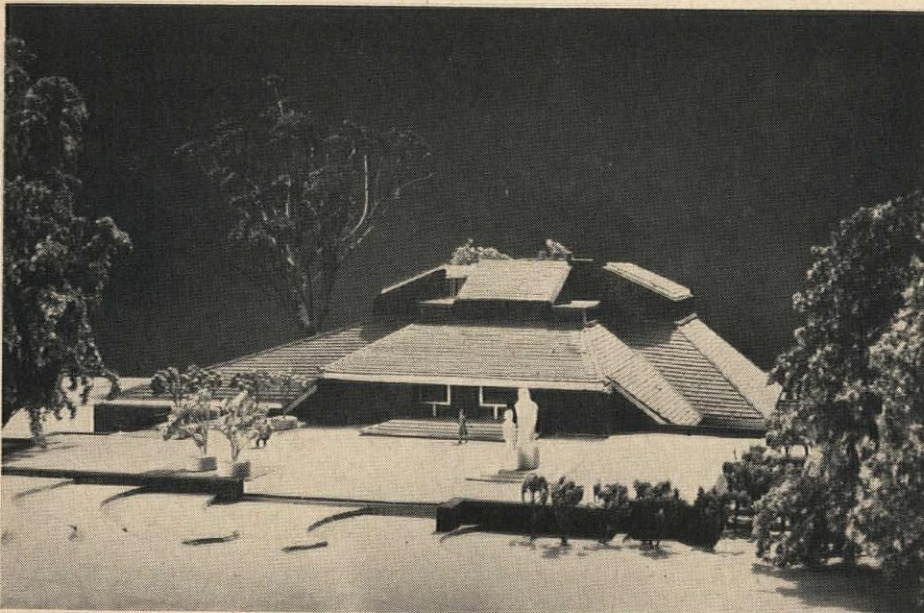
Because the 200's have a higher annealed yield strength and the same modules of elasticity in tension as the 300's, they can effect savings through weight reduction by being utilized in thinner sections. Although the 200-Series is greater in strength and in hardness, it still contains the same degree of ductility as the slightly softer, lower-strength stainless steels. Therefore, formability is nearly identical in most fabricating operations. At

high temperatures, the 200's are stronger.

In the fabrication process, the 200-Series can be turned, milled, drilled, tapped, sawed, sheared, and machined and cut similar to the 300-series. Every welding method is applicable to the 200's. Finishing is accomplished by abrasive grit polishing, buffing, and flash plating. Because the 200's are slightly harder than the 300's, polishing to the same degree of brightness is easier and less expensive. The color of the 200-Series is also more silvery than the 300-Series.

The 200's are available in sheets, strip, plates, bars, wire, tubing, and forging billets. Either Type 201 or 202 is readily adapted to foil, cloth and screening, perforated, expanded, textured, color-coated, corrugated, and other variations.

If the designers' specifications were to call for more applications requiring the 200-Series, then the steel companies, which have traditionally produced larger tonnages of the 300's, should be more than willing to accommodate increased orders for this type of stainless steel.



## DINING AROUND THE MIDDLE

The design for the new 600-seat dining hall for Swarthmore College by the office of Vincent G. Kling provides for three large dining rooms around a communal lounge center. In addition, there will be two 16-person and one 32-person dining rooms located toward the

center of the structure. Siting of the structure on a slope will permit location of the entrance on the second level and a stairway descending into the main lounge. Exterior walls will be native stone; roof will be clay tile; interiors will feature stone and wood beams.



## RAPSON THEATER OPENS

The Tyrone Guthrie Theater, home base of the Minnesota Theater Company, opened to acclaim both for Ralph Rapson's architecture and the playing of the resident troupe in May. Another Rapson contribution occurred when, alarmed by poster display plans, he created a witty cartoon showing how not to deface the façade. Guthrie was convinced. The auditorium (pp. 146-150, JANUARY 1961 P/A, p. 662 and pp. 104-105 FEBRUARY 1962 P/A) proved itself admirable, according to reports; it will be published in detail by PROGRESSIVE ARCHITECTURE at a later date.



NEW FROM JOHNS-MANVILLE:  
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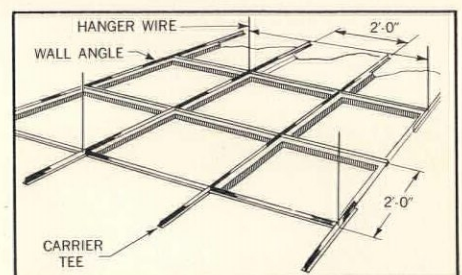
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This new Johns-Manville all-fiber-glass ceiling panel offers a combination of practicality and style . . . at moderate

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JOHNS-MANVILLE



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NEW FROM JOHNS-MANVILLE:  
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ACOUSTI-SHELL  
3-D CEILING PANELS

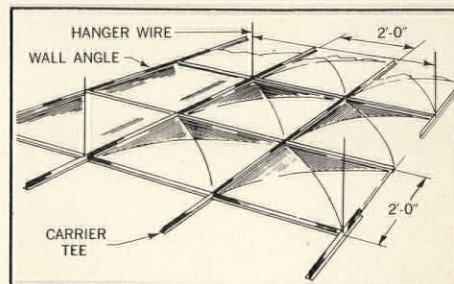
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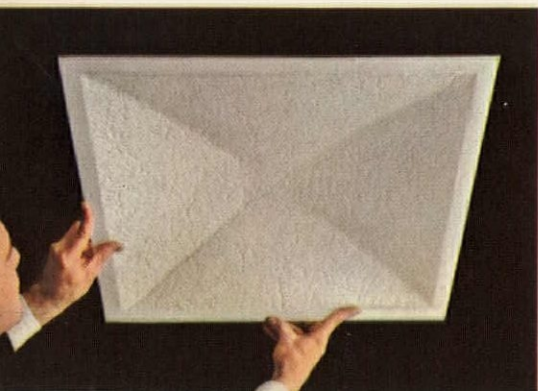
Send for more information on the complete line of Johns-Manville acoustical products. Ask for our new booklet, "Sound Control Ceilings". Address Johns-Manville, Dept. AB, Box 158, New York 16, N. Y. In Canada: Port Credit, Ont. Cable: Johnmanvil.



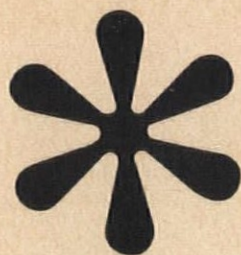
Installation of lay-in Textured Vault Panels is fast and simple in an exposed grid-type suspension system.



**JOHNS-MANVILLE**







# REMINDER

**to send your entries for the  
11th Annual P/A Design Awards Program  
for projects not yet built.**

Deadline for Mailing is August 31

For rules, see p. 65, July 1963 P/A.

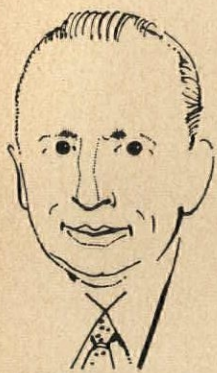
Entries will be judged by  
Vincent G. Kling  
Ernest J. Kump  
Harry Weese  
Peter Collins  
William J. LeMessurier

P/A will arrange publicity in news media for all winners

Address entries to Awards Editor  
PROGRESSIVE ARCHITECTURE  
430 Park Avenue  
New York 22, N. Y.



# Hue and Cry After Stewart



by E. E. Halmos, Jr.

Washington's most famous architect—who-is-not-an-architect was in the midst of an almost annual go-round with his Congressional and press critics, as the capital moved into its hot, steamy summertime in an atmosphere of somewhat unusual legislative lethargy.

The debate didn't seem to perturb 73-year-old J. George Stewart, a graduate civil engineer and holder, since 1954, of his present title of Architect of the Capitol. It has seemed to be an annual sport for many years, and a particular form of relaxation for Senators such as Illinois' Douglas and Wisconsin's Proxmire. Proxmire made his criticisms even more pointed this year by introducing a bill (S. 1806) that would deny the architect the right to pass judgment on any construction or other work on the Capitol grounds.

Two things aroused Congressional (and local newspaper) ire this time: the admittedly monstrous-looking Rayburn (or new-new) House Office Building—now five years in the building and likely to cost more (at \$110 million or so) than all other buildings on Capitol Hill combined. Described in local press articles as having "a style deriving from Middle Mussolini, Early Rameses, and late Nieman-Marcus," the building's interior has been so poorly designed that Congressmen's private offices cannot be reached by staff members without crossing through public reception rooms.

