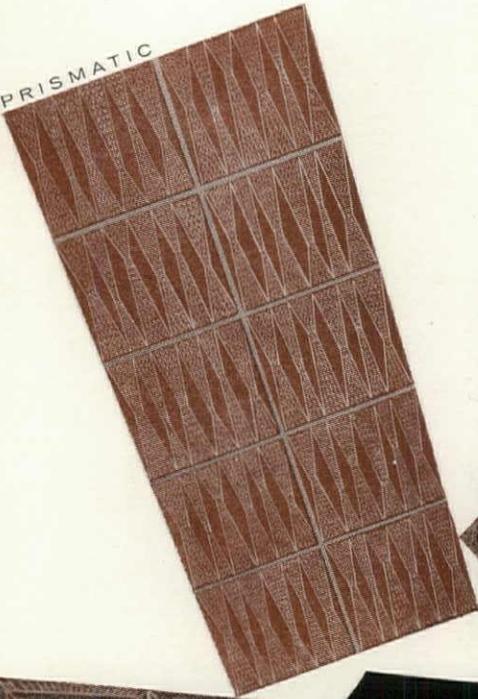


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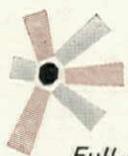
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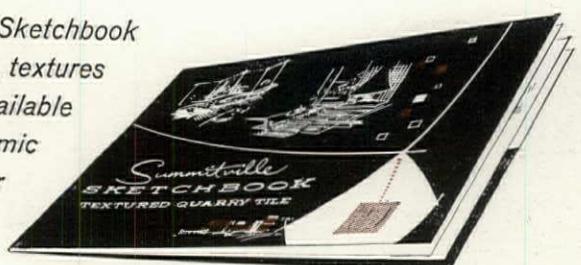
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Frank Lloyd Wright: 1869-1959

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By bringing modern art to the design of his temples, Architect Percival Goodman has introduced new light and color to the Jewish faith—a gallery.

SOM puts the bones outside the skin 146

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Record first quarter building points way to \$51 billion year, as home building and public construction boom

Building moved into spring 1959 with a vitality and variety which is remarkable even for the largest single industry in the nation. The building business was booming as never before—on the strength of a record first quarter of spending—and Congress, although it took time out for Easter recess, assorted dedications, and the opening of the baseball season (at the expense of neglected housing legislation), seemed intent on making the boom still bigger.

Architecture in spring 1959 was increasingly inventive—Eero Saarinen designed a mobile lounge that would go back and forth and up and down to whisk passengers directly from airport to plane—and unceasingly controversial, particularly in Toronto, Philadelphia, and even London and Paris, where Europeans will soon be able to rubberneck at their own skyscrapers.

Finally, as an added fillip to the variety and vitality of building and architecture in spring 1959, a University of Wisconsin professor found Broadway backing for, of all things, a play about an architect.

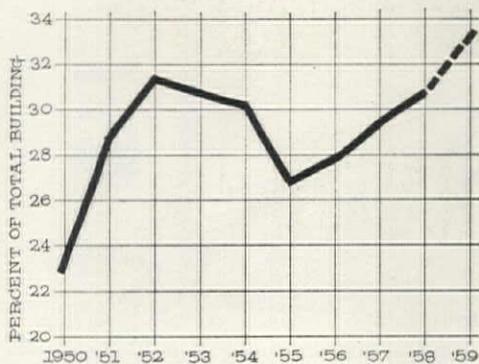
Total spending for new construction hit a first quarter record of \$10.9 billion, 12 per cent higher than last year's first quarter, which had been depressed by recession. But as far as private construction is concerned, the 1959 boom is wholly residential—private nonresidential construction actually trailed last year's first quarter by \$207 million, or about 5 per cent. The drop in nonresidential activity is attributable to the continuing slump in industrial building (down 34 per cent in the first quarter) and office building (down 9 per cent).

While industrial building is expected to recover later in the year, office construction will probably continue its slide, and end with its first minus year since 1952. One of the more peculiar facets to the slowdown in office building is a growing shift of activity from expensive center-city property to urban fringe areas.

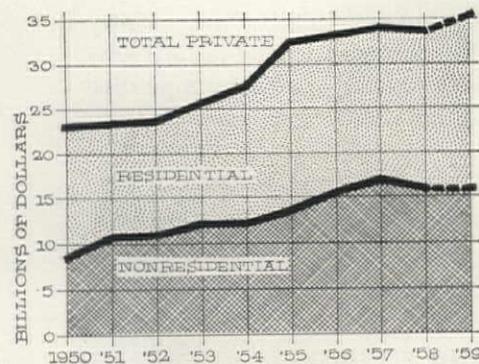
Other areas of private nonresidential building that showed minus signs in the first quarter of this year were hospital building (down 6 per cent) and the building of telephone and telegraph facilities (down 14 per cent). Both categories are expected to advance to new

highs as the year progresses, however.

Running counter to the generally downward trend of nonresidential building is the construction of stores, *continued on page 7*



PUBLIC BUILDING has been steadily rising, by the end of this year will total nearly 33 per cent of all building, a higher percentage than in any postwar year.

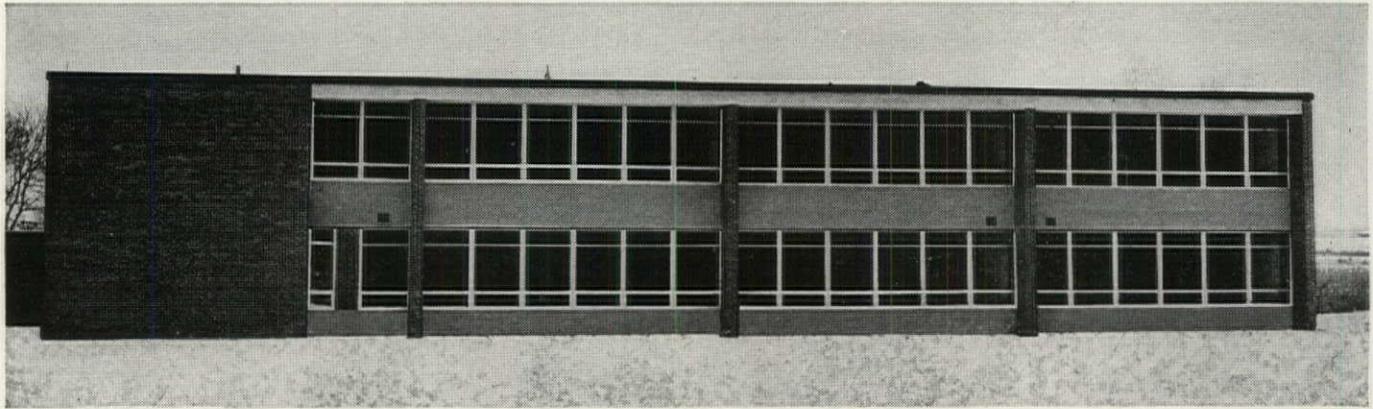


PRIVATE NONRESIDENTIAL building has, at the same time, been slipping from its 1957 high, and will probably continue its first quarter drop (down 5 per cent).

Wright dies at 89

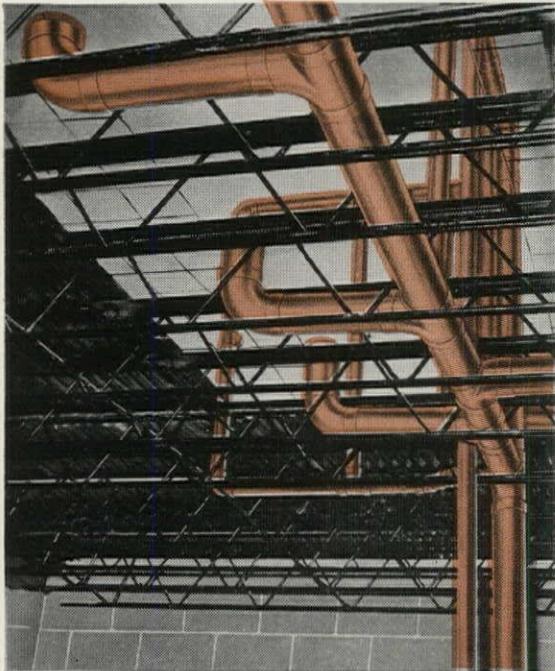
The death of Frank Lloyd Wright in Phoenix, Ariz., last month caught architects and everyone else by surprise (see obituary, page 108), despite his great age. Not only had Wright, at 89, become what seemed a permanent part of the American scene, but he had seldom, even in his later years, been ill. On a Saturday morning, five days before his death, Wright was stricken with abdominal pains and intestinal hemorrhage. Doctors at St. Joseph's Hospital operated the following Monday, and reported that Wright was in satisfactory condition for three days following the operation. Even 15 minutes before he died, Wright was reported progressing nicely. Then, suddenly, in the words of nurse Jessie Boganno, who was at Wright's bedside, "He just sighed and died." Doctors said that "we have to presume a heart attack or something similar to that caused death." Wright's body was taken to Spring Green, Wis., where he was buried near his summer home, Taliesin North.

Speculation on the future of Wright's architectural practice ceased a week later when his office announced that it will continue "as an architectural organization . . . so that his work could be carried on." It will not only execute Wright's work in process but will carry out a "waiting list of things to be done." Mrs. Wright will head the enterprise, which will be administered by the great architect's associates of the past 25 years: Wesley W. Peters, an engineer and Wright's son-in-law, Eugene Masselink, who served as Wright's secretary, Architects John Howe and Allan Davison, and others. Mrs. Wright and her associates will continue to operate Taliesin as a training ground for young architects and designers.



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restaurants, and garages. After two years of decline, store building has definitely turned around, as its first quarter rise of 16 per cent indicates. The turnabout results largely from a sharp rise in shopping-center construction. Last month, for instance, the International Council of Shopping Centers, a trade association of developers and owners, forecast 900 new centers this year, compared with only 300 in 1958.

While total private nonresidential building is below its best level, private residential building continues to expand. Spending for new dwelling units in the first quarter was \$3.4 billion, a 32 per cent increase over the first quarter of last year. And new homes were being started at a seasonally adjusted rate of 1,390,000 per year in March.

In the booming area of public building (up 16 per cent in the first quarter to a record of \$3.1 billion), there is only one worrisome spot—school building. Although it is still too early to pinpoint the reasons, school building dropped slightly in the first quarter from last year's first quarter. Perhaps some 1959 school building may have been temporarily postponed pending expected Congressional action on a federal aid program. Whatever the reason, school building is not keeping pace with classroom needs.

On the other hand, highway building continues to be the bellwether of the public sector. In the first quarter, new highway spending boomed 23 per cent above last year's similar period, and a \$6 billion total for highway spending in 1959 seems a certainty—unless the federal Highway Trust Fund runs dry, as some officials have indicated (FORUM, April '59). The federal role in highway building has mushroomed since 1956, when the Federal Highway Act was passed; this year as much as 50 per cent of total highway spending may come from federal sources, compared with about 20 per cent in 1956.

Philadelphia's mayor hits Penn Center deal

No one was turning the other cheek in the City of Brotherly Love last month, when Philadelphia's private commercial redevelopment project, Penn Center, became a storm center. The furor started when the Pennsylvania Railroad, which owns much of the Penn Center land, announced it had sold 28,000 sq. ft.—the site of its old Broad Street station—to Uris Bros.,

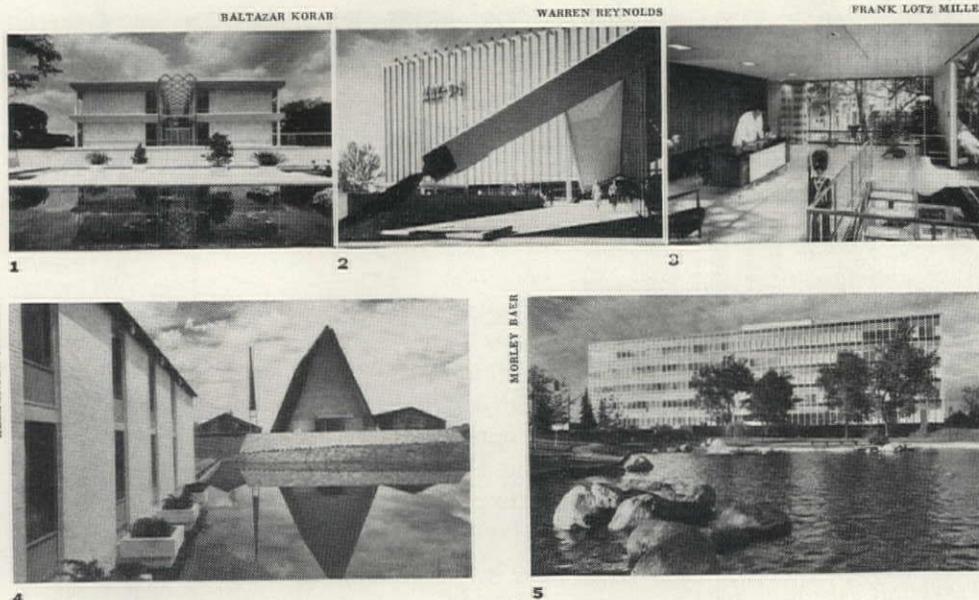
New York builders. Uris Bros. plans to build a 20-story office building, similar to the two it has already built in the center. But Mayor Richardson Dilworth, who has had his eye on the property for a city park, foamed: "The deal is a phony. The Pennsy is trying to force the city's hand. I don't think Uris has any intention of building on the site." Dilworth, with the backing of Edmund Bacon, director of the City Planning Commission, would like to use the Pennsy site and the site now occupied by the old Commercial Trust building as a plaza, which would provide an open view of Penn Center from the south and give the adjacent municipal center a handsome setting. "This is a once-in-a-century chance for the city to do a proper job with municipal building", the mayor added. "As of now, the Penn Square area is pretty messy. Putting up another soapbox like the other Uris building would ruin our big chance to make something out of the area."

The Pennsylvania and Uris Bros. both seemed somewhat stunned by Dilworth's attack, but quickly attempted to set things right. For one thing, both claim that Uris Bros. has indeed bought the land—for a total of \$3 million: a deposit of \$50,000, plus a promise of another \$950,000 within two years or whenever the new building is finished, and a mortgage of \$2 million. (Dilworth claims appraisals by the city show the land is worth at most \$2.1 million.) Uris Bros. admits, as Dilworth also charged, that its most recent Penn Center building is only 50 per cent rented, but says that it expects to get underway with the new building as soon as occupancy in building No. 2 hits 100 per cent—which, it guesses, will be sometime next year.

Uris Bros. and the Pennsy also maintain that the original Penn Center plan called for a building on the disputed site. Dilworth argues that the original plans were drawn up during a previous administration, and that he made his wishes concerning a park known to the railroad last year but was never able to get firm negotiations underway. The City Planning Commission claims it has always preferred a park at the site but has previously admitted that it would settle for a building.

The biggest obstacle to the city's taking over the Uris-Pennsy site may come from the City Council itself, which would have to approve any plan by the city to buy the site. City Council President James H. J. Tate says: "The

continued on page 9



AIA MAKES FIVE FIRST HONOR AWARDS
The American Institute of Architects last month announced the winners of five first honor awards for 1959. They are: 1) McGregor Memorial Community Conference Center of Wayne University at Detroit, Mich., by Minoru Yamasaki & Associates; 2) May-D & F Department Store at Zeckendorf Plaza in Denver,

Colo., by I. M. Pei & Associates; 3) the Diaz-Simon Pediatric Clinic at New Orleans, by Colbert & Lowrey & Associates; 4) Concordia Senior College at Fort Wayne, Ind., by Eero Saarinen & Associates; 5) Central Service Facility of the Washington Water Power Co. at Spokane, Wash., by Kenneth W. Brooks and Bruce M. Walker.



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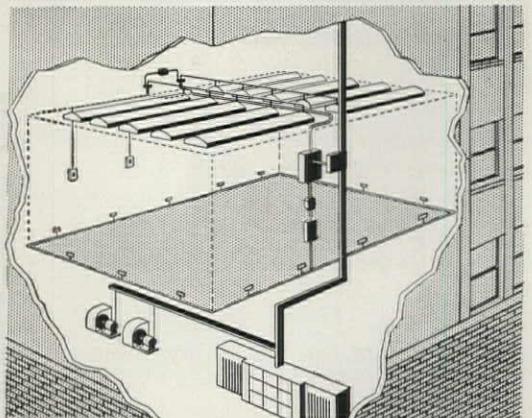
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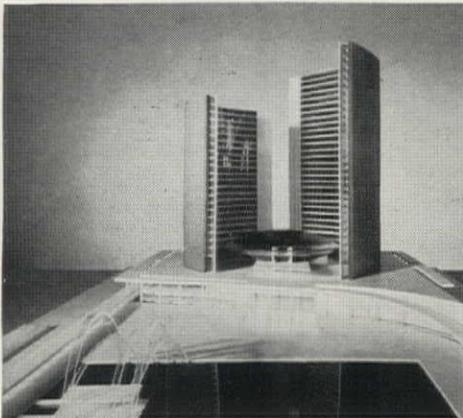
city will get a lot of tax money with a new building, and it needs to expand its tax base rather than shrink it by buying prime center-city land for parks."

Last month, it looked as if Penn Center would have a third building rather than a park, but tenacious Mayor Dilworth was not licked. "We are going to get that property," he vowed. "It's just as simple as that."

City Hall project for Toronto hits snag

Toronto's City Hall is so far just a handsome model left over from last October's mammoth competition (FORUM, Nov. '58), and last month it looked as if further progress may be slow. A major obstacle to the project has arisen in the form of Frederick Gardiner, chairman of Toronto's Metropolitan Council. Originally, Metro was to have taken over the city's old city hall (for \$4.5 million) and to have rented about 80,000 sq. ft. in the new building. Since Finnish Architect Viljo Rewell was proclaimed winner of the city hall competition last October, city officials have

HUGH ROBERTSON—PANDA



been negotiating with Rewell's Canadian associate, John B. Parkin Associates, for a formal working contract. But before that could be done, Metro had to formalize its plans to rent space in the new building—and it was here that Gardiner sounded his ultimatum.

"Metro," Gardiner huffed, "is purely a business organization. I know exactly what it costs to rent office space in a dignified, utilitarian building in this city and that's what Metro is prepared to pay the city for space." Gardiner says he will pay a top of \$6 per sq. ft. for ground floor space, and \$5 per sq. ft. for other space.

No one knows for sure yet how much

space in the new city hall would cost, but there have been some educated guesses. Voters initially approved \$18 million for the project in 1955, which was to pay for 600,000 sq. ft. at around \$30 per sq. ft. But Rewell's design included an additional 100,000 sq. ft.—and building costs have risen an estimated 15 per cent since 1955, say Toronto experts. Total cost now looks to be more like \$26 million than \$18 million, they say, but other architects note that this does not take into account possible difficulties of working with an unusual design. They peg the top figure for the whole project at \$45 million. On the basis of their own unofficial estimates, city officials privately guess that space will cost \$8 to \$10 per sq. ft.—well above Gardiner's top figure.

In order to pin down the cost of the project, the City Council last month approved the first phase of the project, so that Parkin can give them a firm cost figure. (The council action also commits the city to pay architectural fees totaling \$255,000.) Parkin told the council: "We can always bring the project back to price—but I don't know what sort of a city hall you would have as a result."

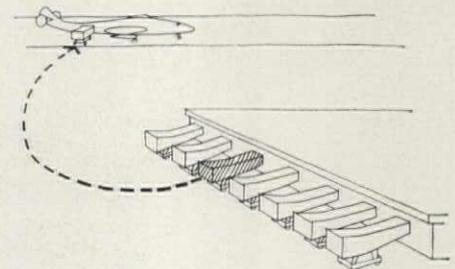
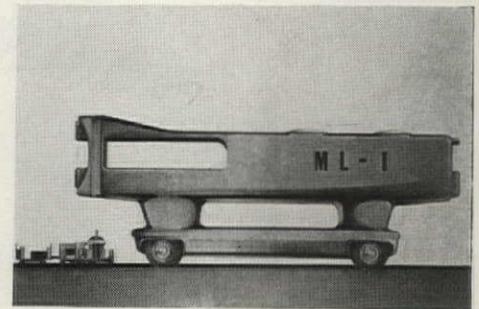
Some backers of the project claim that Gardiner is miffed because Metro was not consulted about the design competition for the hall. Gardiner holds at least one ace if he persists in his refusal to pay more than \$5 per sq. ft. for city hall space: the city needs Metro in the project. Moreover, Gardiner's vociferous and widely quoted blasts about the cost of the project may stir up a taxpayer rebellion against approving any funds for the project beyond the \$18 million already okayed.