As if this wasn't enough—atop the outcry a couple of years ago when the new Senate Office Building was completed and loudly criticized—Mr. Stewart has just put in a bill for some \$20 million to reconstruct the west front of the Capitol building (facing downtown Washington), partly because of deterioration of the old sandstone facing and partly because the \$11.3 million restoration of the east front provided comparatively little added usable space.

That was enough for the Senators and the local newspapers, who took off on their annual chase of Mr. Stewart and his minions and millions.

Amid the hue and cry a couple of facts didn't get mentioned: (1) designs are prepared by registered architects, usually after design competitions; (2) all construction is super-

vised by Congressional committees, who often dictate such details as the huge and expensive private swimming pool in the Rayburn building (not included in original programs).

Anyway, it provided summer diversion for a capital not doing very much else.

## New Fine Arts Commission Members

There was another item of major interest to architects—even though it concerned the capital itself most directly:

The President named five new members to the Fine Arts Commission—a heavy majority of the seven-member group. Still to be named—a chairman, to replace retiring, 72-year-old David E. Finley.

What made the appointments doubly interesting was that they followed closely on severe criticisms of the capital's architecture by the AIA and other professional and amateur critics, and directly on a lengthy report to the President by August Hecksher, who resigned his post as special consultant to the President for the arts. In his report, Hecksher had called for appointment of some sort of an advisory committee or panel to advise on architectural matters.

Not surprising was the appointment of John Carl Warnecke, of San Francisco, who designed the Hawaii state capitol and the approved plan for refurbishing Lafayette Square in Washington; and Hideo Sasaki, Lexington, Mass., Landscape Architect. Others appointed were William Walton, Washington artist; Mrs. Aline B. Saarinen, widow of famed Eero Saarinen and an art critic in her own right; Theodore Roszak, a New York sculptor; and Burnham Kelly, dean of Cornell University College of Architecture.

## Do-Nothing Congress

It was hot and humid—in fact typical Washington weather—when Congress took its traditional break early in July to go home for some fence-mending and speechmaking.

But Congress had little to be proud of: it had passed exactly nothing in the way of major legislation in six months of being in session. Not even the important bills providing money for Federal departments had gotten through, though the House had passed its share of them, carrying a \$3 billion reduction in Presidential requests for funds. (No department, however, will run out of money: Congress did

pass the usual "continuing resolution," which permits the Government to keep on spending at 1963 rates until new appropriations are approved.)

The rate of spending was still a major worry for many Congressmen. So staunch a Democrat as Representative Clarence Cannon of Missouri took the House floor to warn his colleagues that the 1963 fiscal year had closed with a deficit of more than \$8 billion, with an even bigger deficit in prospect; that the Treasury's supply of gold had dwindled to \$15.7 billion; that the average U.S. family must pay about \$114 every month just to meet appropriations for defense, Federal salaries, and payments on the \$309 billion public debt.

## FINANCIAL

Big news for businessmen in July was publication of the final regulations of Internal Revenue Service on travel and entertainments tax deductions.

IRS retreated a little from the first harsh set of proposals that frightened the business community, and caused a sudden drop in restaurant and entertainment business. But requirements for documentation of expenses are still stiff. (You can get a copy from IRS directly, or by sending for the June 25 issue of the "Federal Register," (25¢) from the U.S. Government Printing Office. Ask for "Title 26, Chapter 1, subchapter A, Part 1.")

One bit of news though: You can continue to take employees and associates out to lunch, as well as prospective partners. A "business associate" is defined as "... customer, client, supplier, employee, agent, partner, or professional adviser, whether established or prospective ..."

Business indicators remained good for the construction industry, but there were some signs of a slowing rise, as if investors were pausing to see what course Congress will take over the next few months.

April approvals of municipal bonds, for example, showed voters okaying \$199.3 million worth, turning down \$146.7 million—with an almost even division between approvals and turn-downs of educational building bonds.

Value of new construction put in place, said the Commerce Department, was \$5.5 billion in May—up only about 3 per cent over May of 1962.

And average secondary market prices for FHA-insured new home mortgages held steady for the first time in several months—an indicator of a slight easing of money markets.





## Creating Interesting Texture at Low Cost

You now can subtly vary the interplay of light and shadow on exterior walls, to achieve unusual beauty and textural interest. This architectural distinction is attained with *Contours CV*, a new, lightweight ceramic facing with incised and bas-relief pattern. That shown in the photo is "Sculptured Shadows." For this Phoenix, Arizona, medical center, Architect G. Collum combined flat and sculptured units.

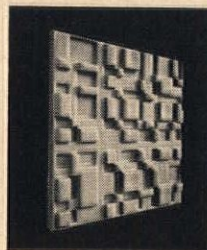
*Contours CV* is characteristically inert, never effloresces, cleans easily, retains its beauty through the years with minimum maintenance. Units are  $11\frac{3}{4}"$  x  $11\frac{3}{4}"$ . They may be applied in the same way as glazed wall tile or as regular adhesion-type CV. Nineteen colors, ranging from pale pastels to rich tones, are available in semi-matte or mottled glaze. Over a dozen patterns now are standard.

*Distributed east of the Rocky Mountains by*

**American  
Olean**  
CERAMIC TILE

American Olean Tile Co., Landsdale, Pennsylvania—a subsidiary of National Gypsum Company

*Contours CV* gives you the construction economy of lightweight, easy to handle, modular pieces of a high-fired ceramic, with a frost-proof body and a glaze impervious to weather. Its distinctive patterns and extraordinary beauty provide new opportunities for award-winning design. Yet it is priced to permit use in a wide variety of commercial, industrial and institutional construction, and will fit the budgets of most jobs. Write for literature showing patterns and specs. Better, visit one of our salesrooms where you can see and feel the beauty of *Contours CV* itself.