Saarinen designs lounge-bus for Chantilly airport

One of the most vexing problems of the jet age has been the difficulty of expanding existing airport facilities to accommodate jets. Last month, the Federal Aviation Agency, which is responsible for the building of the nation's first all-new jet airport about 17 miles from Washington, D. C. at Chantilly, Va., announced a new vehicle for moving passengers to planes that would eliminate the need for "fingers" and satellite facilities that create airport sprawl. FAA believes that, although the vehicle will first be used in

an all-new jet age airport, it could prove a suitable—and economic—solution to the problem of expanding existing airports. The vehicle, called a mobile lounge, would take passengers directly from the main terminal to their planes, with a minimum of walking. It was designed by Eero Saarinen & Associates and Ammann & Whitney, who are designing the International Airport at Chantilly.

The mobile lounge will make it possible to reduce the main terminal area by one-third under what would have



been required for a "finger" design and its many corridors and ramps extending out toward the runways. It should also reduce the jockeying of huge jet planes and keep passengers away from jet exhaust—and noise. Deputy FAA administrator James T. Pyle says he will "immediately proceed with plans to award a contract for development of the vehicle," and he hopes to have a prototype by next January. Potential manufacturers estimate that the mobile lounges will cost around \$100,000 each, and Pyle anticipates buying 20 of them for Chantilly. The airport itself, the design of which has not yet been revealed, is expected to be ready for business by 1961. Congress has appropriated \$62.5 million for it already, and there will undoubtedly be future appropriations.

The mobile lounge will be about 60 ft. long, 15 ft. wide, and seat 80 passengers. It will be self-propelled, driven from either end, and capable of being elevated to fit various heights of aircraft entrances. The entrance of the

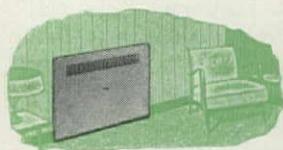
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lounge will fasten pneumatically to the side of the terminal itself until the mobile lounge moves away, when the terminal entry will be automatically closed.

Big profits in slums, New York study shows

Planners and government officials have long known that one of the toughest problems to overcome in urban redevelopment has been the profitability of slums. Last month, University of Pennsylvania Professor Chester Rapkin announced results of a study of a 20-block slum area in New York City's West Side Renewal Project, and not only verified the profitability of slums but also documented another significant fiscal facet of slum finance: the flight of high-grade investment capital from a slum area.

Rapkin's study, which was backed by the City Planning Commission, is a thorough examination of the anatomy of a slum and its effects on the city. The profitability of slums shows clearly in Rapkin's figures of net operating income for brownstones, many of which have become rooming houses. In the

study area, it is as high as 12 to 14 per cent a year. Actual return on cash invested in such slum dwellings ran from 23 per cent to a top of 42 per cent. With returns like this from overcrowded, low-maintenance buildings, it is hard to see how city officials can persuade slumlords to rehabilitate their properties, and thereby cut down their own yields. However, the report recommends that the city make "special attempts to enforce the city's occupancy laws" as a start toward taking some of the easy profits out of slumlording in the West Side area.

Another knotty problem, and one which has seldom been so carefully documented as in Rapkin's report, is that of attracting institutional mortgage funds to the area. "The decline of mortgage money flowing into the area and the increasing stringency of mortgage terms" is the most serious difficulty in initiating a renewal program for the area, the report says. Most mortgage loans made in the area required amortization in "an unusually short period of time"—"hardly any loans were for a period in excess of ten years." Second, third, and even fourth mortgages are the rule rather than the exception.

Other findings in the West Side area were that there had been virtually no

new construction there from 1925 to 1956 despite a population increase in the area of 56 per cent. Some 27 per cent of the population lives in overcrowded conditions "reminiscent of slums in the nineteenth century." Only 28 per cent of all the owners of property actually lived on their property in 1956, compared to 36 per cent in 1945. And slum dwellers in the area pay rents that average \$2.30 per sq. ft.—compared to around \$1.30 per sq. ft. in "well-maintained elevator apartments."

Jury gives honor awards to six Chicago buildings

For the first time in its annual selection of significant buildings in and near Chicago, the Association of Commerce & Industry and the Chicago chapter of AIA got the architectural members of their jury from outside the city (Ralph Rapson, dean of the department of architecture at the University of Minnesota, Harris Armstrong, St. Louis architect). Two top industry representatives were local men: James Rutherford, vice president of Prudential Insurance Co., and George L. Irvine, vice president of General Electric Co. Awards went to: the International Minerals & Chemical Corp., Skokie, Ill., designed by Architects Perkins & Will; Gompers Junior High School at Joliet, by Skidmore, Owings & Merrill; Unitarian Church of Evanston, by Schweikher, Elting & Bennett (see page 130); South Side Housing Development, Bertrand Goldberg Associates; the Harold Levin house, in Olympia Fields, Ill., by George Fred Keck and William Keck.

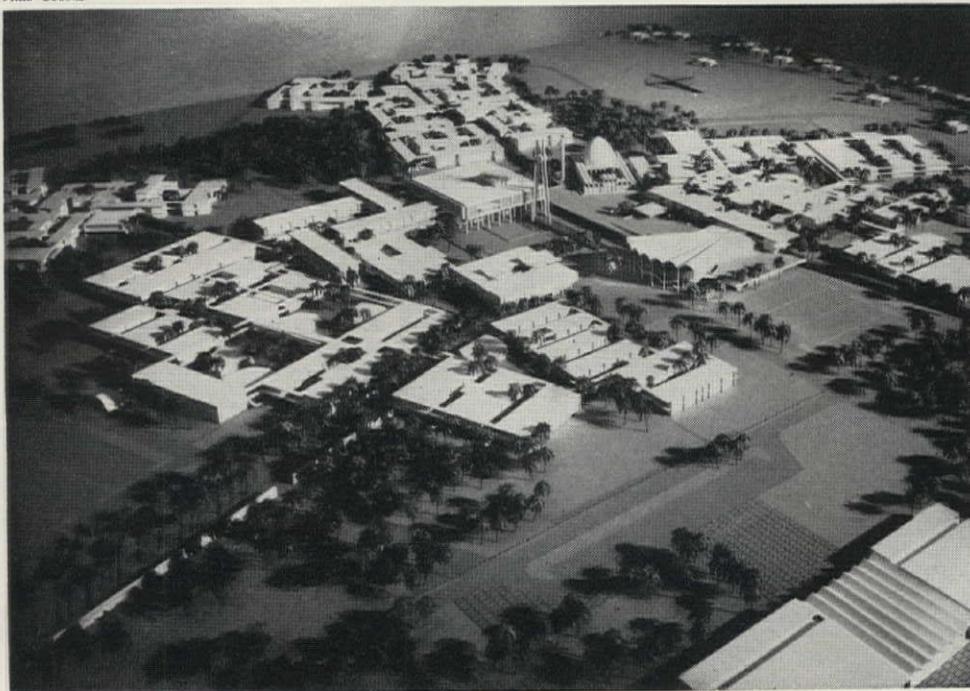
Sculptor Richard Lippold also won an award for his work in the lobby of the Inland Steel building.

Play about Sullivan gets Broadway backing

There have been several fairly successful novels about architects, but somehow dramatists have seen little drama in architecture. (One exception was a drama by Eugene O'Neill which ran for almost a year on Broadway in 1926.) Next season on Broadway, however, playgoers may be able to see a drama about a real-life architect—Louis Sullivan. The play, written by

continued on page 13

FRED STONE



GROPIUS ANNOUNCES PLANS FOR BAGHDAD UNIVERSITY

The Architects Collaborative, headed by Walter Gropius, last month unveiled plans for a 12,000-student Arab University at Baghdad. The site for the university is on a small peninsula jutting into the Tigris River, across

the river from the island site of Frank Lloyd Wright's proposed Baghdad Opera House (FORUM, May '58). The university complex consists of low-lying, air-conditioned buildings with exteriors of white concrete.

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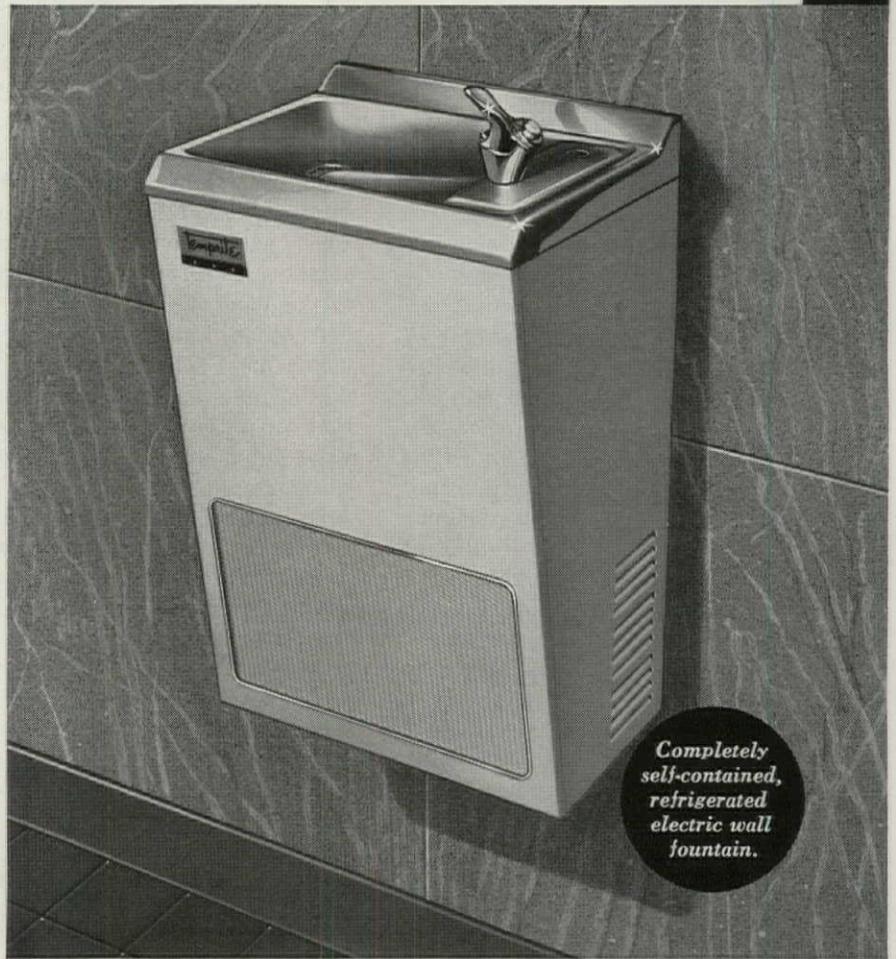
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Edward Kamarck, a young University of Wisconsin associate professor, covers the last year of Sullivan's life and, while it will not be a strictly biographical account, it will, Kamarck says, bear about the same relation to the truth of Sullivan's life as *Inherit the Wind* did to the life of Lawyer Clarence Darrow. Although the action of the drama takes place during Sullivan's last days, it encompasses his whole lifetime. The producers hope to get Frederic March to play the part of Sullivan (Kamarck says that Frank Lloyd Wright will not play an important part in the play).

Kamarck was inspired to write about Sullivan when he saw "the lovely bank at Columbus, Wis." (Farmers and Merchants Union Bank). Kamarck says that the play will be a "delineation of Sullivan's fight against the pretentious eclecticism of the Columbian Exposition." Its theme, says the playwright, is an "affirmation of the need for genuine creativity in arts and in architecture."

Civil Service clamps down on HHFA appointments

The federal Housing & Home Finance Agency found itself in hot water with the federal Civil Service Commission last month over personnel policies. CSC jumped on HHFA when the latter's new deputy administrator, Walter Rosenberry, sent out the following letter to key HHFA officials and regional directors: "I find that the Senators and Congressmen are very much interested in all appointments and promotions of their constituents. In order that this information may be supplied to them, will you please see that I am supplied with the names and proper background of all personnel you are considering appointing or promoting. . . ."

As soon as it got wind of the Rosenberry letter, CSC clamped down on all HHFA appointments and promotions, and installed its own agents to oversee

HHFA personnel policy. CSC chairman Roger W. Jones wrote HHFA Administrator Norman Mason that "Any political clearance of candidates for positions under the competitive civil service system would clearly violate the Civil Service Act and Presidential order 10577. . . . It is the responsibility of CSC and the appointing authority to make the decision as to qualifications of an applicant or a person proposed for promotion."

Mason quickly canceled the Rosenberry letter, but the damage was done. CSC will continue to scrutinize all appointments and promotions for an indefinite period, and thereby will effectively freeze action in a favorite political sanctuary. And it will certainly put a quietus on the not uncommon practice of political committees clearing appointments to the housing agencies.

Briefs

Madison, Wis. will go ahead with its newly authorized Civic Center-Auditorium despite the death last month of Architect Frank Lloyd Wright. Under terms of its contract with Wright, the city could have abandoned his design in event of his death, but Mayor Ivan A. Nestingen says: "We can complete the final plans and specifications with the talents and capabilities of the staff of the Frank Lloyd Wright Foundation."

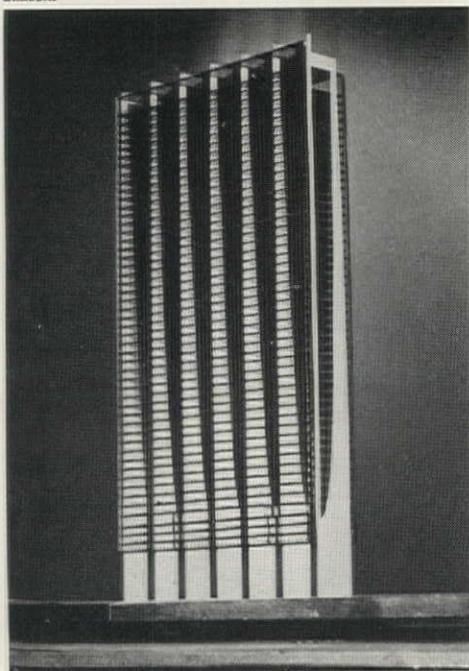
A new "satellite city" is planned for a site about 16 miles northwest of Toronto by a group of British, Canadian and U.S. investors headed by Developer John W. Galbreath. To be called Bramalea, the 5,148-acre site will have industrial parks, commercial and recreational areas, and will eventually house 50,000. Construction is under way on the first industrial park site and some residential areas, and the developers hope that, thanks to the drawing power of the industrial sites, over \$500 million will eventually be invested in Bramalea.

Alarms were sounded last month when it was discovered that the Washington monument is sinking faster into its bed of clay and gravel than it had been. The monument has been settling at an average rate of 1/16 in. per year since 1884, but National Capital Parks Engineer Henry Weeden announced that recent measurements showed that in the past year the monument has settled in 3/16 in. **END**

Paris and London plan for first skyscrapers

Two of Europe's most tradition-bound capitals last month moved ahead with plans to put a large dent in architectural tradition. Both Paris and London announced that they would soon have skyscrapers: for Paris, the tallest in Europe at 52 stories (below), and for London, a 31-story building, tallest in Britain (right). The decision is more revolutionary for Paris than in London, for it means a drastic face lift for the famed Left Bank of Montparnasse, and a new look for the city's historic sky line. However, as a concession to the area's thousands

BRASSAI

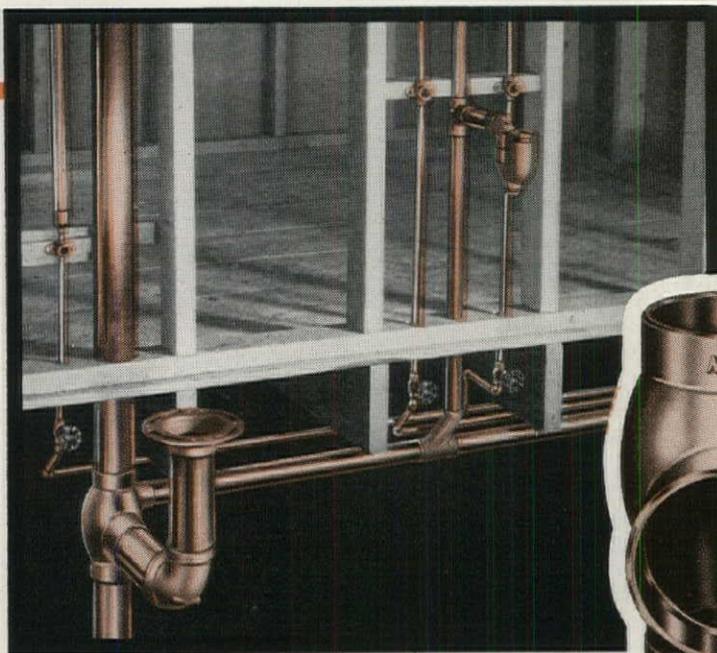


of artist-denzers, the government's plan for the new \$120 million complex of structures (including hotel, office tower, and stores) provides 25 acres for artists' studios.

The building will be of prestressed concrete faced with blue-tinted glass, and will be about two-thirds as high as the Eiffel Tower. Famed Author-Critic Andre Malraux, now Minister for Cultural Affairs, swept away most official doubts about the project when he prophesied: "If we accept the skyscraper, modern architecture will penetrate into Paris. If modern architecture does not penetrate Paris, it will not penetrate into France."

London's project consists of three buildings, the tallest a 370-ft. office tower of reinforced concrete with a glass and stainless steel curtain wall. Unlike the Paris project, London's is a private scheme, to be built at Millbank, Westminster, near the Tate Gallery, for around \$14 million.

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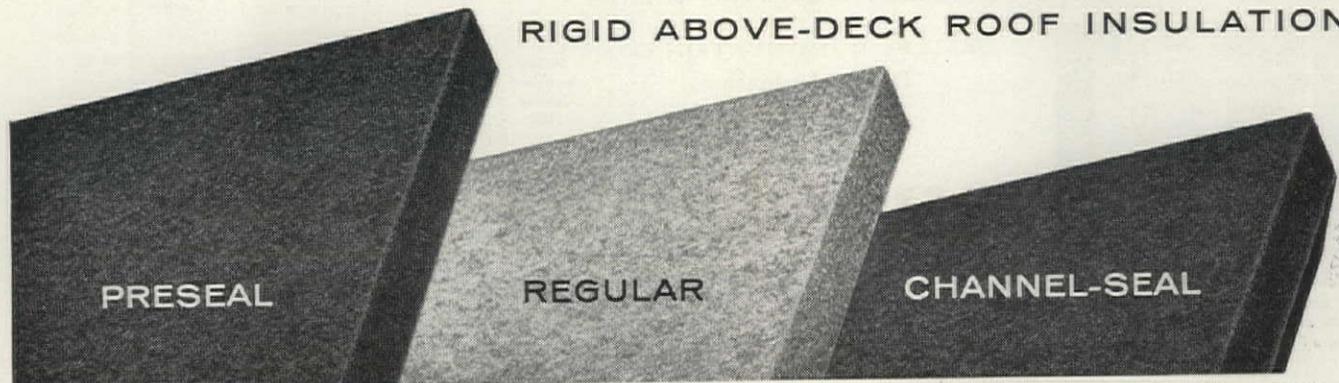
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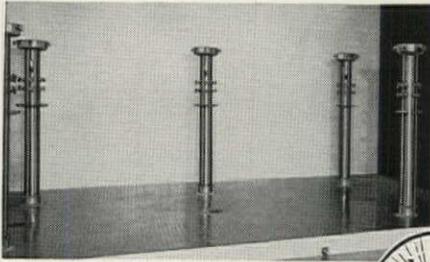
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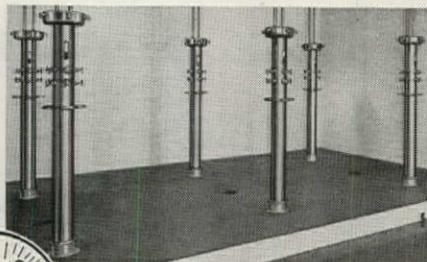
See 1959 Sweet's Architectural File, Catalog 10a Ce.—Write for Specifications, Samples, Information Manual—The Celotex Corporation, Chicago 3, Illinois.