**CONTOURS CV®**

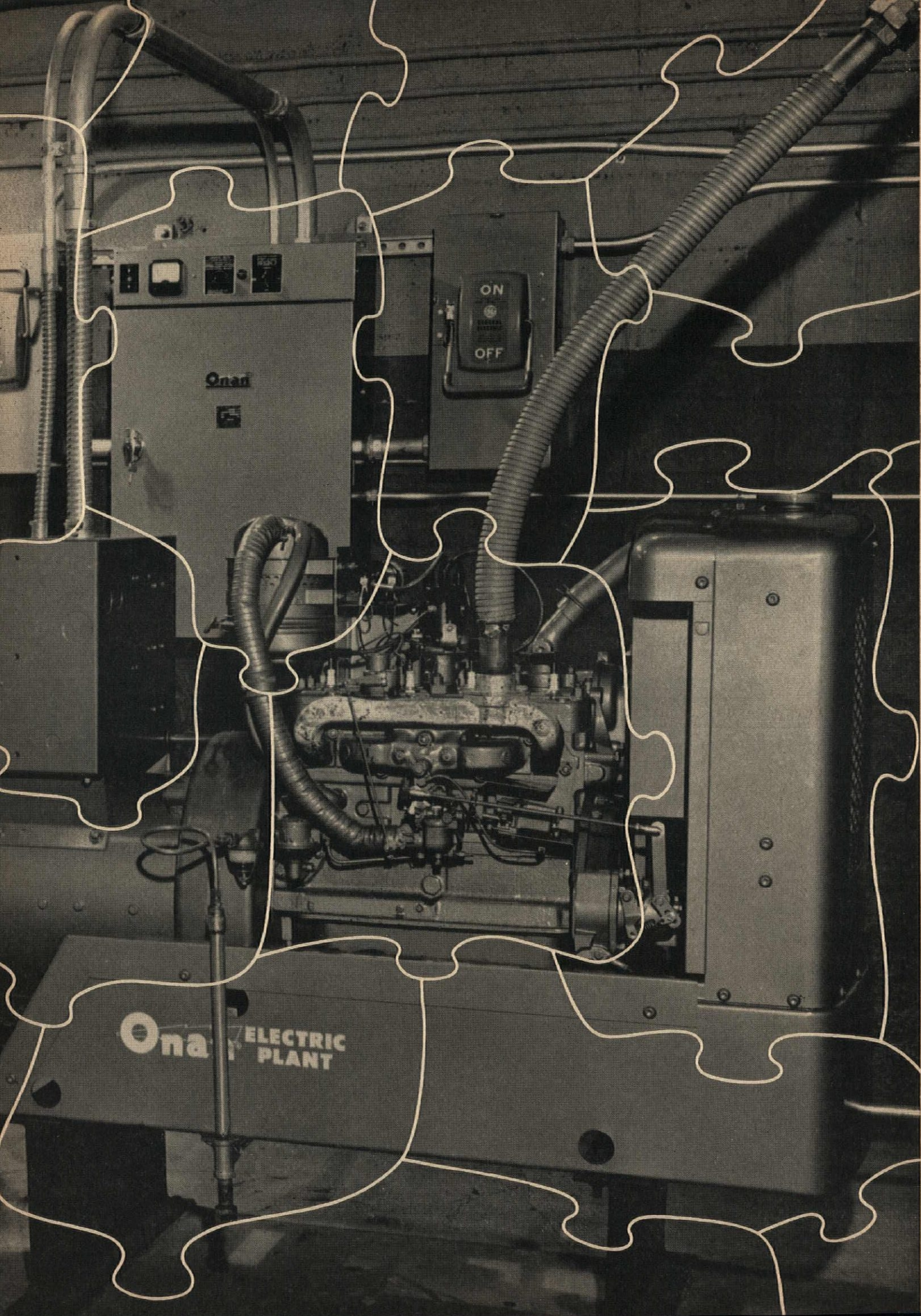
A Gladding, McBean building product by

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**Onan** ELECTRIC PLANT



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You avoid the buck-passing that invariably occurs when you have multi-supplier responsibility when you specify Onan. We take complete responsibility for supplying everything in the installation... from line transfer controls to fuel tanks. Available in Gas, Gasoline, Diesel Models to 230 KW.

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ENGINE/GENERATOR DIVISION



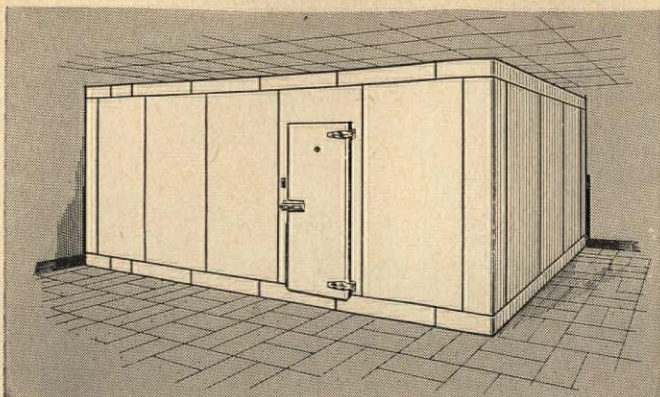
**Studebaker**  
CORPORATION



**PERFORMANCE  
CERTIFIED**

We certify that when properly installed and operated this Onan electric plant will deliver the full power and the voltage and frequency regulation promised by its nameplate and published specifications. This plant has undergone several hours of running-in and testing under realistic load conditions, in accordance with procedures certified by an independent testing laboratory.





Combination normal and low temperature Walk-In installed at Manhattan State Hospital, Wards Island, N.Y.

Specifications prepared by the State of New York, Department of Public Works, Division of Architecture, Albany, N.Y. for the Department of Mental Hygiene.

## Bally pre-fab walk-ins *all-metal coolers and freezers*

**World's most advanced design. New materials and construction techniques offer architects an opportunity to provide tremendous refrigeration advantages to their clients.**

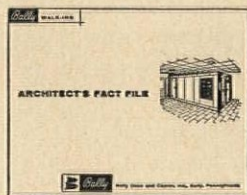
**Urethane 4" thick** (foamed-in-place) has insulating value equal to 8½" fiberglass. Standard models can be used as freezers with temperatures as low as minus 40° F. Urethane has 97% closed cells... cannot absorb moisture... ideal for outdoor use.

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**New foamed door**, so light in weight it ends forever the "hard pull"... the "big push". Door is equipped with new type hand lock (with inside safety release) and convenient foot treadle for easy opening. Also has special hinges that close door automatically. Magnetic gasket guarantees tight seal.

**Self-contained refrigeration systems** combine balanced capacity condensing units and refrigeration coils. Mounted and hermetically sealed with necessary controls on small wall panel. Simplifies installation. Four-hour factory test assures quiet, efficient, trouble-free operation.

Write for Free Architect's Fact File which includes 12-page brochure... Specification Guide... and sample of urethane wall construction.



See Sweet's File, Section 25a/Ba



Bally Case and Cooler, Inc.  
Bally, Pennsylvania

Address Correspondence to Dept. PA

For more information, turn to Reader Service card, circle No. 314



## Planning a school? Get this free Language Laboratory Planning Kit

Complete details on space requirements for language booths, teacher's console, language lab office and tape preparation room, illumination, acoustics, wiring requirements. Kit includes specifications of "Monitor" language lab equipment and furniture—used in hundreds of schools in the U.S. and more than 65 nations around the world. Write to

### ELECTRONIC TEACHING LABORATORIES

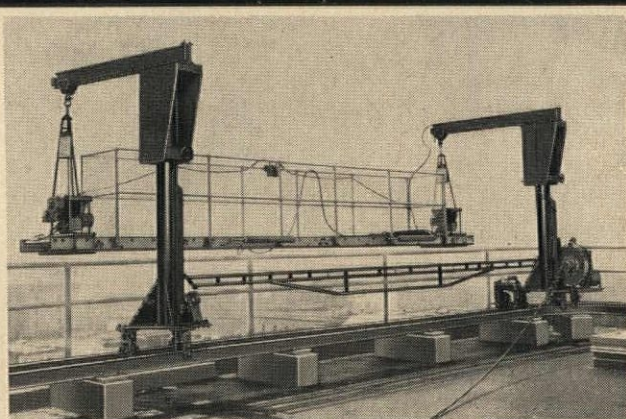
5034 Wisconsin Avenue, N.W. • Washington 16, D.C.  
"Language Laboratory Standard of the World"

SEE SWEET'S CATALOG — SECTION 36A

For more information, turn to Reader Service card, circle No. 369



## POWERED WINDOW WASHING SYSTEMS



**FEATURES:** Carriage—Swing Platform runs on narrow gauge continuous track around perimeter. Track switches for roof storage.

WRITE FOR POWER SCAFFOLDING and ROOF CARRIAGES brochures, engineering data and installations.

**ALBINA ENGINE & MACHINE WKS.**  
2100 N. Albina Ave., Portland, 17 Oregon

For more information, turn to Reader Service card, circle No. 307



## Metal Lath Forms and Reinforces Thin Shell

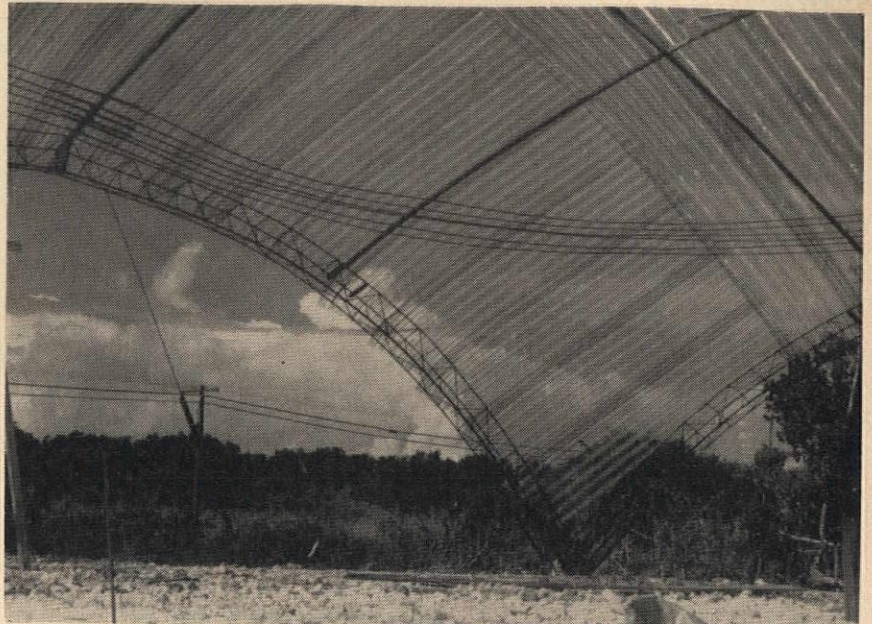
Architect Richard A. Rose, of Miami, and Consulting Engineer Bertram S. Warshaw, of Coral Gables, have developed a paraboloid structure for low-cost housing as well as for banks, restaurants, shopping centers, and office buildings. The structure has rigidity, durability, low-cost maintenance, and high fire resistance made possible by spraying portland-cement plaster over metal lath, which serves as both forming and reinforcement.