FOR GIRLS

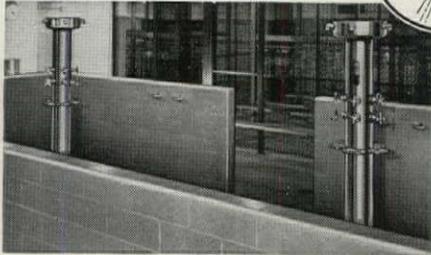


At Harrington Senior High Ardmore, Pa. Bradley Multi-Person Column Showers above are in girls' shower room.

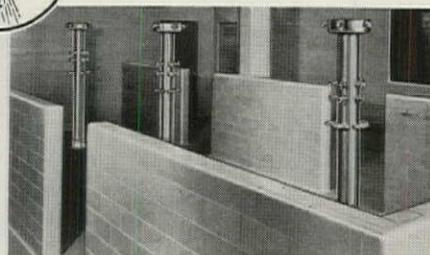
FOR BOYS



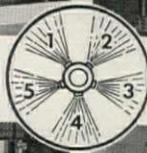
At Harrington also the boys' shower room is equipped with Bradley Column Showers.



The Welsh Valley Jr. High Narbeth, Pa. has 2, 5-person Bradley Column Showers installed within a 4 ft. tile wall enclosure.



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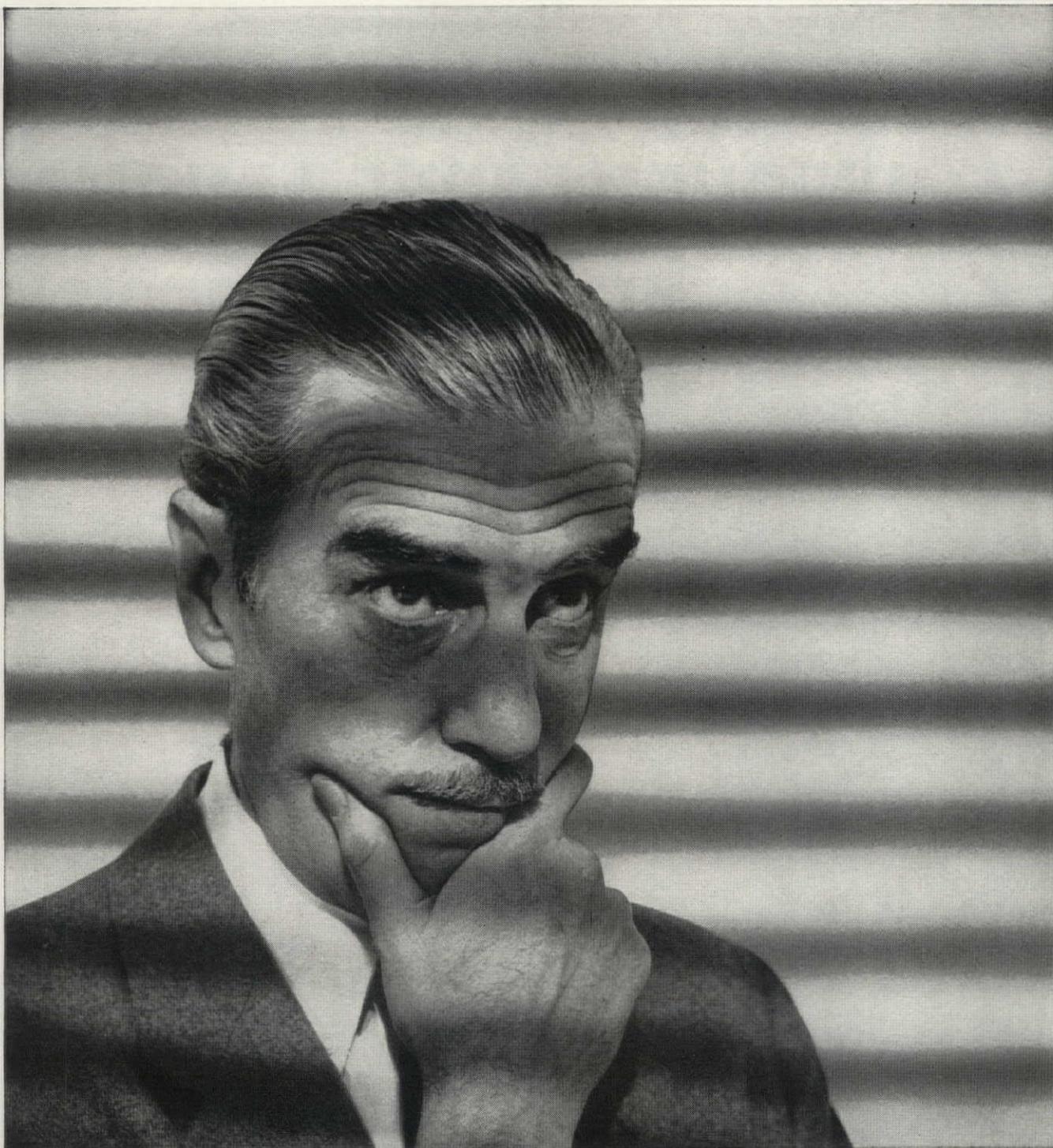
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Architect, Harrington Senior High, Vincent P. Kling, Philadelphia; Engineer, Ernst D'Ambly. For the Welsh Valley School, Architect, Harbison, Hough, and Larson, Philadelphia; Mechanical Engineers; Moody & Hutchinson



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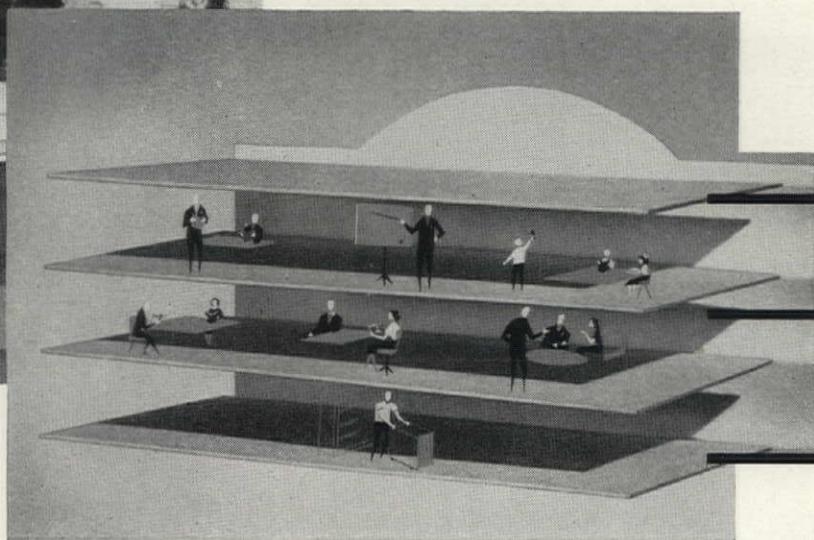
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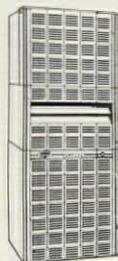
Three Landmarks cover 10,000 sq. ft.—reading rooms, offices, club rooms

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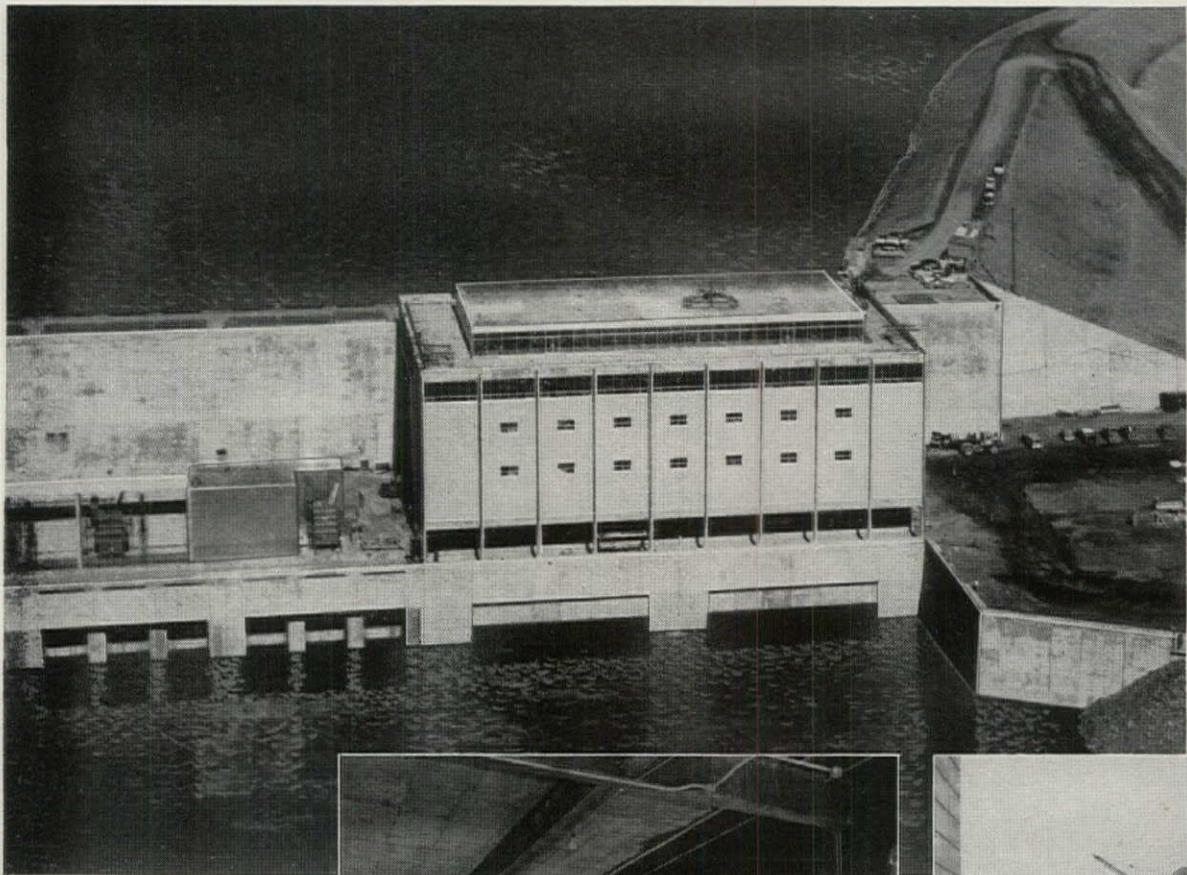
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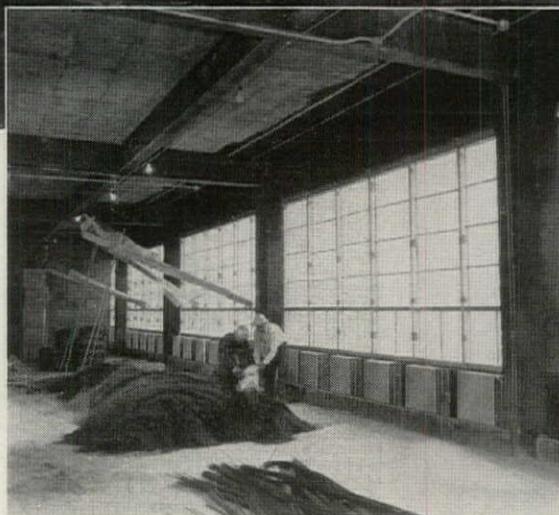
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AMERICAN-SAINTE GOBAIN CORPORATION is a merger of the former American Window Glass Company, Pittsburgh, Pa., and the former Blue Ridge Glass Corporation, Kingsport, Tenn. (which was a wholly-owned subsidiary of Saint-Gobain of Paris, France). American Window Glass Division plants are located in Arnold, Jeannette, Ellwood City, Pa.; Okmulgee, Okla. Blue Ridge Glass Division plant is located in Kingsport, Tenn.

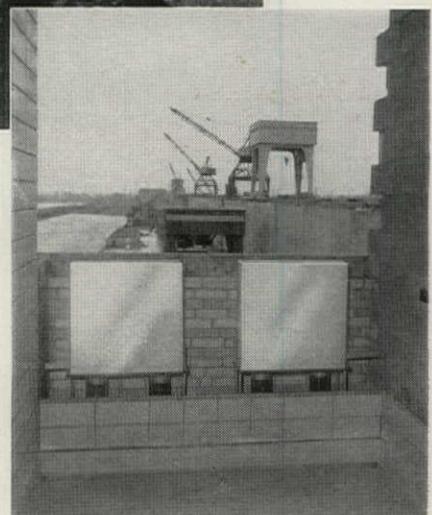
On the waterway



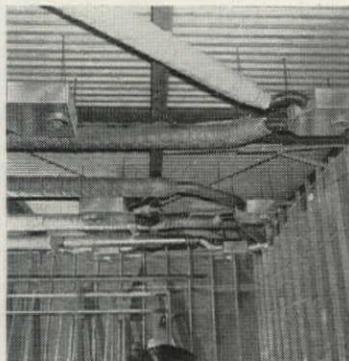
Aerial view of the Robert H. Saunders—St. Lawrence Generating Station, in which a Connor High Velocity system provides "constant comfort conditions."



Some of the 131 Under-Window units installed here. Because of the highly efficient way in which it blankets the cold outer walls with warm air, this attenuator is ideal for the climate, where cold wind, ice, and snow vigorously bear in upon the buildings much of the time.



Under-Window units, two of which are shown here partially installed, produce a draftless air flow pattern upward along the wall and out under the ceiling, effectively conditioning an area approximately 25 feet from the outside wall.



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Connor Under-Window Model Valve Attenuators installed here represent important new dimensions for today's architect in his effort to combine function and decoration effectively.

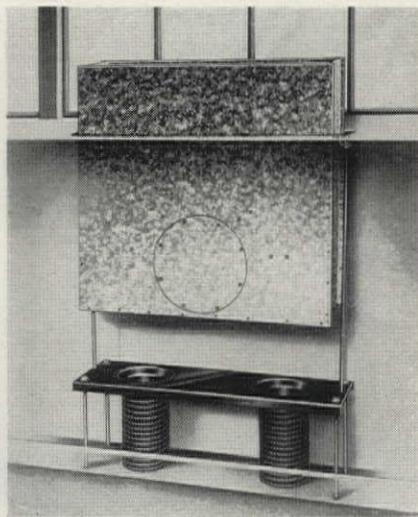
The unique design of these Under-Window units permits their removal through a top discharge grille. And this single design feature—offered exclusively by Connor—was eminently beneficial to the architect in two totally unprecedented ways:

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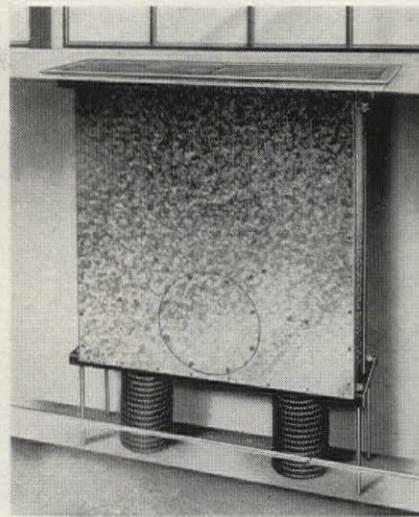
Additionally, these Under-Window units satisfied several special engineering demands for balanced air delivery, zone controlled air diffusion, and space conservation.



Demonstrated here is the way in which the Under-Window units are permanently enclosed by the glazed tile wall and ledge.



Ease of installation and removal. The units are simply inserted or removed through the grille opening at the top, and clamped (when installing) to mounting plates.



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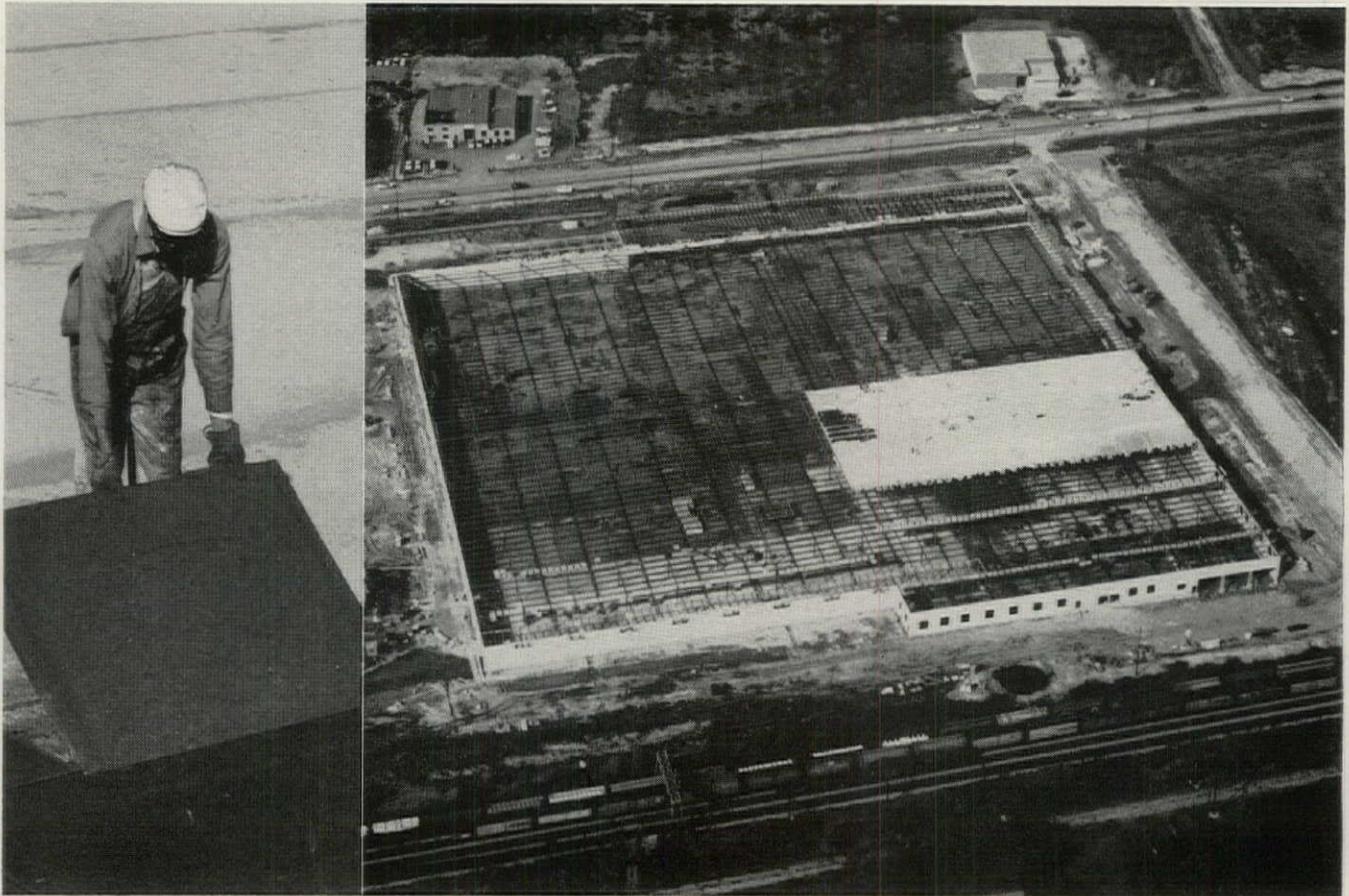
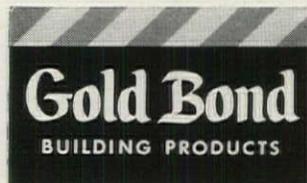


Photo shows part of 450,000 square-foot, Gold Bond Poured Gypsum Roof Deck in place on F. N. Burt Co. factory, Cheektowaga, N.Y. Deck was insulated with Gold Bond Roof Board.



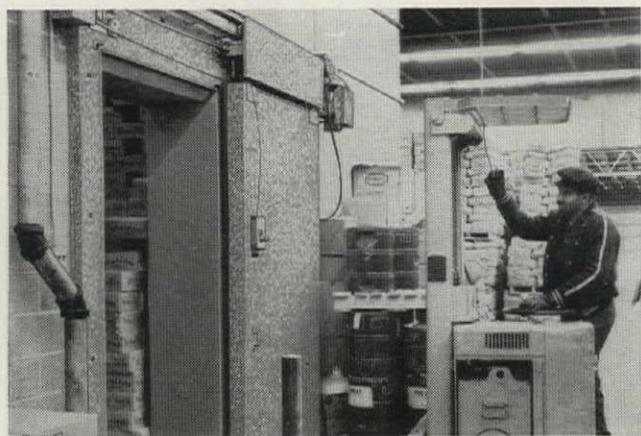
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The building has unusually large bays, approximately 27' by 27' with flat slab reinforced floors 9" and 10" thick. While the building is only seven stories, and the floor live load 100# per square foot, heavy loads must be supported by the columns because of the large bays.