Pyramidal piers are anchored to a concrete floor slab to resist the thrust of the dome. Designed according to local conditions, these piers support steel-bar space trusses to which 1" square steel-tube arches are attached. Surrounding the dome horizontally and closely spaced above the arched openings are six complete circles of reinforcing bars. Wired to the trusses and square steel-tube arches is  $\frac{3}{8}$ " ribbed metal lath. The portland cement, with waterproofing added, is machine-applied to the metal lath from both below and above to produce a thickness of  $2\frac{1}{2}$ ". The finished paraboloid design will provide a living space of 729 sq ft; ceiling heights range from 5'-6" in the four corners to 13'-4" at the center of the dome. Enclosing walls will vary according to local conditions and individual taste. After a 28-day curing period, the cement plaster achieved a strength of 4000 psi. The shell has a k-factor of 9.0, but this can be reduced to as low as 5.0 by employing a lightweight aggregate. With the exception of minor flexural stresses at the heavily reinforced boundaries, the shell is in membrane compression created by gravity loads. Even though temperature changes will alter the intensity of the compressive stresses, there is practically no stress reversal.


The erection cost of the dome and slab, based on 729 sq ft of useable floor space, is \$2.32 per sq ft. This figure may be reduced to \$1.50 per sq ft if the total 34 ft sq area under the dome is considered. If the shell is placed on taller pyramids or columns, this would increase the useable floor area and reduce the \$2.32 figure to \$1.50. Further reduction in the per sq ft cost of useable floor space can be achieved by extending the slab to the full rectangular dimensions of the foundation columns, which would provide useable floor space beneath the arches and storage space at the corners beneath the legs of the dome. Metal Lath Association, Engineers Bldg., Cleveland 14, Ohio.

On Free Data Card, Circle 100

Photos: Courtesy Metal Lath Association







**Look! This  
vapor barrier  
can't be set  
on fire!**

Pyro-Kure consists of laminations of kraft paper, aluminum foil or plastic film in any combination, made resistant to tear or puncture by use of reinforcing fibers between the plies. In addition to its use as pipe jacketing for low temperature lines (to sub-zero applications) and on duct-work, Pyro-Kure is recommended on commercial insulation, and as fire resistant drop cloths or barriers around such fire hazards as welding and paint spraying areas.

## ***A New Standard of Protection On Pipe and Duct-Work***

Pyro-Kure vapor barriers cannot contribute to fire because it extinguishes itself if it is ignited. Thus, vapor barriers which once were a potential fire hazard are now adding to total fire safety.

This new product line is U/L listed with flame spread ratings of "25 and below." The flame resistant property is permanent! MVT ratings go down to 0.02 perms. Attractive embossed grades are available for exposed applications such as in commercial metal buildings.

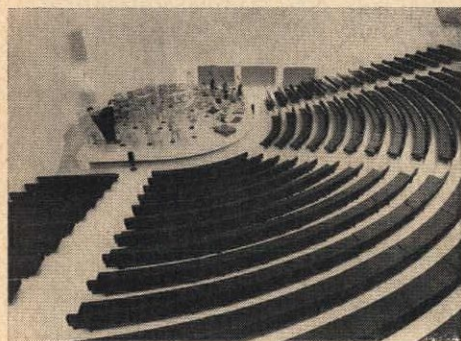
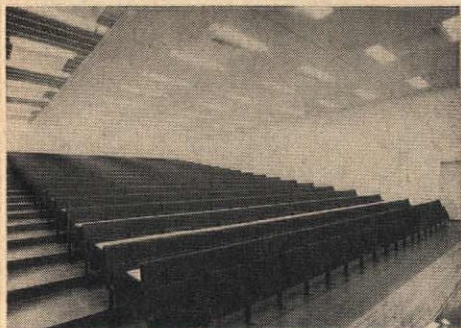
Make sure your jobs have Pyro-Kure vapor barrier protection. Leading insulation manufacturers offer Pyro-Kure facing and jacketing on their insulation materials . . . or Pyro-Kure may be applied by the insulation contractor right on the job. A data kit is available without cost or obligation. This kit includes samples of various grades, perm ratings, etc. Write American Sisalkraft Company, 56 Starkey Avenue, Attleboro, Mass., Division of St. Regis Paper Company.

**PYRO-KURE<sup>®</sup> NON-COMBUSTIBLE VAPOR BARRIERS  
FOR INSULATION FACING AND JACKETING**



## Central Source for Interior Furnishings

International Contract Furnishings, Inc., provides a new source for contract interiors and a single source of supply for the best furnishings from Finland. Six Finnish firms are represented; among their renowned design-



ers are Alvar Aalto and Ilmari Tapiovaara. Furniture from Denmark, Sweden, Switzerland, and the U.S. is also in the collection, the aim of which is to provide a central source of good contemporary furnishings for architects. Seating with wood and metal bases, desks, tables, case pieces, children's furniture, area rugs, lighting and textiles are offered in profusion. Two types of auditorium and lecture-hall seating designed by Toivo Korhonen and Esko Pajamies (*shown*) are offered. Folding seats have nylon bearings; seats and backs are foam-padded; behind each seat is a writing board finished in plastic laminate. International Contract Furnishings, Inc., 145 E. 57 St., New York 22, N.Y.

*On Free Data Card, Circle 101*

## Constant Light Assured

"Ev-R-Lert" by Mainco provides instantaneous lighting upon failure of the regular light and/or power. The low beam remains constant for approximately 5 hours—enabling escape, emergency activities, or orientation in trapped areas such as elevators. This emergency lighting unit is maintenance-free. Deterioration of the

unit has been prevented by eliminating moving parts; nickel-cadmium-cell batteries (similar to those powering Telstar) are unaffected by atmospheric conditions. During normal lighting, the units are charged through wires from the electrical system; cessation of wire current actuates Ev-R-Lert. Recharging resumes with restored lighting, and within a few hours another emergency can be met. The unit, which can be held in one hand, may be inconspicuously installed in the center of regular lighting, air-conditioning, and similar fixtures or in separate key areas. The Maintenance Co., Inc., 10-40 45th Ave., Long Island City 1, N.Y.

*On Free Data Card, Circle 102*



## Radiant Ceiling Heat

Glass radiant ceiling heaters for grid suspension have been designed for 2'x4' modular ceiling system. Heaters, which can also be suspended from high or irregular ceilings, or surface mounted to ceilings, can be used as supplemental heat or as the sole source of heat in a building. They are made of Pyrex glass panel into which a thin metallic oxide film has been fired to conduct electricity. Panel, strengthened with glass fibers, emits long-wave infrared radiation that heats objects rather than air. Heaters contain no moving parts that cause noise or require maintenance. Rated at 500-w, they are available for 120-, 208-, and 240-v electrical systems. Corning Glass Works, Corning, N.Y.

*On Free Data Card, Circle 103*

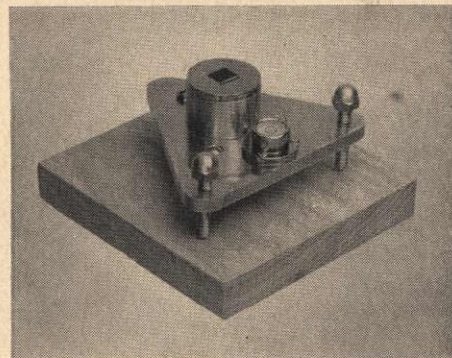
## Snap-In Beams/Panels

Snap-in panel and beam construction method for many types of structures has been announced. Buildings, with clear-span widths from 20 ft. to 80 ft. and lengths from 20 ft. up are



possible. Exposed-beam design has bolt-free decking and walls that provide leak-resistant construction. Beams designed with box sections have built-in electrical raceways. Buildings can expand to 60 ft., 100 ft., or 1000 ft. by adding necessary footings and installing required beams and panels for expansion lengths. Existing end wall then would be unsnapped and relocated in its new position. Other features are standardized panels and windows, and steel foundation flashing placed on concrete foundations for protection against moisture, rodents, etc. Further features include snap-on insulation and finished interior combinations, bolt-free panels, and variety of color schemes for both beams and panels. Lundell Mfg. Co., Inc., Cherokee, Iowa.

*On Free Data Card, Circle 104*

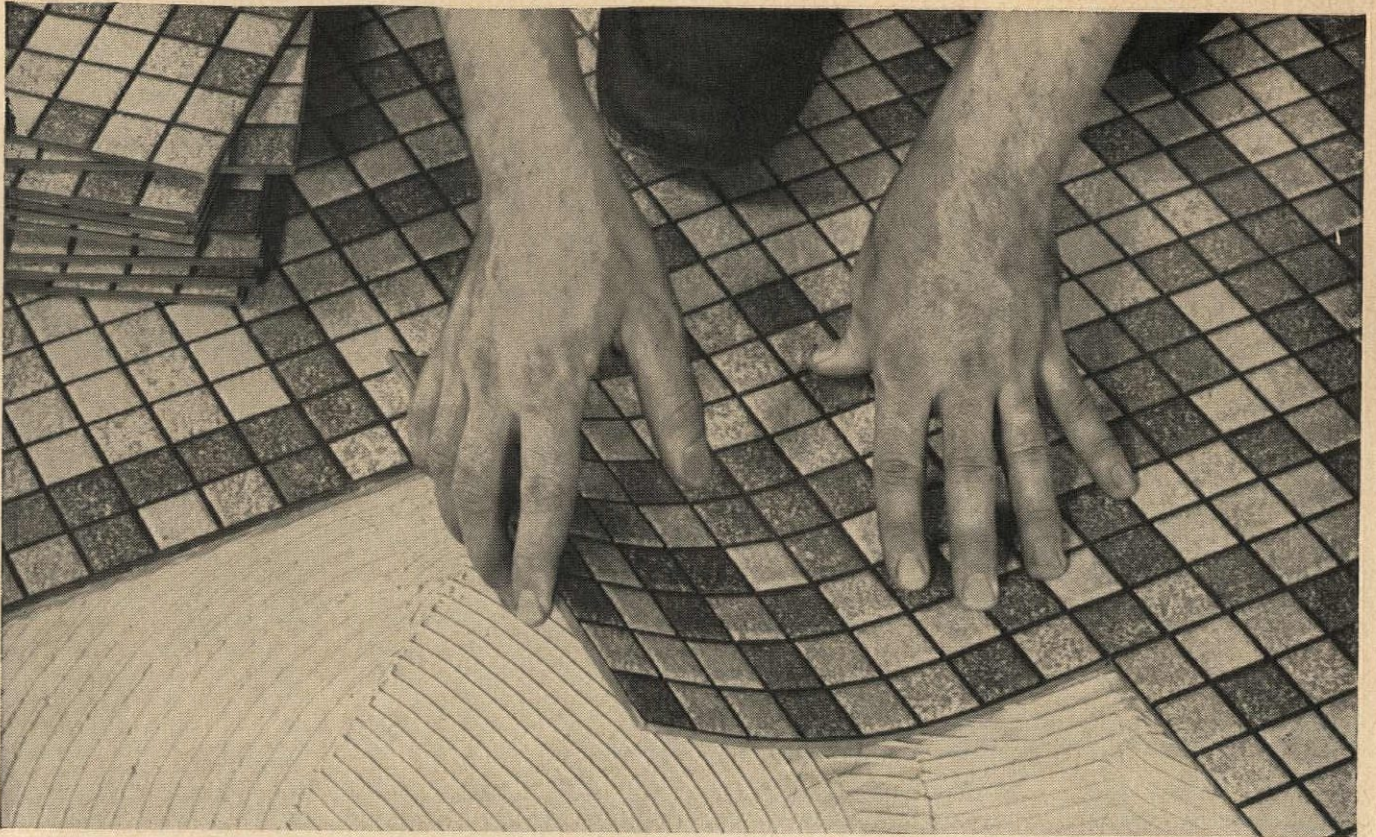


## Measuring Radiation

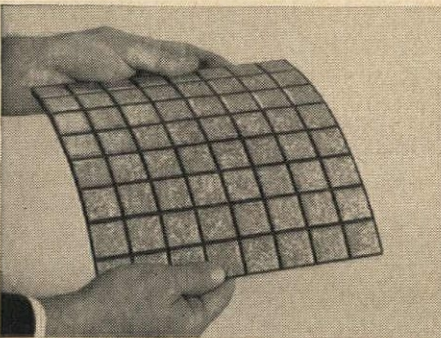
Solar radiometer that uses silicon photovoltaic cells, called "Sol-A-Meter," has been developed. It measures solar radiation by generating a short-circuit proportional to the intensity of the sunlight falling on the cells. Sol-A-Meters are simple, rugged, versatile, and reliable. They are insensitive to position or orientation. Other features include extreme rapidity of response, built-in temperature compensation, and accuracy of  $\pm 3$  per cent. Sol-A-Meter is available at a cost of \$75.00. Yellott Solar Energy Laboratory, 9051 North Seventh Ave., Phoenix 21, Ariz.

*On Free Data Card, Circle 105*

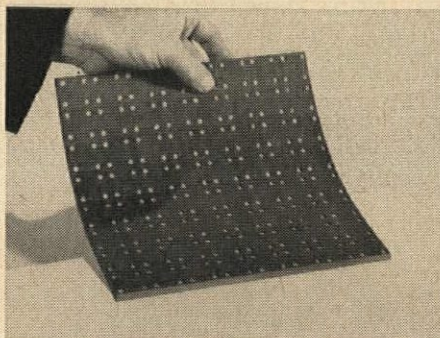




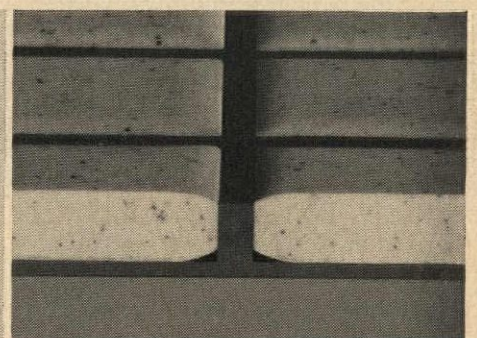
Each 9" x 9" x  $\frac{3}{32}$ " Ceramaflex tile is made up of 64 one-inch square ceramic tiles securely bonded in a pre-formed flexible rubber grid. It's quickly and inexpensively installed on, above or below grade. And it's ready for use the instant it's laid.



This is the "working" surface of Ceramaflex—genuine dent-proof ceramic tile in one-inch squares, joined by impervious rubber to eliminate grout failures.



Now let's look at the back. This cushion of live rubber remains permanently flexible—guarantees a lifetime of comfort and quiet underfoot.



This enlarged cross-section of Ceramaflex shows the relationship of the rubber grid to both back and sides of each individual tile. Notice how the joint surface is flush with the edge of the tile.

## There's only one resilient ceramic flooring...

### **CERAMAFLEX\*** by Romany•Spartan

Where resilience, permanence and minimum maintenance are required, there's only one answer—Ceramaflex. Choose from a handsome variety of plain colors and buckshot patterns to create any desired decorative effect. Use unglazed in areas where foot traffic is heavy and either glazed or unglazed where light service is anticipated. Your nearby Romany•Spartan distributor will provide samples and additional information. Or write United States Ceramic Tile Company, Department PA-32, Canton 2, Ohio.



*Ceramaflex® is the exclusive product of United States Ceramic Tile Company*

**UNITED STATES CERAMIC TILE COMPANY**



**CERAMIC TILE**



## AIR/TEMPERATURE

### Ventilators

Catalog, 28-pages, shows ceiling and wall ventilators, range and oven hoods, exhaust and attic fans, heat lights, and radiant wall heaters. Specifications, accessories, dimensions, diagrams of wiring, and typical installations are given. Fasco Industries, Inc., North Union at Augusta, Rochester 2, N.Y.

*On Free Data Card, Circle 200*

### Fintube Boiler

Package boiler available in various sizes for industrial, commercial, and service use is presented in 4-page booklet. Employing internal fintube concept of heat transfer, boiler is efficient, compact, and has a high capacity. "Powerfin Boiler" is at least 25 per cent smaller than any other competitive boiler of equal horsepower. Other advantages include less floor and head space for installation of boiler; quick-opening, no-bolt rear door; more effective refractory and insulation; and two-pass construction to reduce all thermal strain. Booklet includes illustrations and charts. Brown Fintube Co., Commercial Heating Division, 300 Huron St., Elyria, Ohio.

*On Free Data Card, Circle 201*

### Hot-Water Heating Unit

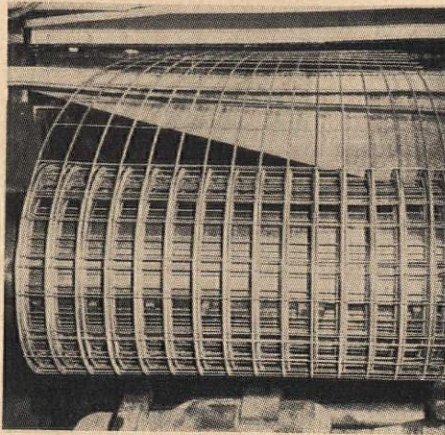
Pamphlet, 4-pages, discusses complete hot-water circulating electric heating system. Baseboard system contains no mechanical moving parts. Electric heating elements remain constantly in water to operate at low temperatures and provide lifetime maintenance-free service. Antifreeze solvents protect unit when not in use. There is no chimney hazard and no chance for flame combustion. Pamphlet contains charts depicting system's features, installation procedures, and specifications. International, Electric Heating Division, 3800 Park Ave., St. Louis 10, Mo.