Decision by the Architects-Engineers, Graham, Anderson, Probst & White, to use high strength reinforcing bars was based on utility rather than on initial economy.

For example, a first story column with conventional steel verticals consisting of two concentric spirals contain-





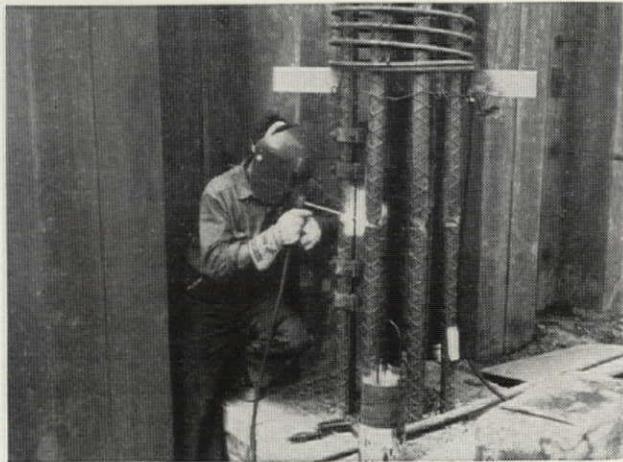
Washington National Insurance Company Building, Evanston, Illinois. Graham, Anderson, Probst & White, Architects-Engineers, Chicago. Norman F. Brunkow, Chief Structural Engineer. A. L. Jackson Company, General Contractor, Chicago. Gateway Erectors, Inc., Steel Erectors, Chicago.

ing 22 No. 11 bars, limited to a design stress of 20,000 PSI, would have been 32" in diameter. The same column using 11 No. 18S butt-welded, high strength bars, with a possible design stress of 30,000 PSI, measures 26" in diameter—a saving in floor space of approximately 2 sq. ft. per column.

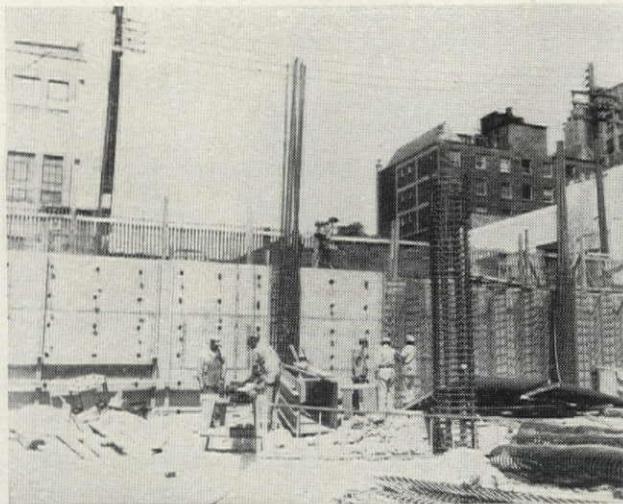
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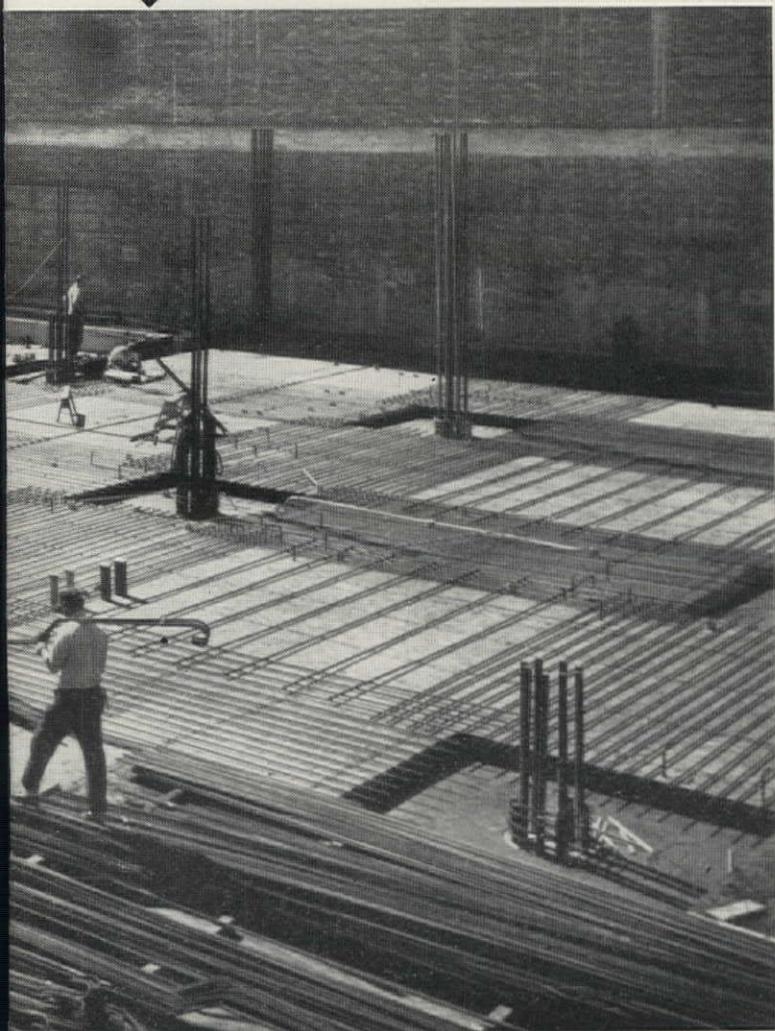
Progress photo below shows the setting of reinforcing steel in the second floor and indicates the staggered heights of column verticals.



NO. 18S HIGH STRENGTH REINFORCING BARS used in column verticals are electrically butt-welded in basement story adjacent to steel sheeting. To accomplish the weld, the lower bar is furnished with a square cut end and the top bar is beveled at 45 degrees from each side to form a chisel end. Clamps are used to hold bars in alignment.



This photo shows first and second story column verticals extending above the basement floor after having been butt-welded to the dowels in caisson tops. Bars are No. 18S high strength types furnished by Republic Steel.



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Contractor:
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Son, Inc.
Hawthorne, N.Y.

**Consulting
Engineer:**
Giffels &
Vallet, Inc.
Detroit, Mich.

Architect:
L. Rossetti
Detroit, Mich.

*-the Comfort
Computation*

came out . . .



The Dunham-Bush 'HAH' is designed for ceiling installation which conserves space vitally needed for engineering purposes.

Of course, IBM really didn't employ any of its masterfully precise computers to predetermine whose air conditioning equipment would best serve their new Engineering Laboratory at Kingston, New York.

But all equipment selected was calculated to meet the important demands modern industry must make to ensure personnel comfort and equipment protection.

For example, here at Kingston, 92 engineered Dunham-Bush Horizontal Air Handling units efficiently deliver conditioned air to create the climatic interior that's seasonally required. Dunham-Bush units have operational versatility that enables them to cool, heat, filter, or dehumidify air, according to temperature requirements. Additionally, such Dunham-Bush heating products as finned tube radiation with expanded metal covers, horizontal and cabinet type unit heaters, and F&T traps and strainers are used throughout the laboratory.

Contact your nearest Dunham-Bush sales representative for assistance when your next heating or cooling job arises.

You'll find that this one source—one responsibility is of inestimable value.



Close-up of Dunham-Bush 'HAH' which cools, heats, filters, dehumidifies air.

Dunham-Bush, Inc.

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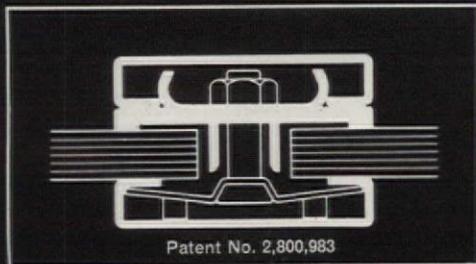
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NO. 33

MUNTIN BAR

The mirror reflects it better than we can say it: The PITTCO No. 33 Muntin Bar has stunning simplicity of line because it has no visible fastenings—a result of PPG's constant effort to eliminate visible fastenings wherever possible in PITTCO members.

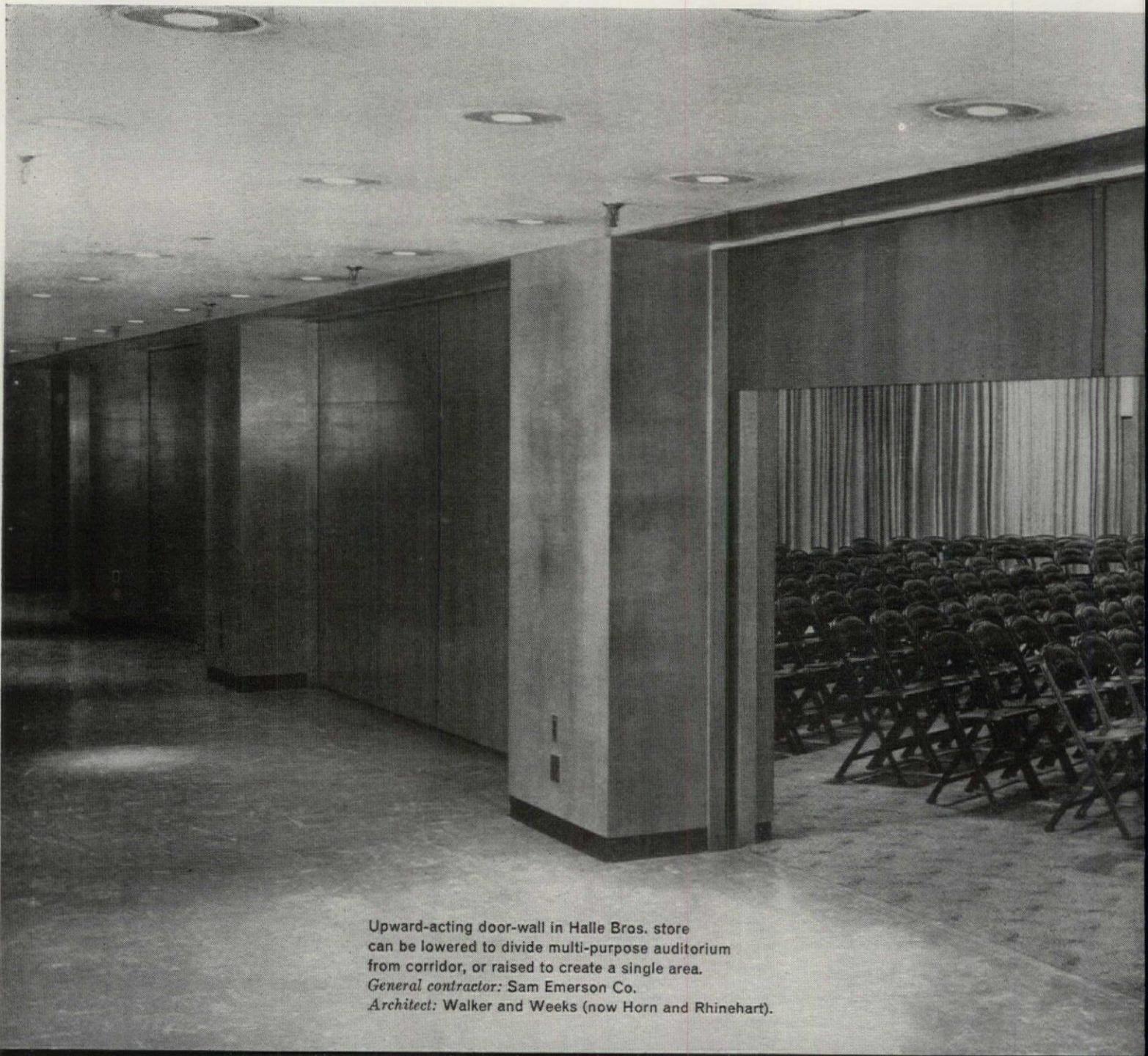
Consult your PITTCO Store Front Metal Representative for information on complete line of PITTCO glass-holding and decorative metal members, or refer to Sweet's Architectural File—Section 21.



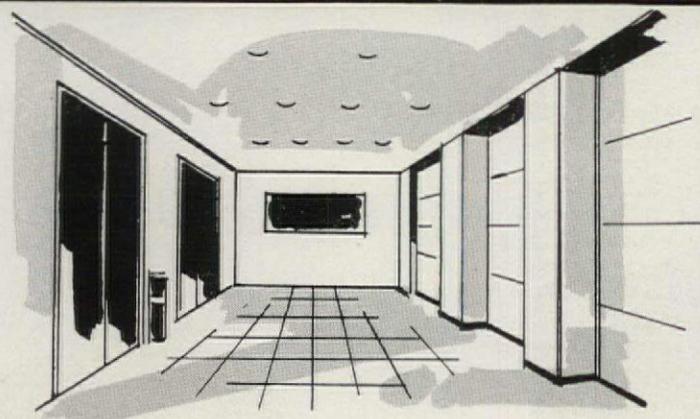
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PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



Upward-acting door-wall in Halle Bros. store can be lowered to divide multi-purpose auditorium from corridor, or raised to create a single area.
General contractor: Sam Emerson Co.
Architect: Walker and Weeks (now Horn and Rhinehart).



The "OVERHEAD DOOR," installed in series, can be lowered to let corridor serve as area for elevator traffic. Door designs are available to complement any architectural design or engineering requirement.



Door-wall can be raised to make corridor serve as expanded selling area. Overhead Door Corporation, world's largest maker of upward-acting doors, fabricates its own components.

In Halle Bros. department store, Cleveland...

upward-acting door-wall idea lets corridor do extra duty

This special opening problem called for design of a "movable wall" installation . . . to quickly convert a wide corridor into extra space for selling or other store activities. Working with the engineering staff of Overhead Door Corporation, the architect solved this problem with The Original "OVERHEAD DOOR"—providing a series of upward-acting sectional door-walls that rise into a false ceiling.

This disappearing door-wall idea is one of many special door jobs expedited by architects all over the nation, with the help of factory-trained personnel from Overhead Door Corporation and its distributors. In problems requiring doors of any size, shape or weight . . . in wood, aluminum or steel . . . for commercial, industrial or residential use . . . the "OVERHEAD DOOR" specialists follow through with responsible, warranted service.

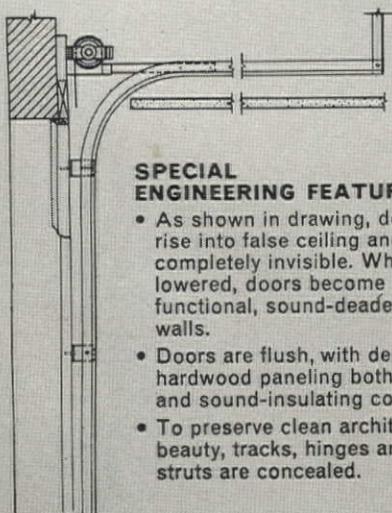
To save spec writing and drafting time on any special opening problem, see your local distributor of The "OVERHEAD DOOR" (or Sweet's "A" file) for our upward-acting door specification catalog . . . with complete drawings . . . prepared by architect consultants. Learn from your distributor why, for over 38 years, architects have specified The "OVERHEAD DOOR" more than any other brand.

The "Overhead Door" made only by
OVERHEAD DOOR CORPORATION
Originator and perfecter of upward-acting sectional doors

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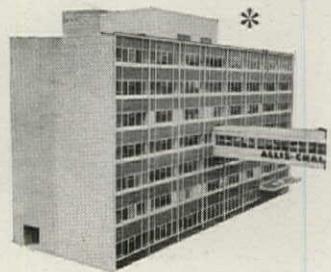
SPECIAL ENGINEERING FEATURES

- As shown in drawing, doors rise into false ceiling and are completely invisible. When lowered, doors become functional, sound-deadening walls.
- Doors are flush, with decorative hardwood paneling both sides, and sound-insulating cores.
- To preserve clean architectural beauty, tracks, hinges and struts are concealed.

© 1959, O. D. C.



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from drafting board to building occupancy**



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STEEL and ALUMINUM

Windows and Curtain Walls

There's a short-cut through window and curtain-wall problems — all the way from rough drafting stages to occupied building.

Architects who have used this short-cut agree: it's one of their safest, surest, most satisfactory routes to successful, early project completion.

And little wonder! Bayley has been building this short-cut for you for more than *three quarters of a century!*

All you do is this: put your window and curtain wall problems in Bayley's hands *while your project is still in the rough drafting stages.*

- This way, you often solve some of your biggest problems *before they arise.*
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- You avoid reworking window details later on.
- You get pre-engineered economies: a soundly built wall, soundly installed.
- You get client approval of completed plans at an earlier date.

Your local Bayley representative will be glad to give you more details on these and other advantages of letting Bayley work with you, without obligation. Call him at any time! Also see Sweet's File or write us for Bayley catalogs.



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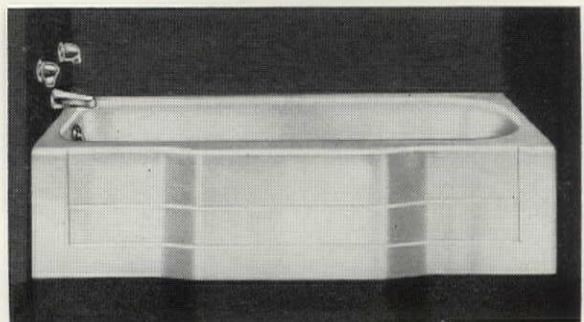
The new *Emblem*, shown on left page, is a typical salable combination of styling by the staff of designer Dave Chapman and manufacturing know-

how by Eljer. It incorporates a whole list of new features with industry-accepted developments such as Eljer's integral china overflow and ground-in valve seats.

See these great new *pretested* Eljer fixtures without delay. Check your Eljer plumbing contractor today.

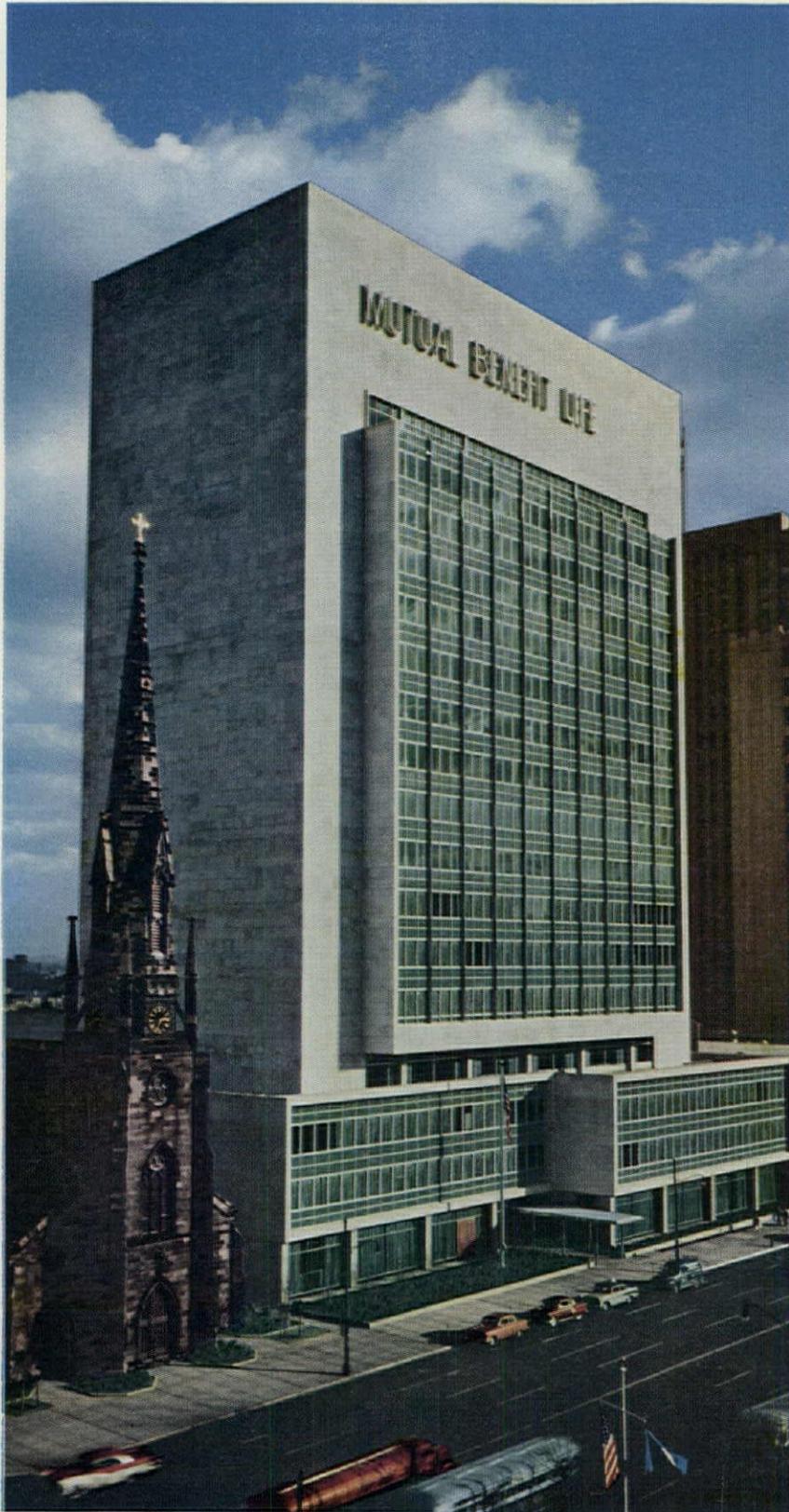
ELJER
Division of The Murray Corporation of America

Three Gateway Center,
Pittsburgh 22, Pa.



PERFECT COMPANION piece to the new *Emblem* is the *Riviera* enameled iron bath, outstanding in quality, moderate in price.

NEW BLAIR china lavatory also matches *Emblem* toilet. Available in 6 decorator colors, snowy white.



A face of glass in color

Recipient of the William E. Lehman Award for outstanding architectural design, the new home office building of the Mutual Benefit Life Insurance Company, Newark, New Jersey, effectively utilizes SPANDRELITE®—Pittsburgh's beautiful *glass in color*—in the spandrel areas.

Specifically designed for curtain-wall spandrels, SPANDRELITE is a heat-strengthened glass with ceramic color fused to the back. It is available in 18 standard colors, plus a wide range of custom colors, and in *polished* or *twill* finishes. The colors retain their freshness, impression of depth, original brightness and true shades indefinitely.

SPANDRELITE is strong, durable and economical. It will withstand impact and a wide range of temperature variations. It resists weathering and corrosion. It is non-porous and non-absorbent. Installed like regular glass, it is easily cleaned and maintained.

Our Architectural Representative near you will be pleased to assist you with your curtain-wall problems, without obligation on your part. For additional information, fill in and return the coupon for our free, full-color booklet.

Other Pittsburgh Glass Products used in this building: Polished Plate Glass; HERCULITE® Tempered Plate Glass Doors equipped with PITTCOMATIC® Automatic Door Openers; SOLEX® Heat-Absorbing Plate Glass; PENNVERNON® Window Glass; Heavy Plate Glass; Polished Plate Glass Mirrors.

Architects: Eggers & Higgins, New York City, N. Y.
Contractor: George A. Fuller Co., New York City, N. Y.

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A roundup of recent and significant proposals



HUGE AUTOMATIC POST OFFICE FOR PROVIDENCE, R.I.

In Providence, R.I., ground has been broken for one of the most up-to-date post offices in the world. To be built by International Telephone & Telegraph and leased by the Post Office Department at an annual rent of about \$1.4 million, the huge, shell-topped

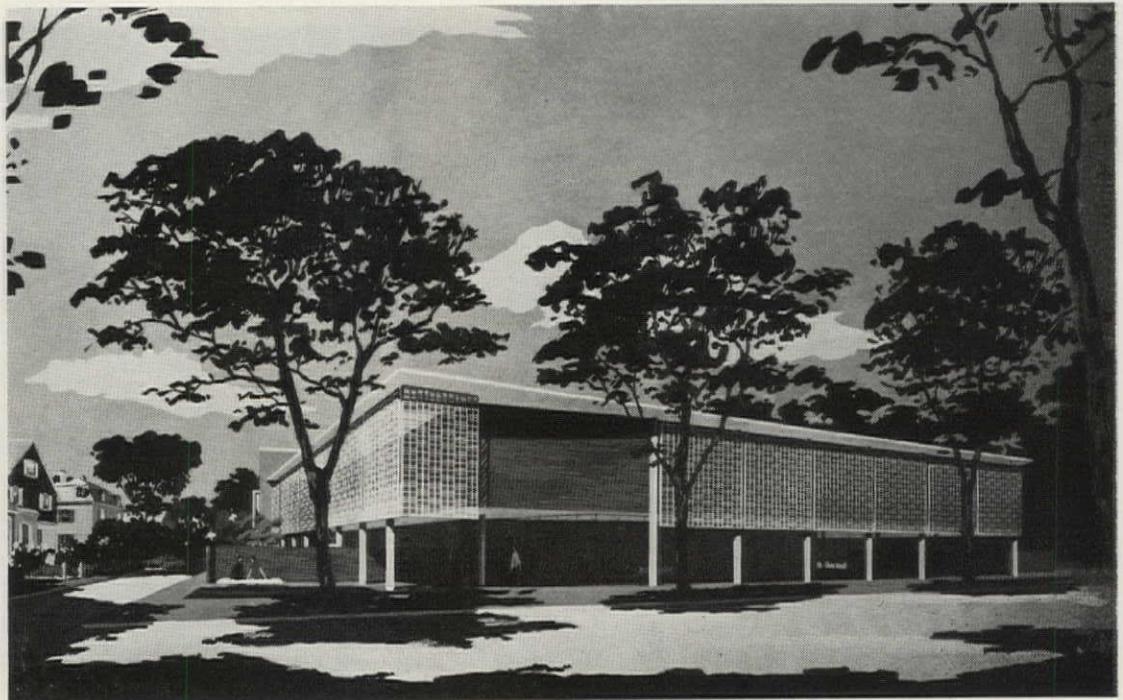
structure will occupy part of a 13-acre site in the city's new West River Industrial Park. It will have a total floor space of 132,300 sq. ft., automatic sorting machines that can route thousands of letters per hour, drive-in facilities for depositing mail or purchasing

stamps, and an adjacent heliport for quick shuttling of mail to the airport. Designed by Charles A. Maguire & Assoc. of Providence, the building is scheduled for completion by September 1960. It will cost \$20 million, including equipment.



SAN FRANCISCO SKYSCRAPER

The American President Lines, a firm with a long-standing stake in San Francisco, will soon build there a 22-story skyscraper designed by the local architectural firm of Anshen & Allen. In contrast with some of the city's other new office towers, the building (above) will have a rugged, organic look. Its curtain walls will be of prefabricated concrete panels embedded with crushed white quartz; golden aluminum fins will project between the windows, partly for sun protection, partly to reduce a sweeping view to a more natural scale. To be started this summer, the 284,000 sq. ft. project will cost roughly \$7 million.

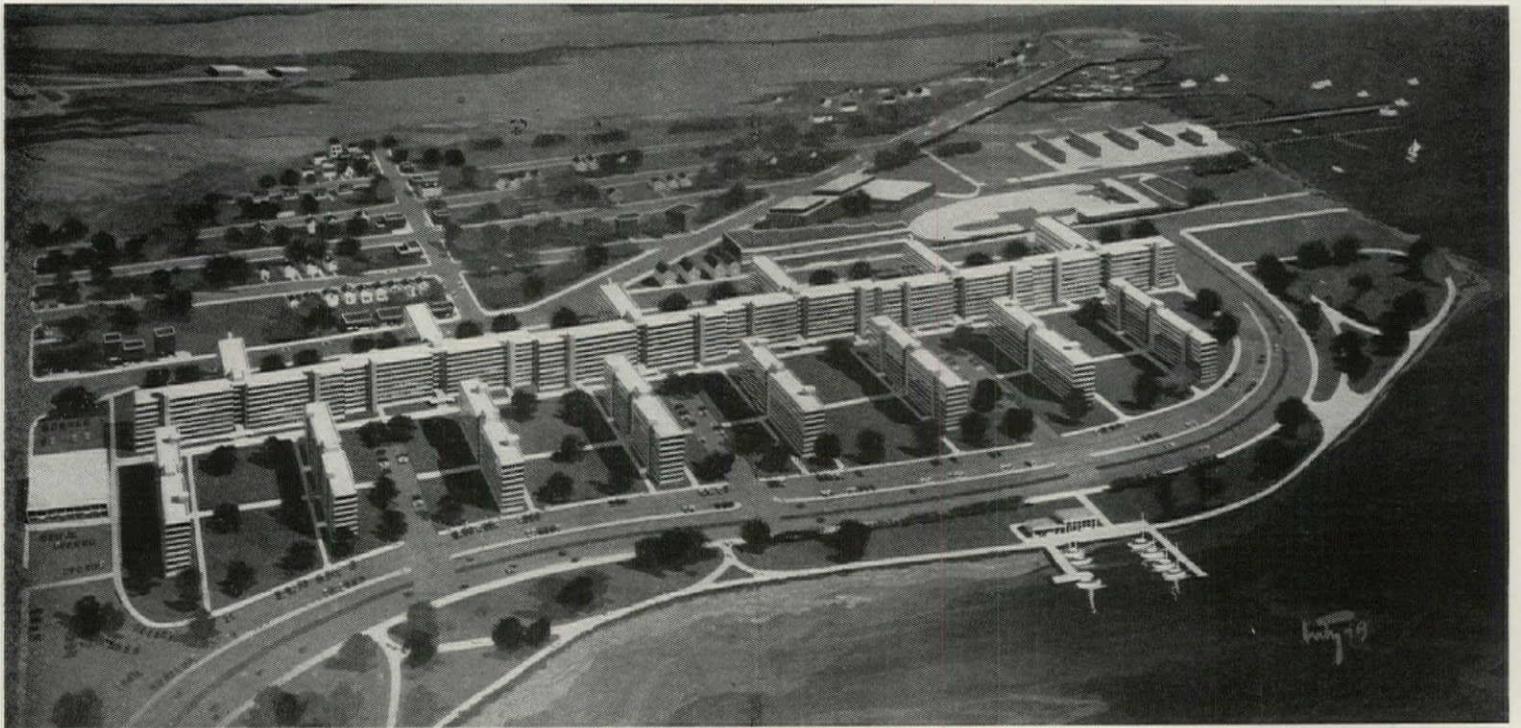


VERSATILE DRAMA CENTER FOR HARVARD AND RADCLIFFE

A new drama center for Harvard University and Radcliffe College will soon be built in Cambridge, Mass., from plans by local Architects Hugh A. Stubbins & Assoc. Shown above, the building will be

faced with red brick and glass and shielded by an aluminum sun screen. It will have two theaters, one a small 100-seat experimental theater, the other a 515-seat theater which, unlike any other in the country,

can be quickly altered to provide a conventional proscenium, an Elizabethan theater, and a theater-in-the-round. Scheduled for completion in 1960, the 50,000 sq. ft. project will cost about \$1.5 million.



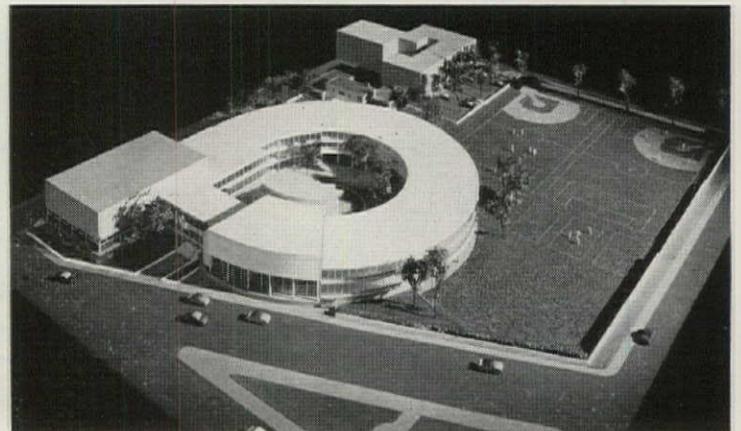
MIDDLE-INCOME HOUSING FOR NEW YORK CITY

Soundview apartments, a \$30-million cooperative development, will soon sprawl across a 92-acre slum-cleared site on New York's Clason Point, a spit of land just across the

East River from La Guardia airport. To offer 1,800 middle-income apartment units at a monthly maintenance fee of about \$24 per room, the huge brick-faced project will be only

eight stories tall (taller buildings would obstruct the glide path into La Guardia) but will be 1,850 ft. long with a total floor space of 2.1 million sq. ft. There will be 20 to 30 acres

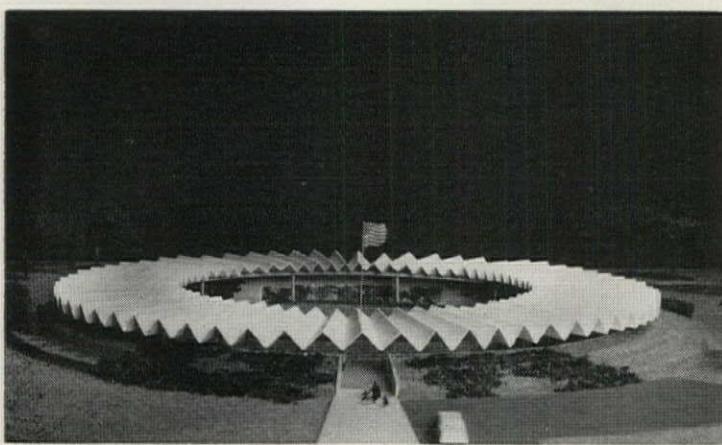
of landscaped parks. Designed by Architects Kelly & Gruzen, the Title I project will be built in three sections, the first section to be ready for occupancy by late 1960.



CIRCULAR SCHOOLS FOR CALIFORNIA, ILLINOIS, AND TOMORROW

Los Angeles Architects Balch, Bryan, Perkins & Hutchason designed the Tumbleweed School (upper left) now being built in Palmdale, Calif. Its seven brick-faced buildings enclosing a recreational courtyard will provide 16 classrooms for about 650 students. Cost: \$550,000. The building at right (above), Chicago's \$2-million F. W. Parker School, will have 32 classrooms, on two levels, for some 600 students. Architects: Holabird &

Root. The hypothetical project at left, however, shows how 350 schoolchildren might be protected against radioactive fallout. Designed by Albert Sigal Jr., a member of the northern California AIA's Committee on Nuclear Energy, it would have nine wedge-shaped classrooms built 12 ft. underground. It would be surrounded with a ring of water and roofed with 3 ft. of sod and a pleated concrete roof. Cost: about \$22.50 per sq. ft.

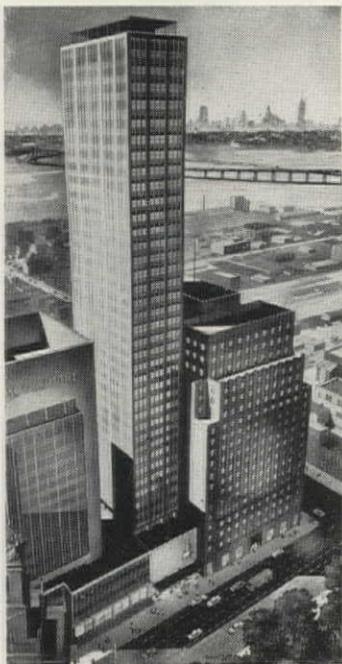




TWO GLASSY OFFICE BUILDINGS FOR NEW YORK CITY

On the west side of Manhattan's Park Ave., a few blocks south of the Seagram Building, Uris Brothers, New York developer-builders, will build two glassy towers as alike as two gigantic unidentical twins. Shown at left is 320 Park

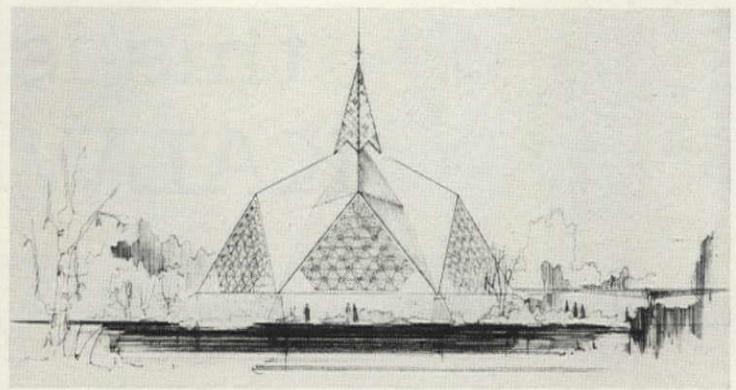
Ave., the tallest of the two, which will rise 33 stories. At right is 350 Park Ave., a 30-story project. Both buildings, to cost about \$40-million, are the design of Emery Roth & Sons. Completion is scheduled for the fall of 1960.



NEW JERSEY SKYSCRAPER

The tallest building in the state of New Jersey will be this 40-story Newark office tower. To be built on a 60 by 238 ft. site by Developer Arthur H. Padula, the aluminum- and -limestone-faced project will squeeze up between the New Jersey Bell Telephone Co. building and the new \$12-million home office of the Mutual Benefit Life Insurance Co. (far left in the photo). A ten-story parking garage for 300 cars will be attached to the rear. The architect is Romolo Bottelli Jr. of Maplewood, N.J. The cost has been set at roughly \$10 million. No date has been scheduled for start of construction.

FORUM welcomes nominations of new projects for this section. Send a brief description and a photograph, addressed to Projects Editor, ARCHITECTURAL FORUM, 9 Rockefeller Plaza, New York 20.



CONCRETE CHAPEL FOR CALIFORNIA DIVINITY SCHOOL

Architects Albert Hunter Jr. and Shig Iyama have designed this hexagonal-shaped, 300-seat chapel to be built at the Salesian Junior Seminary, in Richmond, Calif. The building will have gable-shaped walls of concrete grillwork filled with

colored glass inserts, a folded-plate roof of precast concrete panels (also triangular in shape) and a copper and glass spire. Construction is scheduled to be started late this year; cost of the 6,400 sq. ft. building will be \$275,000.

SMALL AIRPORT TERMINAL FOR CLEVELAND

A glass-walled terminal building is now under construction at downtown Cleveland's Lakefront Airport, a new small-plane facility built on fill beside Lake Erie. Shown complete in the rendering (below), the 48,000 sq. ft. project will

be built in stages; the first step, the two-story central building, is scheduled for completion by mid-1960. Cost for the entire program, the design of Architects Outcalt, Guenther & Assoc., has been estimated at \$1.4 million.



PLUSH HOTEL FOR LAS VEGAS

Las Vegas, a city not short on luxurious hostleries, will soon have another: the new \$15-million Hotel Deauville (below) which will be equipped with its own dome-shaped gaming casino, a 1,000-seat theater, three swimming pools, a golf course, an adjacent

motel and a roof-top cocktail lounge serviced by a glass-enclosed exterior elevator. To be built on an 80-acre site by the Tower Hotel Corp., the ten-story, 1,200-room structure will be completed by the summer of 1960. Architects: Stiles and Robert Clements.



this is the kind of light KALWALL Translucent



Only 113 Kalwall panels were needed to enclose the entire 6000 sq. ft. Edburgh plant. Architect Ian M. Horne, who designed the building, reports, "the interior is filled with so much glareless light, daytime use of electric lights will seldom be needed." Installed cost of translucent Kalwall was considerably less than bids submitted for other curtain wall systems.

you get with Panels

structural Kalwall panel units require no mullions or supporting framework

The fabulous Pavilion roof . . . an award-winning high school . . . and now an entire translucent factory. In buildings of every type architects are discovering the drama — the practicality of Kalwall translucent building panels.

Kalwall is a union of fiberglass face sheets with an aluminum grid core — a totally new type of building material. Kalwall is so strong and rigid it can be installed without supporting framework — is so light in weight (1.5 lbs./sq. ft.) workmen can handle it without power equipment. King-size panel units of up to 4' x 20' install simply, quickly — economically.

Kalwall is ideal for controlling light, either to or from a building interior. In the daytime, direct sunlight is diffused to even, glare-free illumination. At night, lights cause panels to glow outwardly with a soft luminous quality. A low U factor makes them excellent insulators of both sound and heat.

Kalwall is available as individual panels, or in prefabricated panel unit walls, custom-assembled to include sash and other curtain wall components. Kalwall colors are soft green, blue, rose, yellow, crystal, and white.