*On Free Data Card, Circle 202*

## CONSTRUCTION

### Reinforcing Wire

Brochure, 8-pages, introduces high strength, deformed reinforcing wire. Convex, protruding deformations retained in the wire after cold drawing, provide maximum continuous anchorage and more efficient crack control along entire length of wire. Uniform



perimeter of 70,000 psi yield strength wire permits welding at any angle for varied distribution of planes of anchorage within concrete. Wire is available straight, coiled, or welded into sheets or rolls. Brochure includes details on design and construction of wire, anchorage tests results, typical arrangements for continuous pavement, floor slab and beam reinforcement, and table on dimensional requirements. Laclede Steel Co., Arcade Building, St. Louis 1, Mo.

*On Free Data Card, Circle 203*



### Wood Fiber Ceiling Tile

Deep-etched, wood fiber ceiling tile is described in 4-page brochure. The tile's fissured and multifibered construction absorbs up to 70 per cent of all sound, and reduces transmission of sound through ceiling. Brochure contains information on sizes, thickness, joints, and finishes, and illustrates various patterns. Simpson Timber Co., 2000S Washington Bldg., Seattle 1, Wash.

*On Free Data Card, Circle 204*

### Metal Building Manual

Technical Committee of Metal Building Manufacturers Association has just revised its 28-page "Recom-

mended Design Practices Manual." Sections include examination of roof dead and live loads, seismic forces, deflection limitation, minimum standard for thickness, aluminum and plastic panels in metal buildings. Details and charts are included. Metal Building Manufacturers Assn., 2130 Keith Bldg., Cleveland 15, Ohio.

*On Free Data Card, Circle 205*

### Ventilating Ceilings

Data file contains information on ventilating, fire-retardant, membrane-faced, mineral-fiber, wood, asbestos, and metal ceilings. File also gives specifications, research data, and job information relating to various installations. Armstrong Cork Co., Liberty & Mary Sts., Lancaster, Pa.

*On Free Data Card, Circle 206*

### Elastomeric Roofs

Elastomeric roofing system called "Gacoflex" is introduced in 4-page brochure. Neoprene and Hypalon (a product of DuPont) elastomers offer lightness of weight, versatility, weatherability, and ease of application. Folder includes liquid system material specifications and applications, sheet system material specifications and applications, and flashing procedures. Gates Engineering Co., Wilmington 99, Del.

*On Free Data Card, Circle 207*



### Solar Shielding Glass

Solar shielding glass is introduced in 4-page brochure. Glass excludes 59 per cent of total solar energy, controls glare to 35 per cent luminous transmittance, and is made of a special



heat-resistant glass. Glass also improves utilization of floor space, eliminates hot-wall effects, and lowers air-conditioning costs. Brochure includes chart that compares solar glass to typical heat-absorbing glass as well as to other materials in adjoining chart. Corning Glass Works, Technical Products Division, Corning, N. Y.

On Free Data Card, Circle 208

## Raised Floors

Manual for raised floors has been published. "Infinite Access Floor" consists of 2' x 2' modular panels supported on all sides by rigid understructure consisting of adjustable pedestal assemblies supporting removable stringers. Manual gives general requirements, design requirements, and details. Tate Engineering, Inc., Architectural Products Division, 516 South Eutaw St., Baltimore 1, Md.

On Free Data Card, Circle 209

## Truss Clips

Booklet, 15-pages, discusses truss clips. Only a hammer is required to make trusses with "Truss Clips,"

thereby permitting job-site assembly. Clips are made of 18-gage, high-strength steel, and no nails are used other than those that are part of the clip. Booklet also discusses component and panel clips. Included are truss designs for spans and pitches, installation procedures, sizes of truss clips, jig designs, and code information. Details of trusses are also given. The Panel-Clip Co., P. O. Box 423, Farmington, Mich.

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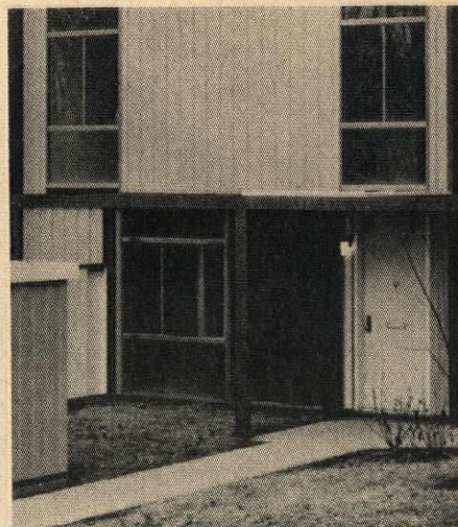
## DOORS/WINDOWS

### Sound Control For Folding Doors

Booklet, 8-pages, presents report on selecting folding partitions where sound control is required. It offers information on how to specify for sound retardance, describes problems frequently encountered, and emphasizes role of desired results. Sketches, graphs, and charts illustrate structural sound-retardance factors and point out common errors in construction with respect to sound control. Clopay Corp.,

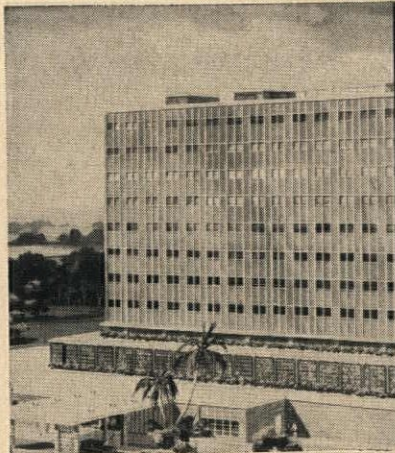
Commercial Products Division, 1400 Academy Ave., Detroit 20, Mich.

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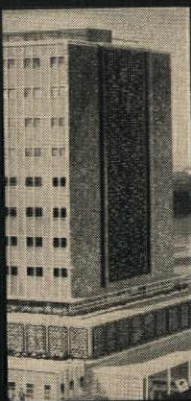
## Metal Doors/Frames

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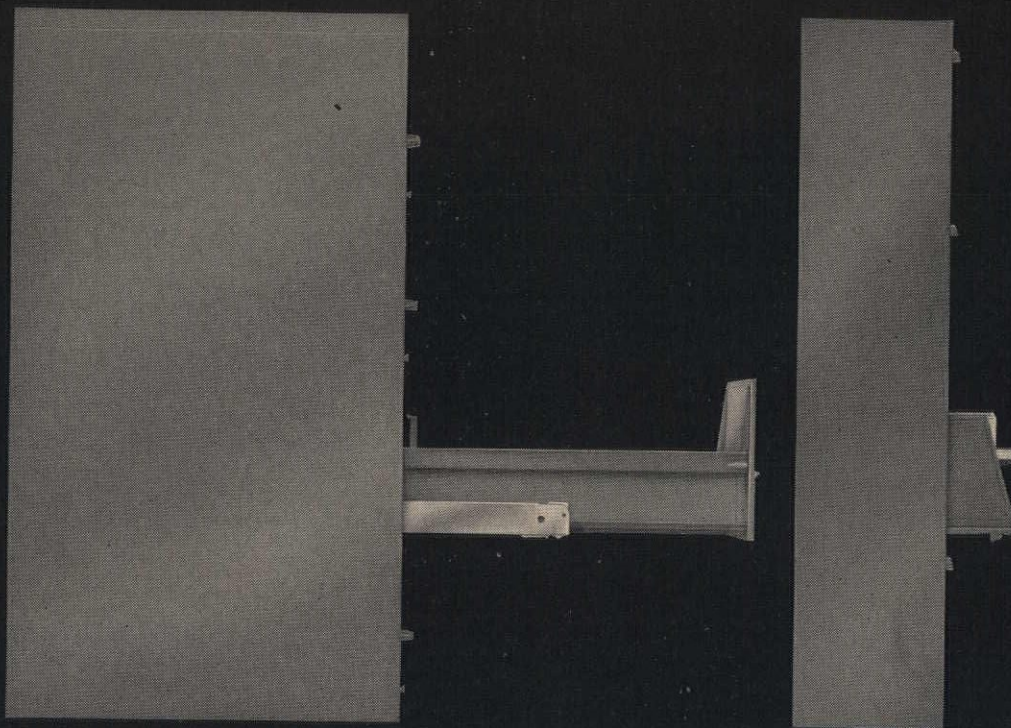
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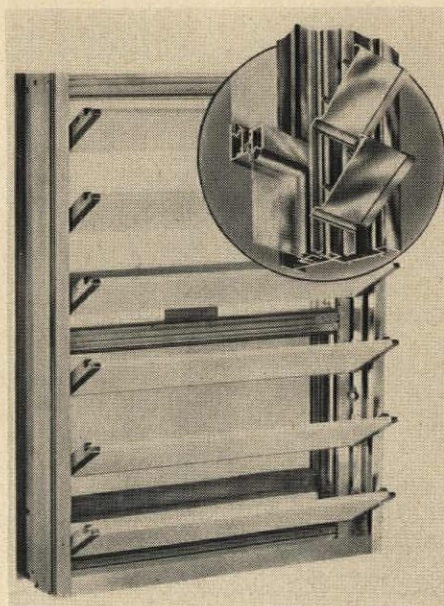
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bustion, and bridges slight cracks. Rubber & Plastics Compound Co., Time & Life Building, Rockefeller Center, New York 20, N. Y.

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### Elastomeric Coatings

Booklet, 12-pages, covers properties and typical uses of elastomeric adhesives, coatings, and sealers. Illustrates how coatings are employed in general and electrical manufacturing, transportation, and construction trades. Minnesota Mining and Manufacturing Co., Adhesives, Coatings, and Sealers Division, 900 Bush Ave., St. Paul 6, Minn.

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### Plastic Waterstops

Publication describes "Durajoint" plastic waterstops, masonry control joint units, and expansion joint flashings. Also discussed are "Rodoflex" closed-cell plastic premolded joint fillers and "Rodofix" thiokol base 2-component polysulfide sealing compounds. Booklet includes details, specifications, charts, and installation procedures. Electrovert Inc., 240 Madison Ave., New York 16, N.Y.

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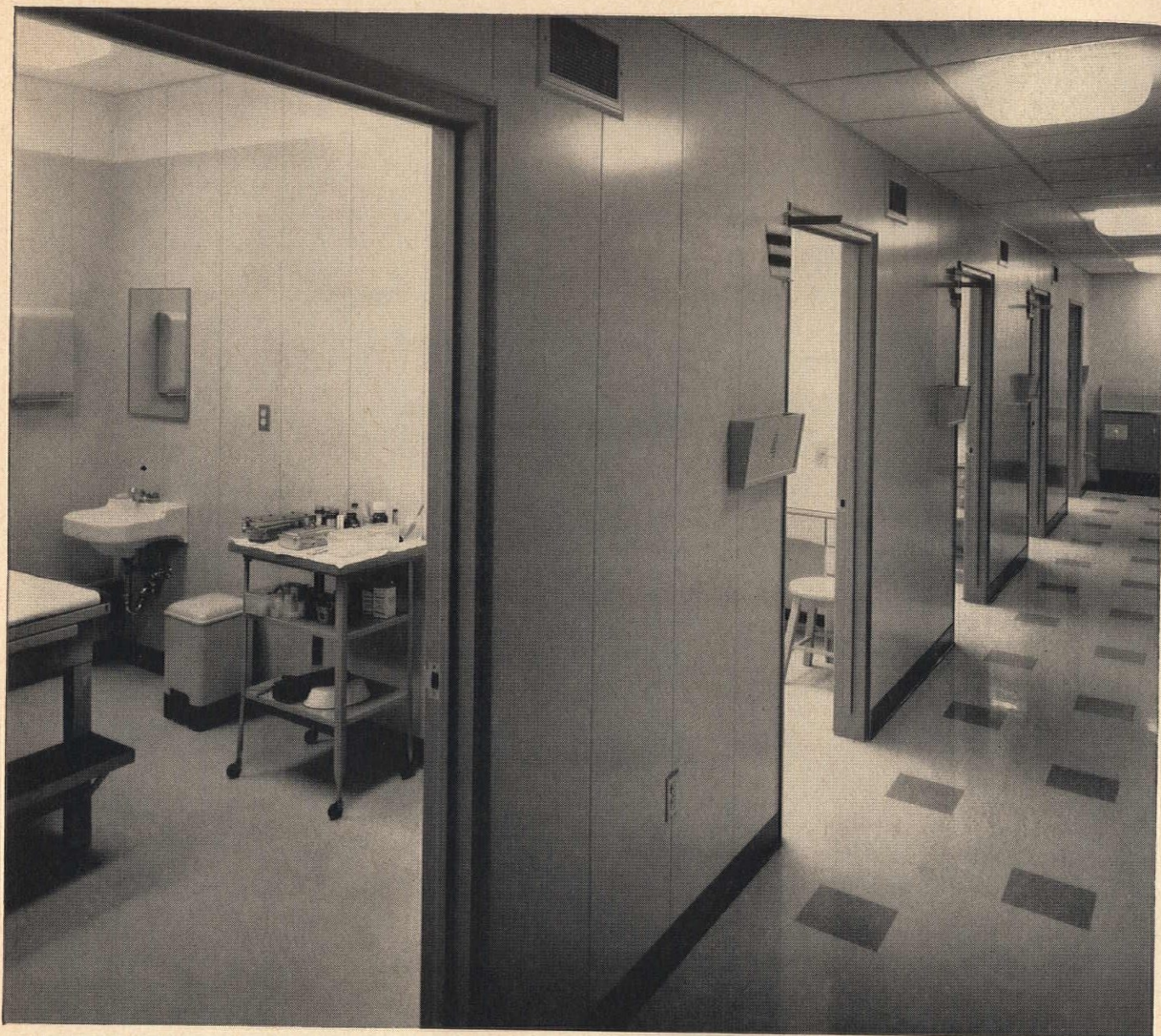
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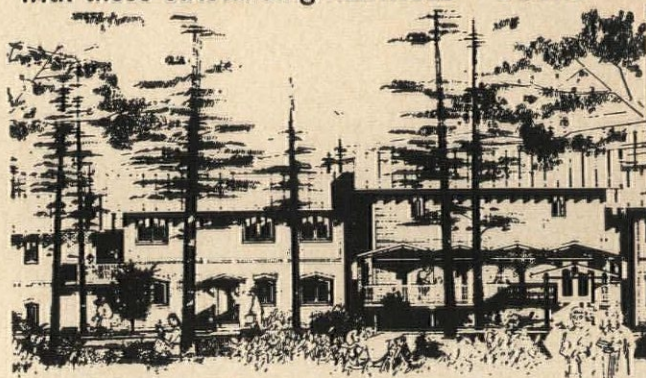


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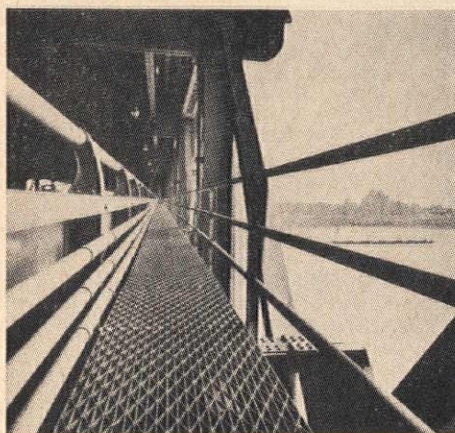
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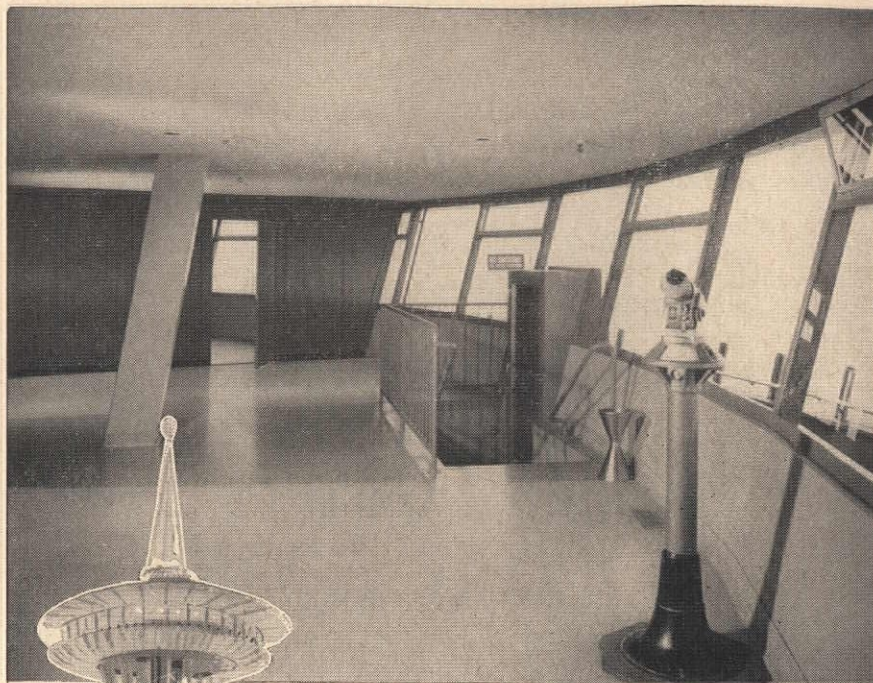
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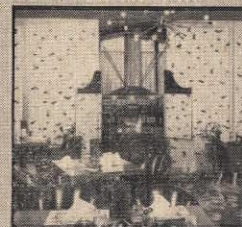
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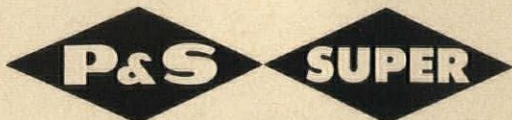
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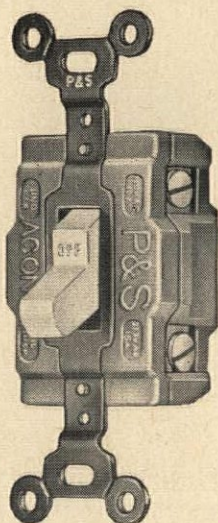