Send Kalwall Corporation prints of the job you're on now. In a matter of days you'll have them back showing how easy — how practical it is to include the magic of translucence in your design. The Kalwall Corporation, 43 Union Street, Manchester, New Hampshire.

KALWALL TRANSLUCENT STRUCTURAL PANELS *

*Patented and Patents Pending
See us in Sweet's Architectural File, Section $\frac{3C}{KA}$



Standards Sizes
4' x 20' — 4' x 12' — 4' x 10'
4' x 8' — 2 $\frac{3}{4}$ " or 1 $\frac{3}{4}$ " thick



Edburgh Manufacturing Corp. plant in Newburgh, New York, as it looked before installation of Kalwall panels. Since Kalwall panel units are self-supporting, mullions or structural framework were not needed.

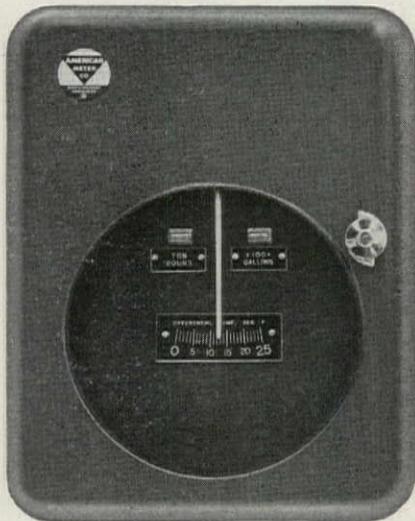


Four-man team from Boss Glass Company, Caldwell, N. J. enclosed 1000 sq. ft. of wall area a day. Men had never installed Kalwall before. 14' x 4' panel unit is so light one man can push it upright. Panels are held in place by channels bolted to floor and roof.



Joining system for Kalwall installation is simple. Inner and outer battens, are coated with a sealing material — then fastened to each other with long screws. Battens seal panels to each other — play no structural role.

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**BTU Meters can be located independent of
the system piping, convenient for reading.*



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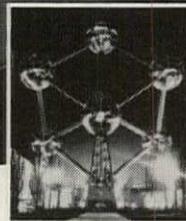
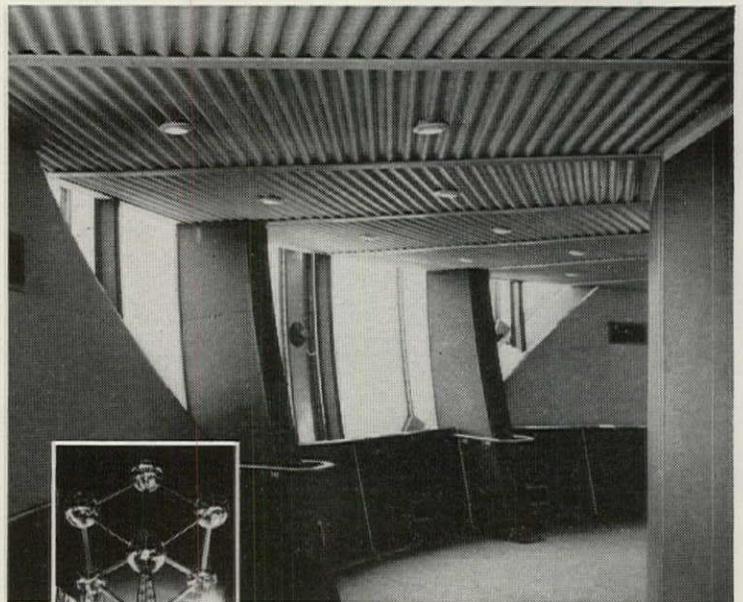
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A highly imaginative team, Andre and Jean Polak, make striking use of a highly revolutionary material. In the Atomium's swank Upper Sphere they applied Colovin laminates with a lavish hand.

Colovin vinyl in a blue linen finish bonded to 6 mm steel for walls of the outside corridor. Cream-colored Colovin vinyl on corrugated aluminum for sound-deadening ceilings. Azure Colovin vinyl laminated to Masonite for exterior casements.

Despite the impact of the elements and the wear and tear of a million visitors a day, Colovin laminate installations in the Atomium and elsewhere throughout the Brussels Fair showed un-

changing brilliance of color and rock-hard resistance to abuse with the barest minimum of maintenance.

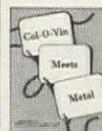
On both sides of the Atlantic Colovin laminates have been rigidly tested by such quality-conscious firms as Ford, General Electric, Philco, Samsonite. Colovin takes preference over other metal finishes because it offers multi-color printing and deep texture embossing not possible with other materials.

Get the whole story in "Colovin Meets Metal." Laminate samples, colors and textures, test specifications, industrial applications, and list of laminators to whom we supply Colovin vinyl sheeting. Mail coupon for copy.

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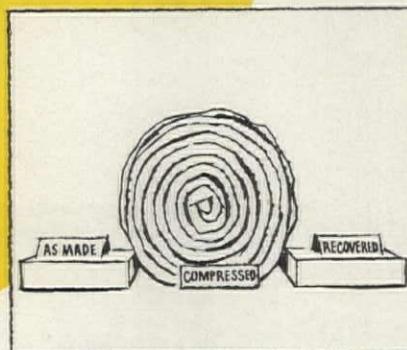
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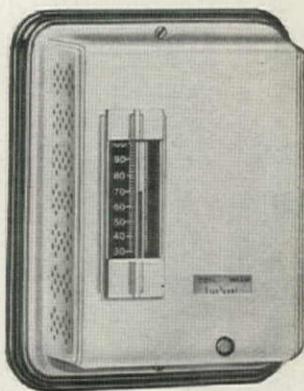
The Right Way to Control Air Johnson Pneumatic Temperature

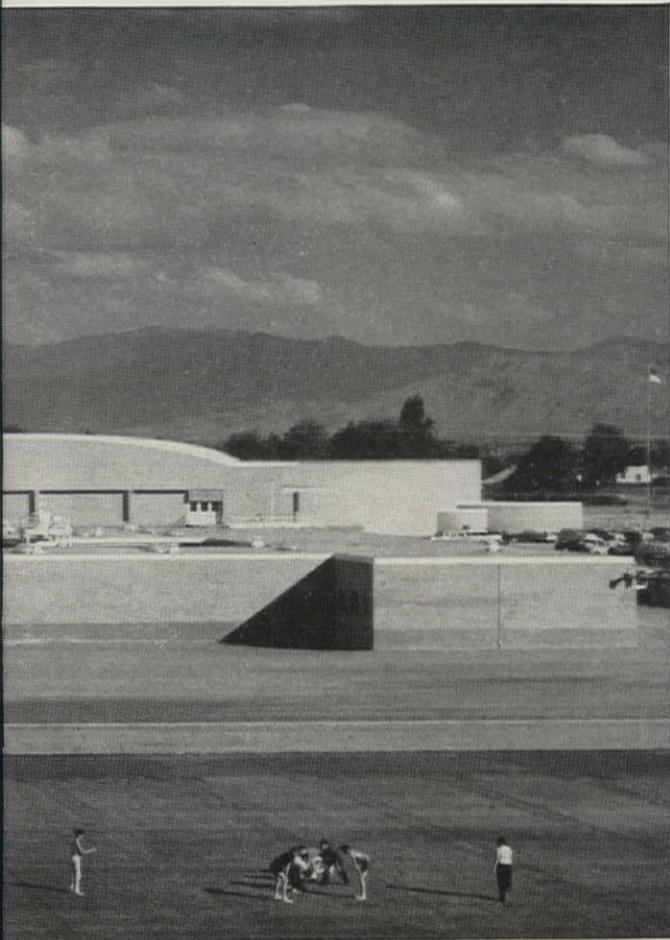
For reasons of cost as well as comfort, an air conditioned school the size of Catalina High School has to have an efficient temperature control system.

This spacious, campus-type school contains nearly a quarter million square feet of floor space. Besides classrooms, its expertly planned facilities include numerous special-purpose rooms, a library, a science and homemaking wing, shops, a cafeteria for 500, an auditorium seating 930 and separate girls' and boys' gymnasiums, the latter a 4,000-seat building.

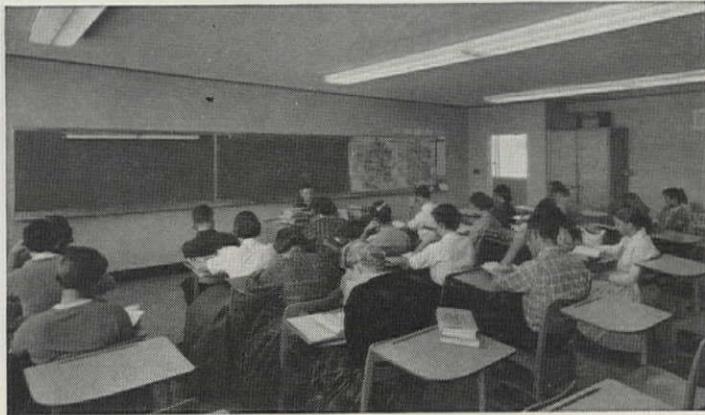
A Johnson Pneumatic Temperature Control System gives this modern school the very finest comfort standards. With all rooms individually controlled by Johnson Thermostats, the system meets the special heating and cooling needs of each room and maintains ideal thermal conditions for every purpose.

The flexible, precise operation of the control system keeps heating and cooling costs at a





Catalina High School, Tucson, Arizona. Scholer, Sakellar & Fuller, architects; John Paul Jones, mechanical engineer; L. C. Anderson Co. and J. J. Craviolini, general contractors; Southern Arizona York Refrigeration Co., mechanical contractor, all of Tucson.



Refreshing, comfortable classroom temperatures assure a productive environment for teaching and learning. Johnson Heating-Cooling Thermostats control over 140 centrally supplied room air conditioning units in the school.



The use of pneumatic controls assures efficient, economical operation of the 31 central fan systems that supply conditioned air for the gymnasiums, auditorium, library and other large spaces. All rooms are individually controlled.



The thermostat on the wall takes care of the cooling problem when cooking ranges are in use. The Johnson System is designed to safeguard student health and comfort in special-purpose rooms as well as in regular classrooms.

Conditioning: Control

minimum. There is no wasteful overheating, no expensive overcooling. The use of pneumatic controls keeps costs down in other important ways, too, for they are easier to understand, require less supervision, less maintenance and less power to operate than any other type of controls.

When you build or air condition, let the specialist Johnson organization help you provide your client with a control system that is engineered for both comfort and economy. The advice of a nearby Johnson representative is yours without obligation. Johnson Service Company, Milwaukee 1, Wisconsin. 105 Direct Branch Offices.

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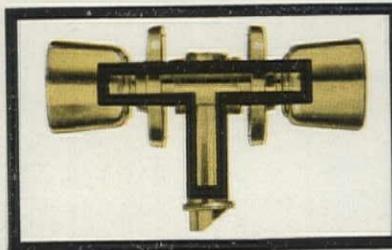
new

construction

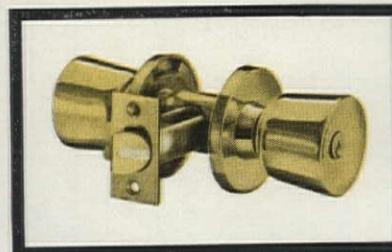
MAGNALOCK

Not just another heavy-duty bored lock... but an entirely new concept from Sargent. Exclusive "T" Zone construction for greater strength and security. Self-supporting for standard hollow metal door cutouts. Reverses completely without disassembly. Styled in the same high fashion designs of the IntegraLock line in a variety of knobs, escutcheons, finishes. Planning something really new? Call your Sargent supplier or write: **Sargent & Company, New Haven 9, Connecticut.**

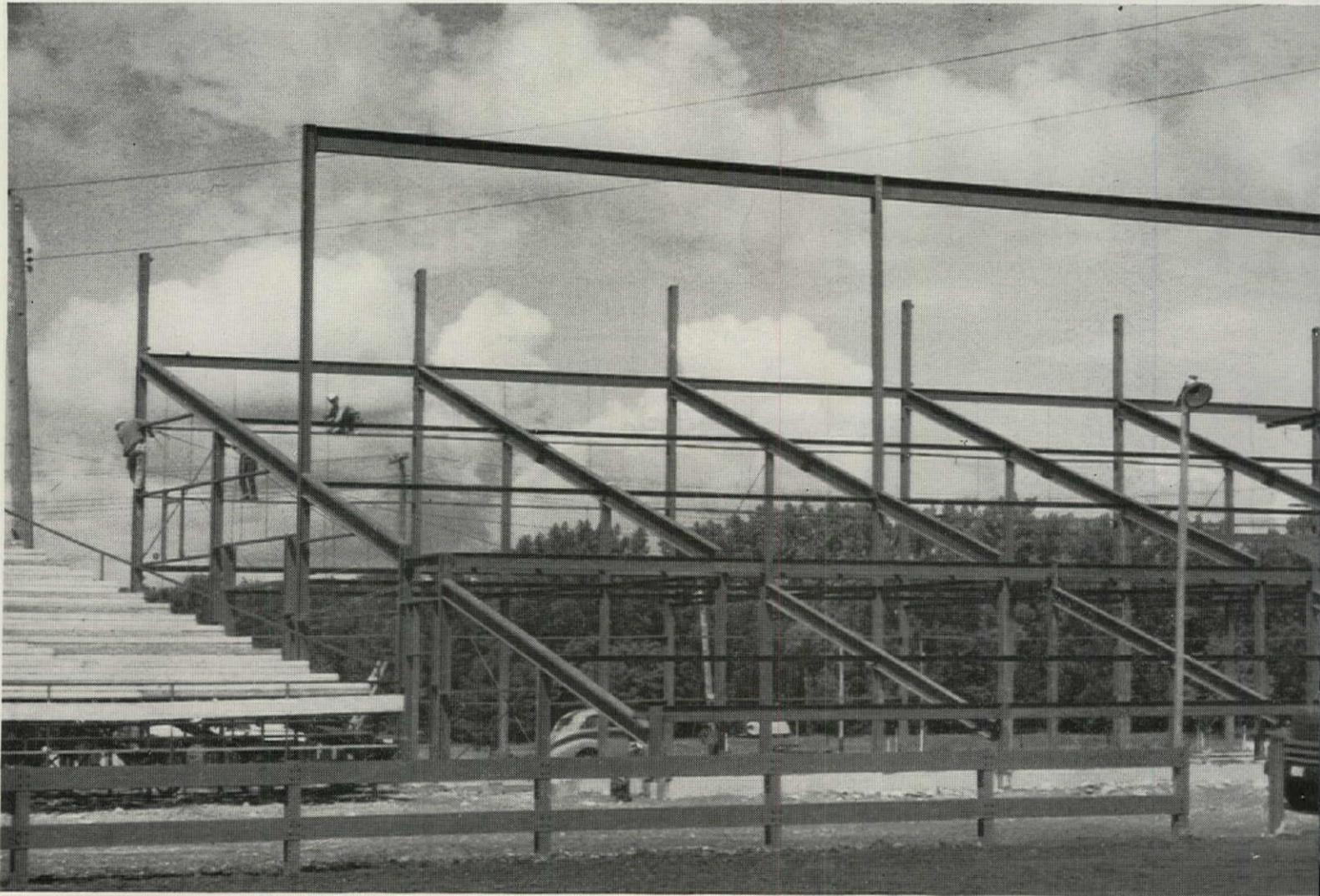
SARGENT



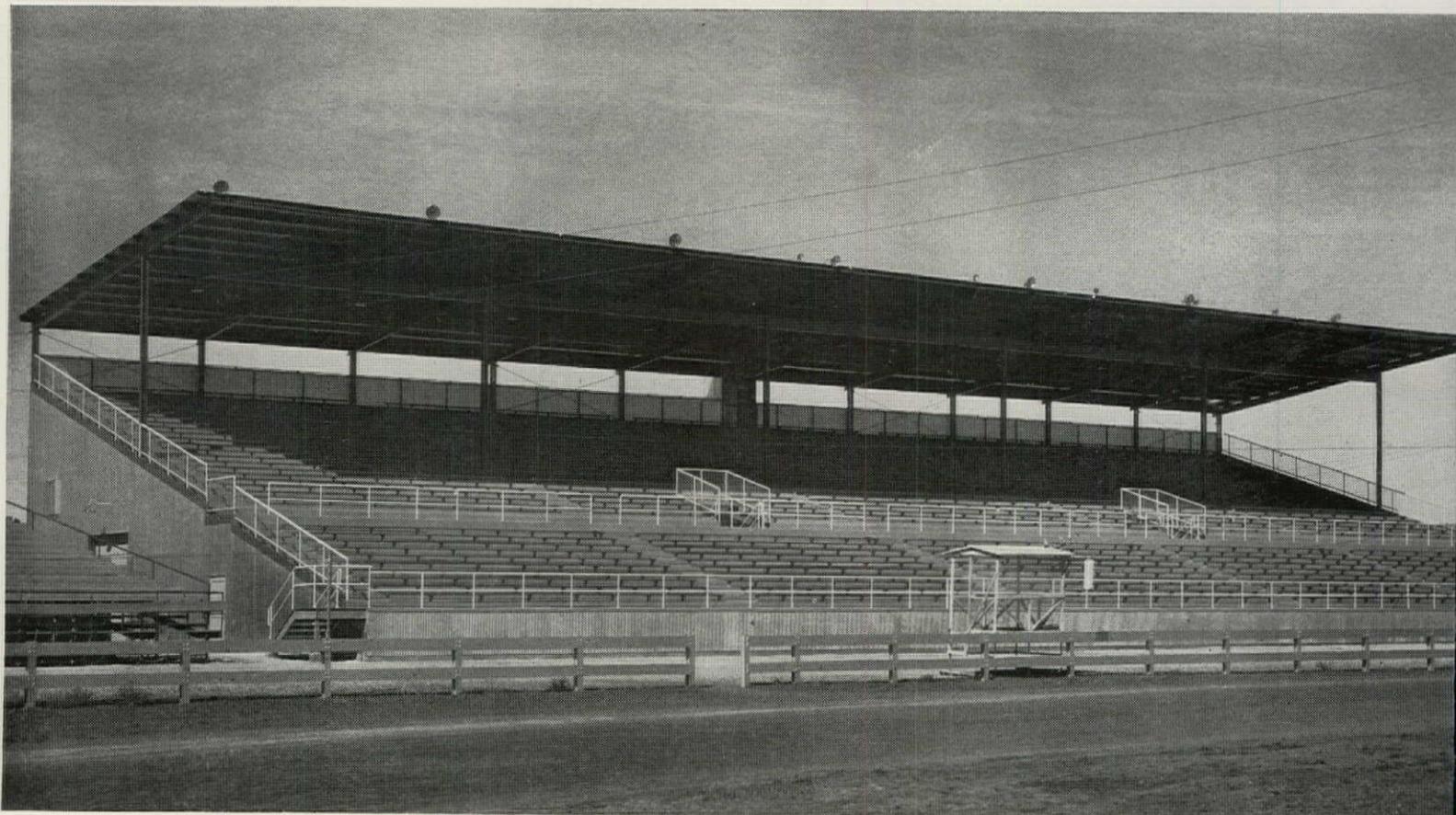
"T" Zone (torque zone) Toughness. One-piece aligning tube and latch tube interlock, form rugged bend-proof, torque-resistant "T" in critical twist area.