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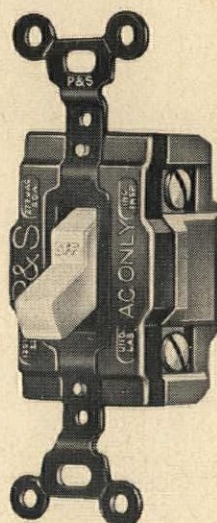


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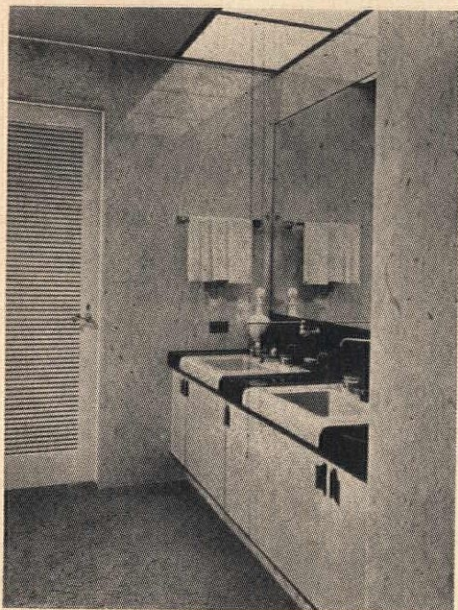
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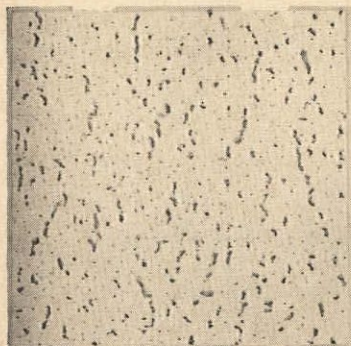
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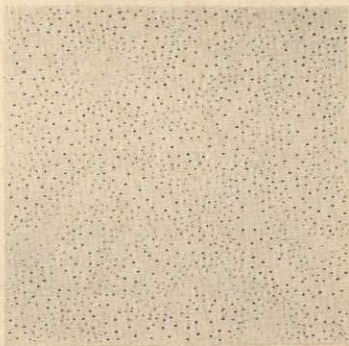
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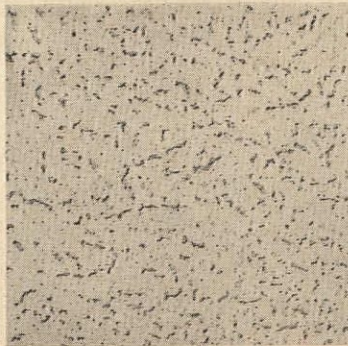
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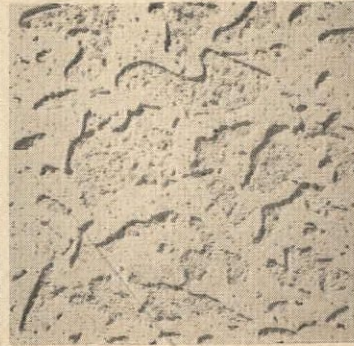
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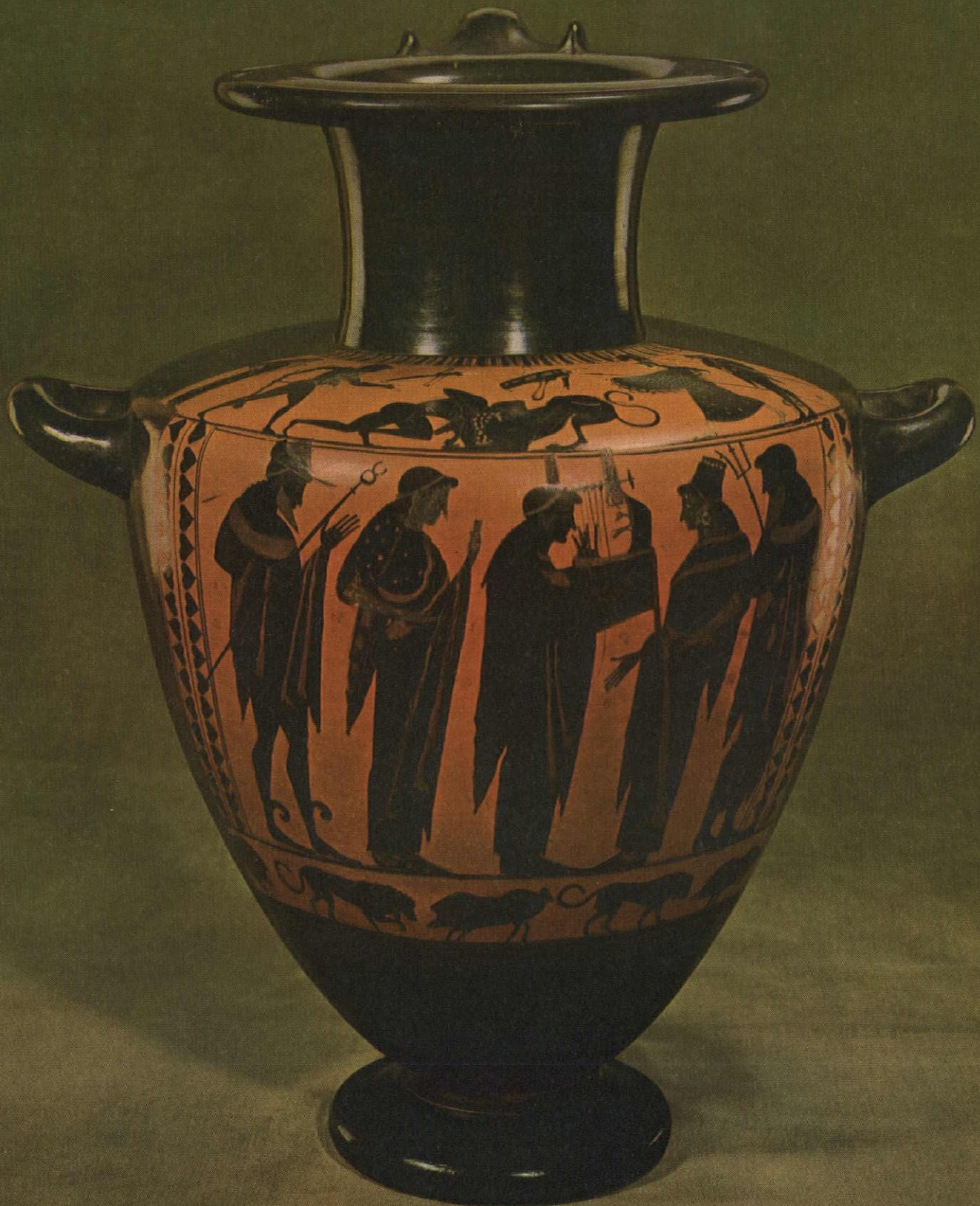


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