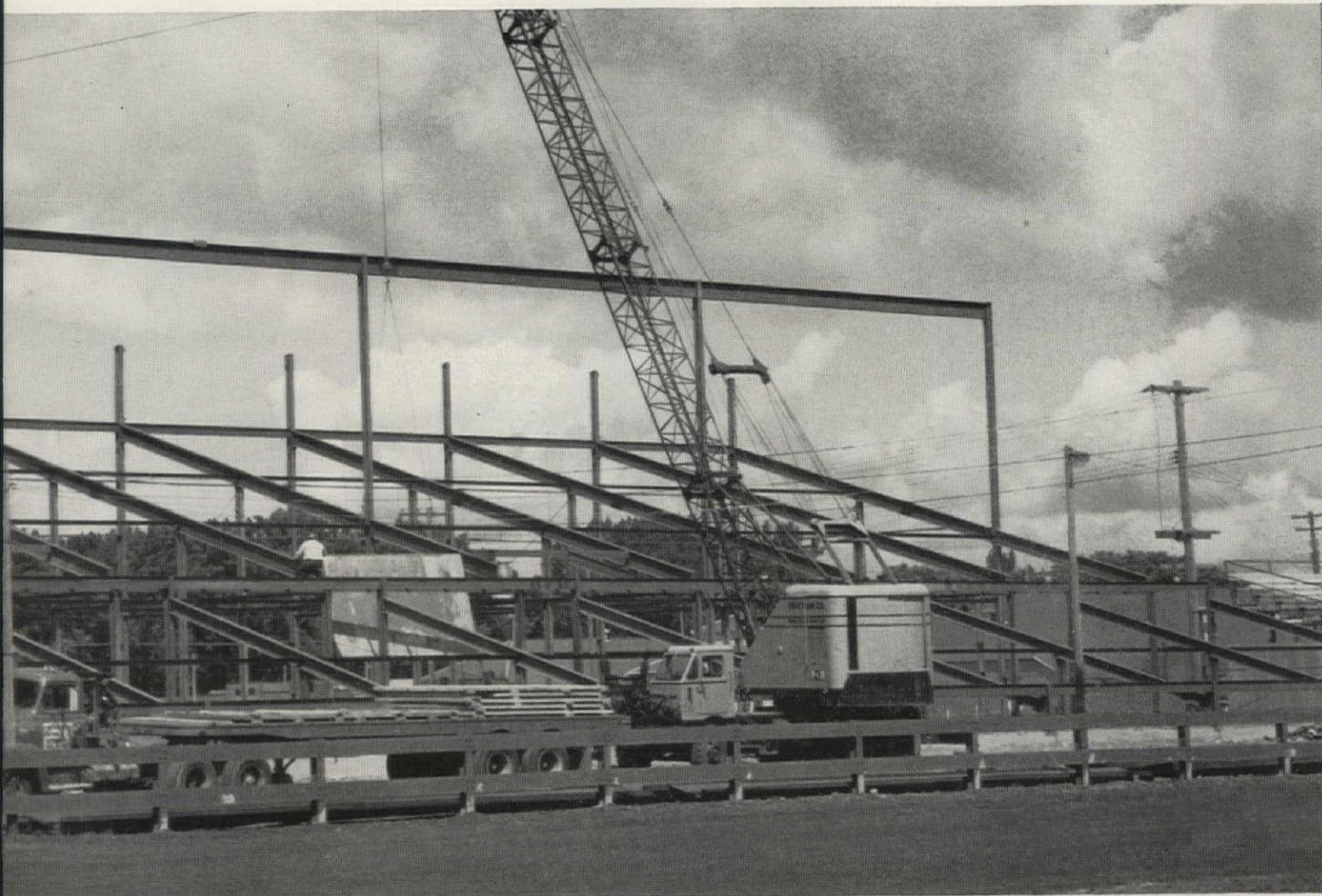


Tyler Design (YM)— now available in the MagnaLock line of 161 series heavy-duty bored locks.



Minot State Fair grandstand, Minot, North Dakota. Fabricated with 92 tons of USS Structural steel and erected in 75 days. Owner: Ward County Fair Assn.; Architect & Engineer: Engineering Division, Arrowhead Engineers & Constructors, Duluth, Minn.; General Contractor: Central Steel Erection Co., Minot, N. D.; Fabricator: Fargo Foundry Co., Fargo, N. D.





Structural Steel delivered quickly in far-away places

NORTHWEST of Fargo is the town of Minot, North Dakota, about 50 miles from the Canadian border. It's not the easiest place to reach with structural steel shipments, but when they wanted steel for a state fair grandstand, they got it . . . pronto . . . from United States Steel.

The order called for 92 tons of structurals, 112 tons of Multigrip Floor Plate and 6 tons of DI-LOK Reinforcing Bars. The steel was fabricated in Fargo, about 225 miles away, delivered to Minot, and erected there in 75 days. This is another case that points up the advantages of dealing with United States Steel. On large or small jobs, you get service when you need it in any section of the country.

Quick deliveries: Recent expansion of production facilities assures quick deliveries and continuing avail-

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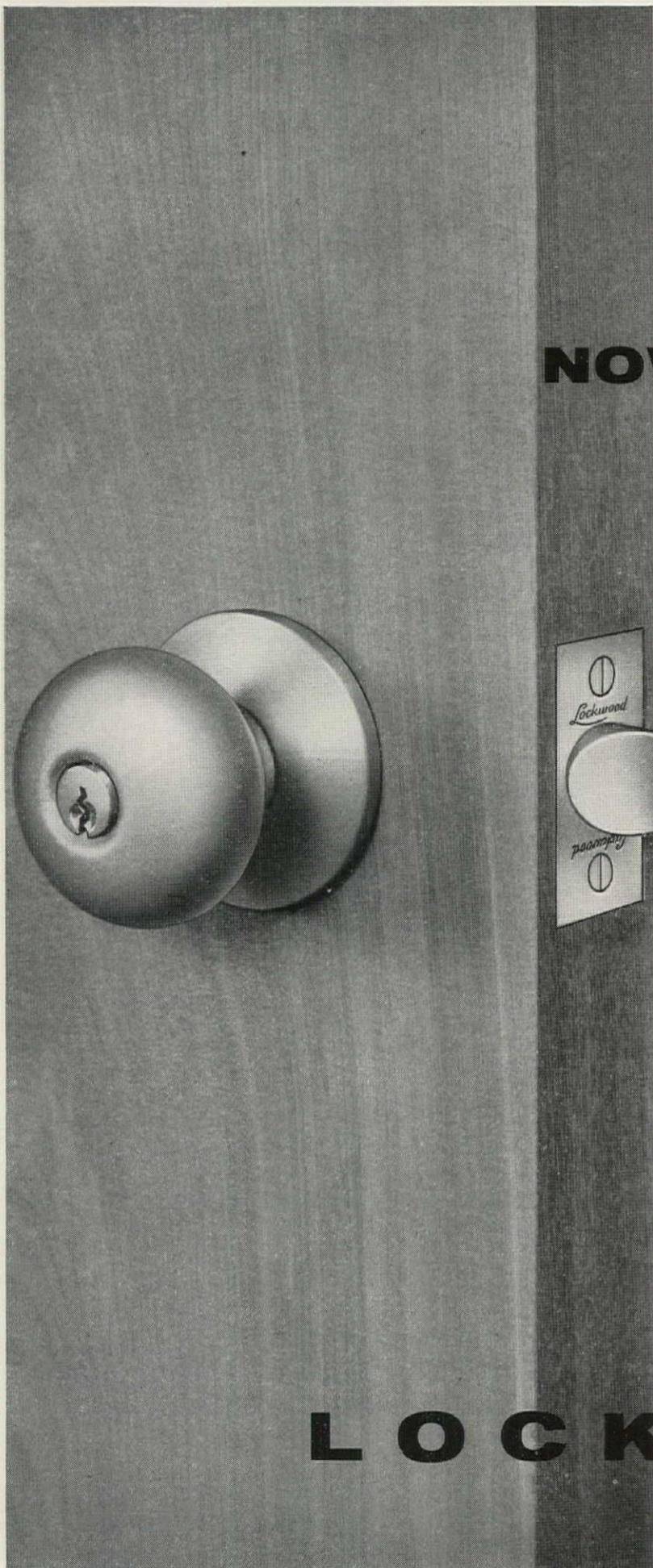
For your copy of "USS Steel Shapes and Plates," a handbook containing details, dimensions and weights of available sections, write to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

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NOW... the finest
of heavy duty
locksets
with

STAINLESS STEEL trim

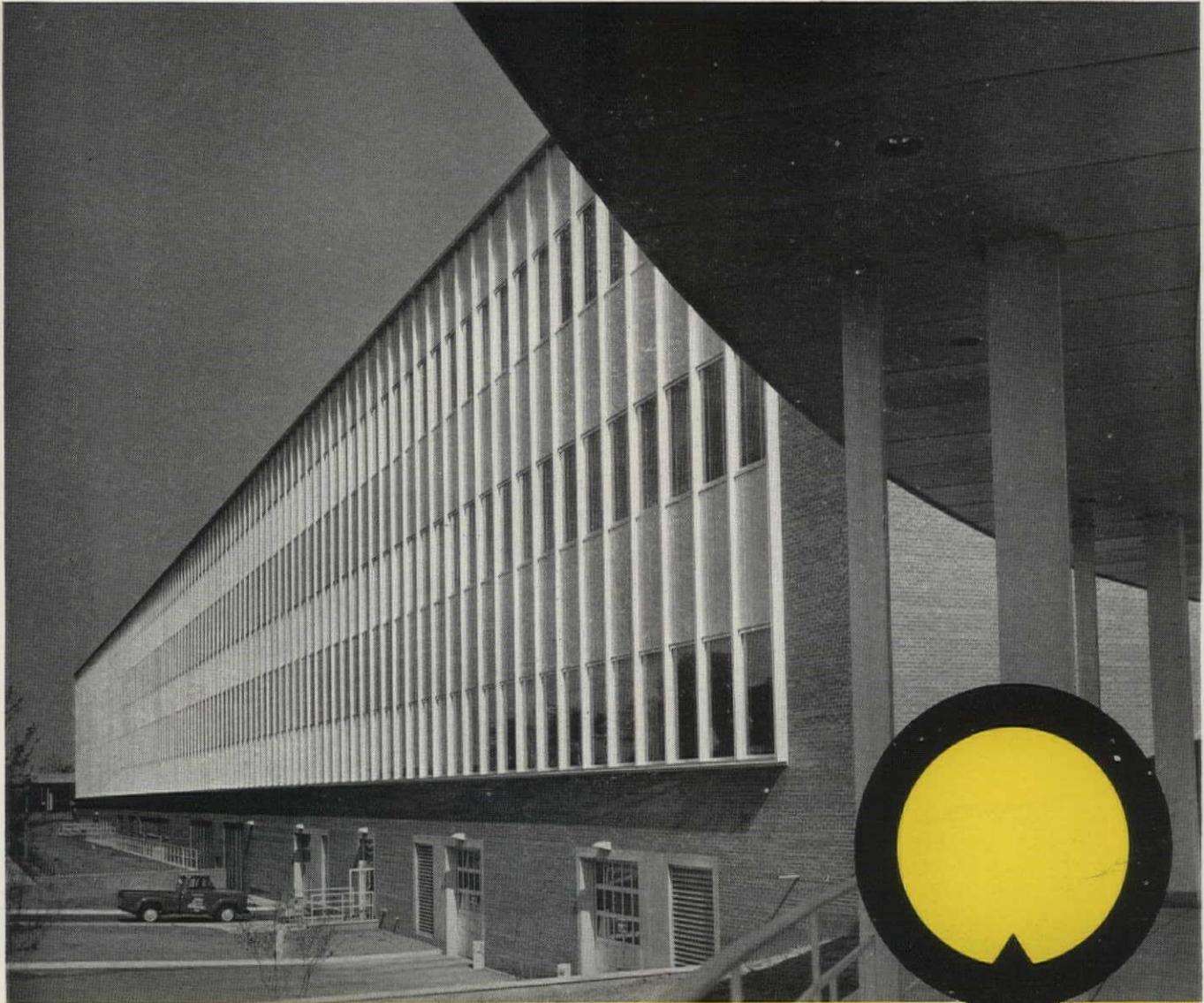
Beauty that's more than skin deep — everlasting and *care-free* . . . Lockwood heavy duty locksets in Darby Design with lustrous STAINLESS STEEL trim.

Tough, strong and corrosion-resistant, this matchless new trim is now produced by Lockwood in both dull satin and highly polished *permanent* finishes to blend with other stainless steel accessories.

When you're looking for quality appearance and quality performance, look to Lockwood Darby Design with STAINLESS STEEL trim or Holiday Design which has a $3\frac{1}{4}$ " square rose.

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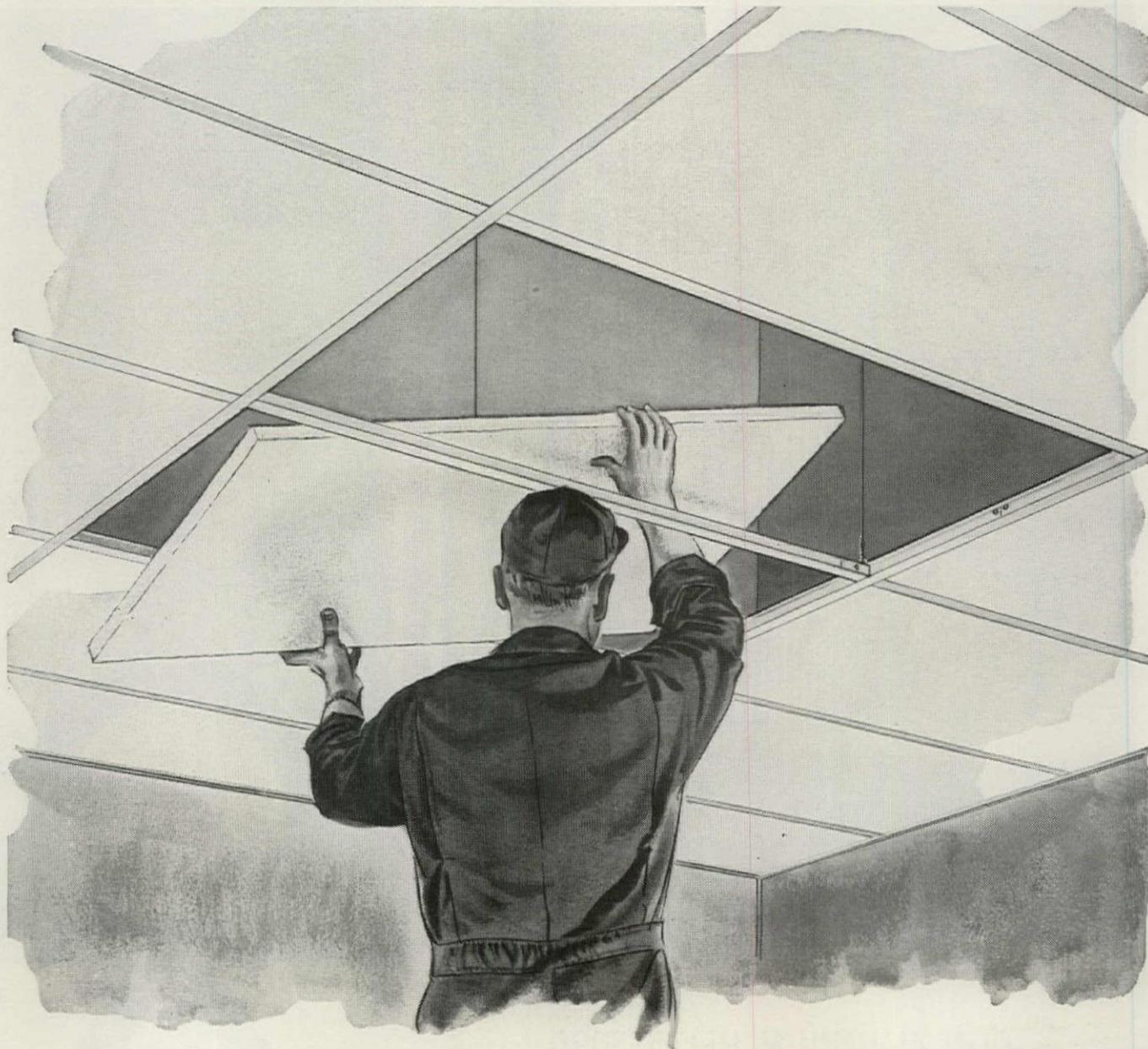
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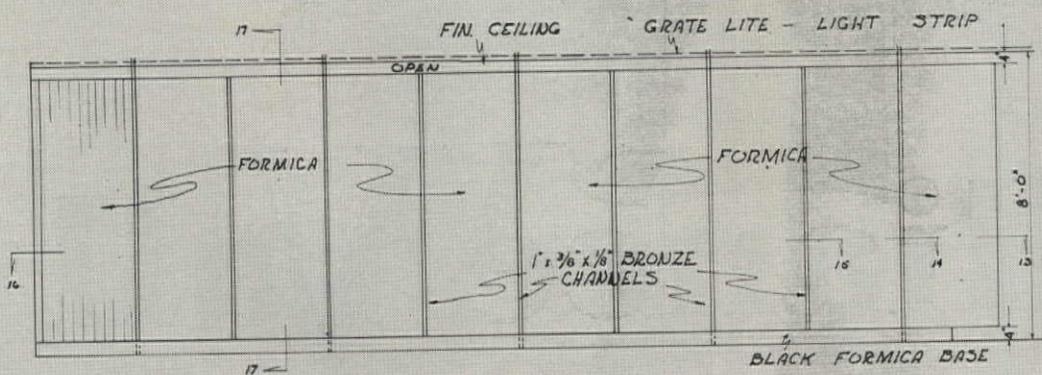
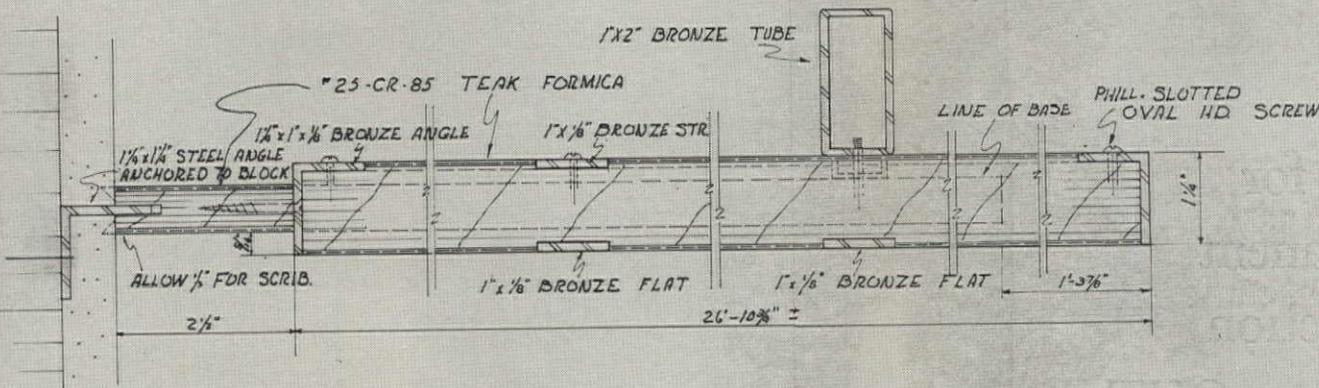
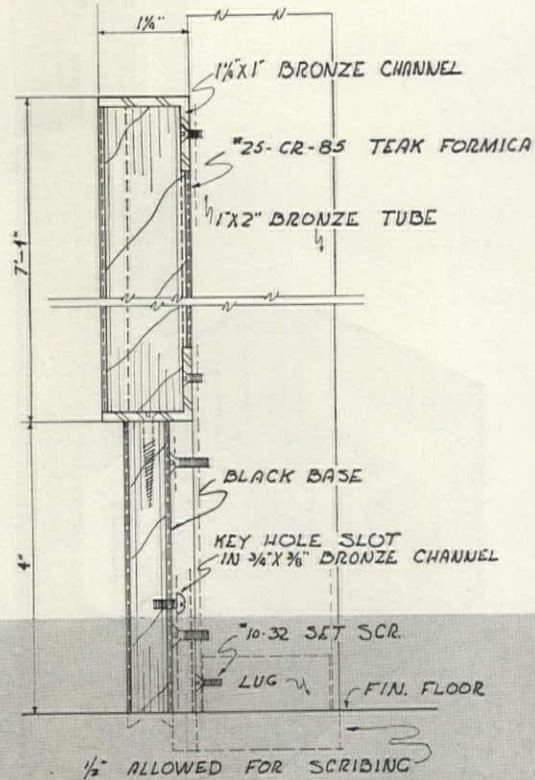


Materials: Formica 1/16" sheets Teak 25-CR-85
 Formica 1/16" sheets Black 1014 Urac 185 Glue
 1 1/8" lumber core birch plywood 1" x 2" bronze tubes
 1" x 1/8" bronze flats 3/4" x 3/8" keyholed bronze channel

Plywood slabs cut to finished size of 7'-8" were shop veneered with Urac 185 adhesive under pressure with Formica 1/16" material both sides.

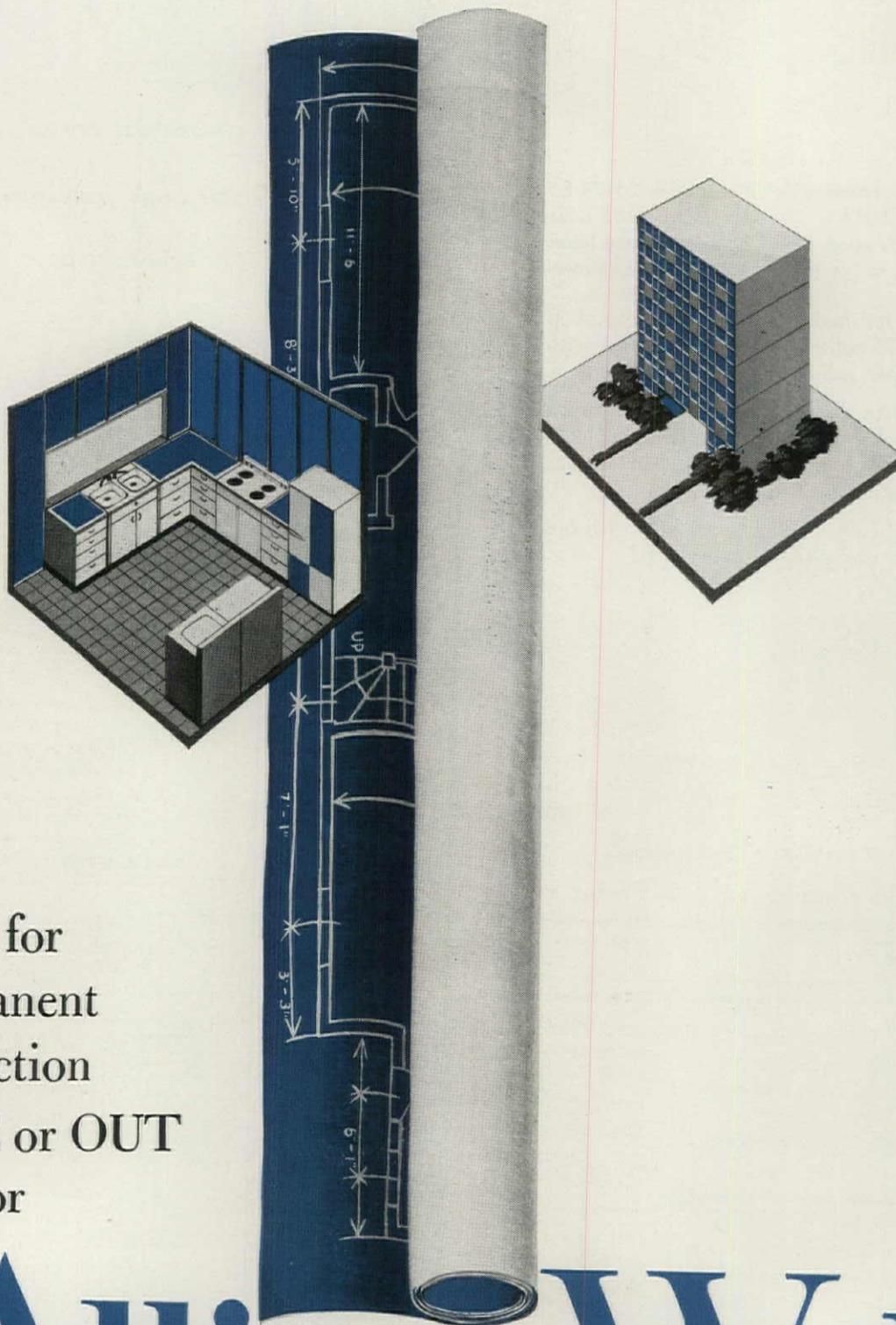
1/2" plywood was two face veneered with black Formica to form 4" base. Supporting bronze tubes were erected floor to ceiling and base attached to channel extensions keyholed over screw heads in base.

Formica slabs rest vertically on base and bolt to tubes every 8 ft. Bronze flats cover seams every 4 ft.



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... be sure you get genuine Formica. Look for this wash-off registered trade mark on the surface.



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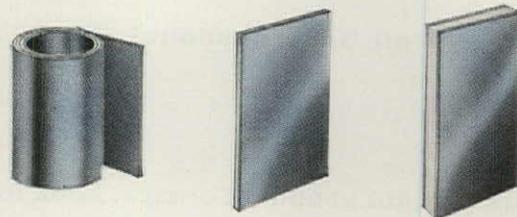
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Moscow Exhibit Manager Harold McClellan coordinates builders, architects, and Russians



TIME: WALTER BENNETT

Vigorous, hard-driving **Harold Chadick McClellan** has been many things in his 61 years. At Occidental College, he worked as both a cantaloupe inspector and a janitor on his way to getting a bachelor's degree. He also has been sales manager of a dairy, and now heads a multimillion dollar paint company. Since last fall, "Chad" McClellan has had what he considers the most challenging job of all—negotiating with Soviet Russia for the first U.S. exhibit buildings ever seen in Moscow, to open in late July.

McClellan was tapped for the job last September by George V. Allen, director of the U.S. Information Agency, who had been impressed with McClellan's efforts as Assistant Secretary of Commerce for International Affairs (1955-57) and as a member of the Public Advisory Board of the Foreign Operations Administration.

McClellan also had scored in overseas trips for the National Association of Manufacturers, of which he was president in 1954. And his prowess as a negotiator had been demonstrated two years ago when he played a key role in luring the Brooklyn Dodgers to his native Los Angeles.

As General Manager of the U.S. exhibit, McClellan has had to work with two usually difficult groups—Russians and artists. He spent nearly six weeks negotiating with the Russians for the exhibit itself ("It was complicated—we were as suspicious of them as they were of us"), but finally got the site he wanted (at Sokolniki Park, just a 15-minute subway ride from downtown Moscow). He also got them to agree to no censorship on the millions of pamphlets that will be distributed and to purchase the exhibit buildings from the U.S. at the fair's closing for either \$375,000 or 50 per cent of construction cost,

whichever is cheaper. The Russians, who will stage their own fair at New York's Coliseum this summer, agreed to lease parkland to the U.S. for \$142,000 (for 300,000 sq. ft.) and are doing most of the site work and foundations for the main buildings (FORUM, Feb. '59).

McClellan got along as well with the artists as he did with the Russians. He has worked with Designer **Charles Eames**, who is preparing a special film about life in the U.S. to be shown in the 200-ft.-diameter dome at the fair, and with New York Designer **George Nelson**, who has planned the layout of exhibits in the main exhibition building, which was designed by **Welton Becket & Associates**. McClellan has had little trouble with the artists, largely because he has administered the over-all project as he would his own corporation, delegating responsibility for details to those best qualified to do the job. Nelson, who maintains that the fair could not have been completed without McClellan, says: "McClellan is a bear for detail—he is constantly at your heels. But he always lets the experts do things their way—as long as they get it done on time."

One of McClellan's toughest tasks will be coordinating the construction and assembly of the exhibit. Most of the two major buildings will be prefabricated, then shipped to the site, where Russian workmen will aid U.S. and Italian building specialists in getting the Fuller-designed dome and the fan-shaped main exhibition hall assembled. The Russians will build needed water, gas, electrical, and sewage facilities.

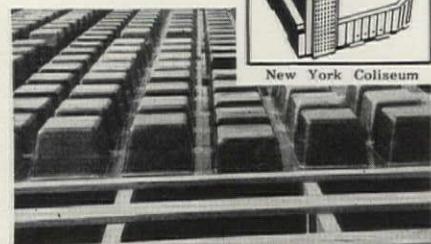


GREENFIELD STEPS DOWN

Philadelphia real estate tycoon **Albert M. Greenfield** recently announced that he was giving up his chairmanship of Bankers Securities Corp. He is also selling a substantial interest in the company, which has annual sales of around \$500 million from various divisions, including department

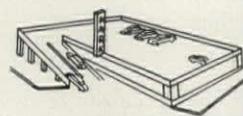
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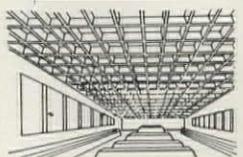


New York Coliseum

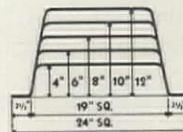
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and specialty stores, office buildings, and taxicabs. The 71-year-old entrepreneur last year resigned as chairman of the City Planning Commission, and his latest move out of his own business, which he formed 31 years ago, will give him even more time to devote to other activities. Greenfield only hinted at what his future interests would be. He said: "The greatest challenge before us is what we can do in a most practical manner to secure the rights and duties of man in a free society." Although he has not announced any specific plans, Greenfield will probably continue to devote much of his time to city development. Significantly, one post he continues to hold is that of a member of the executive committee of the Old Philadelphia Development Corp., a private organization which acts as consultant to the city's Redevelopment Authority. Greenfield also will continue as a director of Bankers Securities, but the chairmanship will be taken over by **Gustave G. Amsterdam**, 50, who has been president since 1955.

PEOPLE IN BRIEF

HHFA Administrator Norman P. Mason has named **Lyman Brownfield** new HHFA general counsel to take the place of Julian H. Zimmerman, who recently succeeded Mason as FHA chief. Brownfield, 45, had been general counsel of FHA, and formerly practiced law in Columbus, Ohio. Brownfield's successor at FHA will be **Graham W. McGowan**, who has been special assistant to the general counsel and the secretary at the Department of Commerce. McGowan is a former Assistant U. S. District Attorney (Northern Indiana) and frequently represented Commerce at various ILO conferences.

H. Ralph Taylor, for the past four years director of the extensive urban renewal program in New Haven, Conn., will leave that post next month to become the top renewal administrator for James H. Scheuer's City & Suburban Homes Co., which is currently shepherding projects in Cleveland, Sacramento, St. Louis, and is just completing Southwest Area "B" in Washington, D. C.

F. Moran McConihe, who for nearly three years has been commissioner of the federal Public Buildings Service, has resigned, citing the pressure of his real estate business in nearby Maryland. McConihe had tried in vain to rid Washington of its temporary federal buildings and was a firm backer of the lease-purchase program for federal buildings. He was reportedly unhappy with Congressional action killing that program and cutting back funds for new building in the District.

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NEW KANSAS COURT HOUSE
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Project: Sedgwick County Court House, Wichita, Kansas—the largest non-federal construction project ever undertaken in Kansas.

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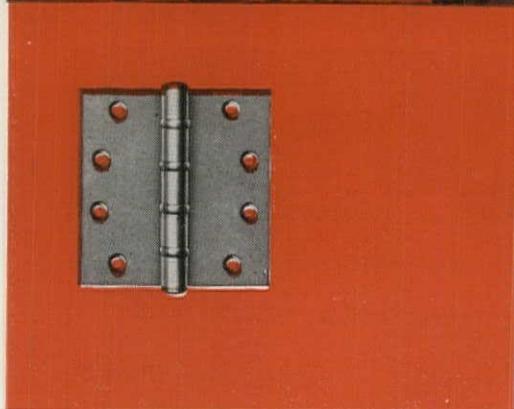
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"Also, there hasn't been one reported accident from slipping since Suntile was installed. Before, accidental falls were numerous."

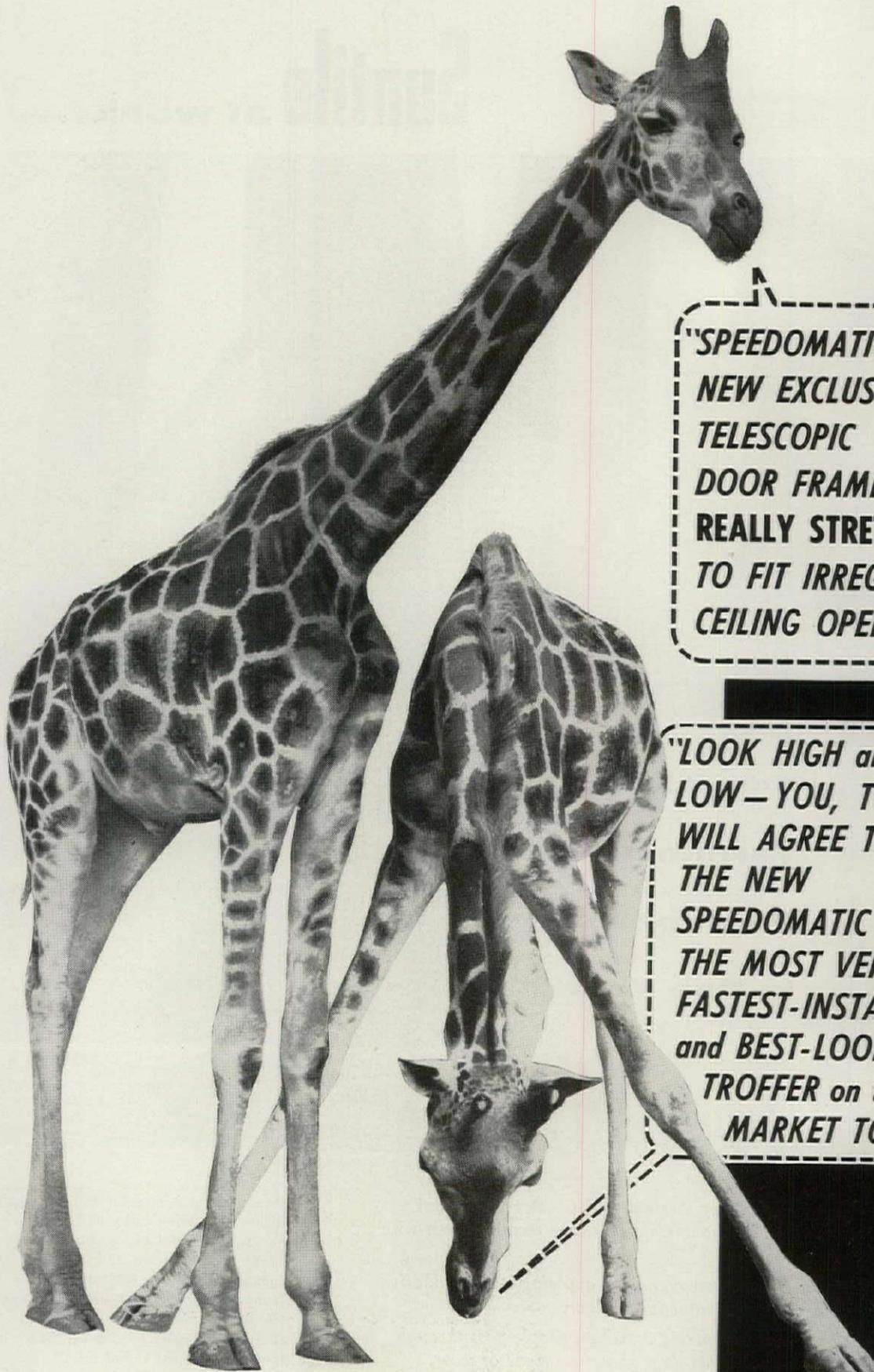
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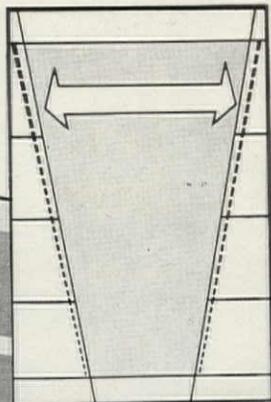
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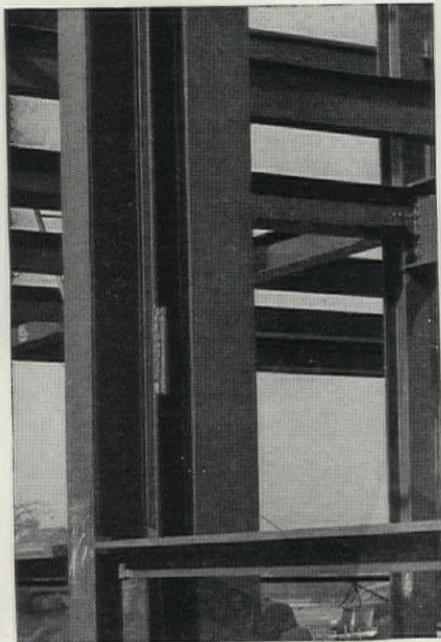
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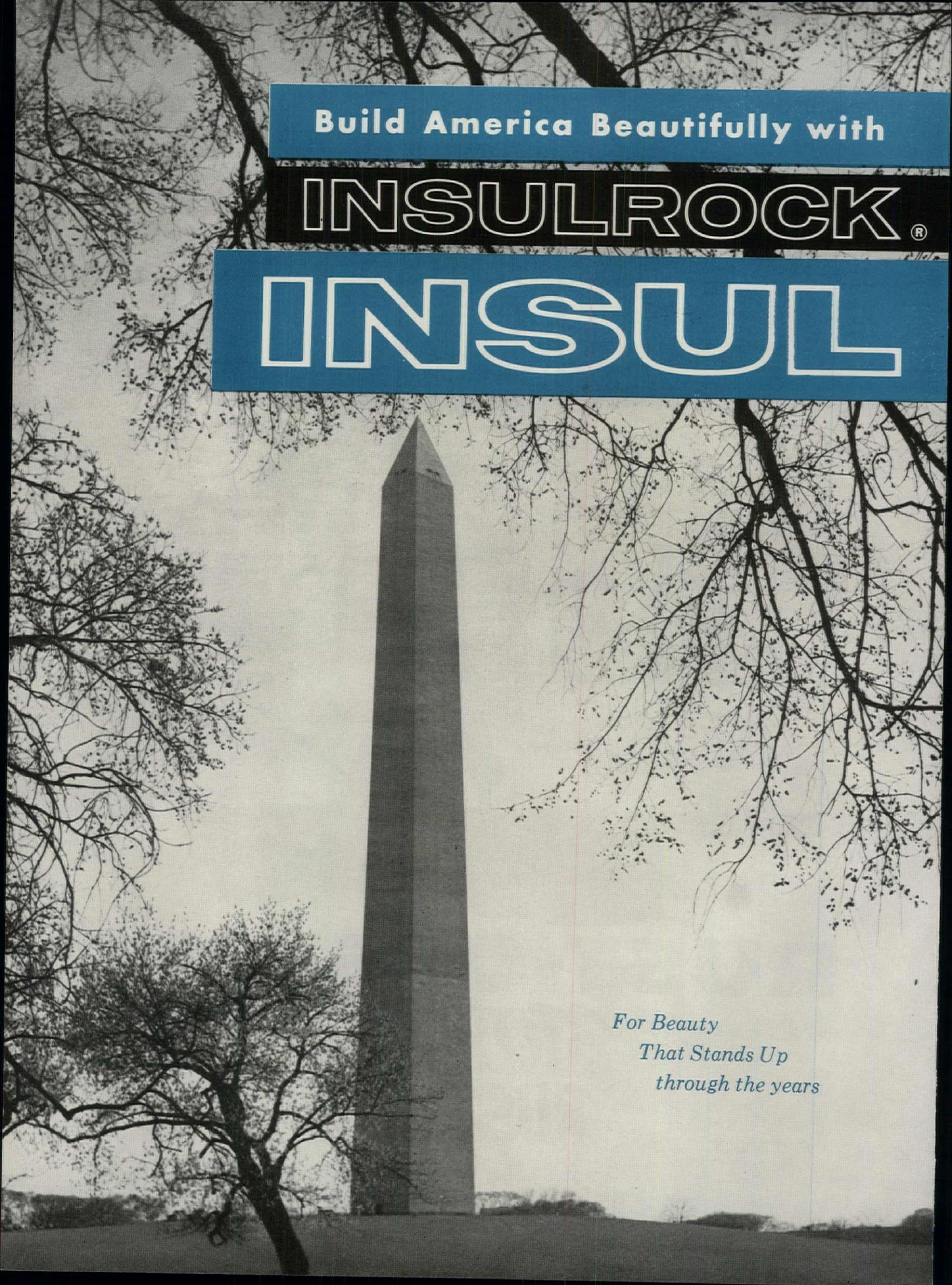
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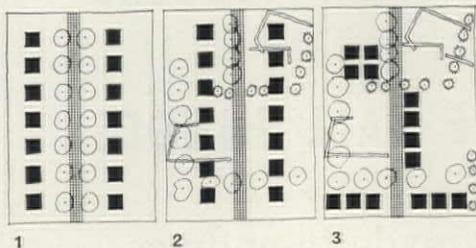
subdivision . . . lunar living . . . criticism

SUBDIVISION RESEARCH

Forum:

I enjoyed the report on subdivision planning in your February issue.

Enclosed are some interesting studies of subdivision design approach: 1) a typi-



cal subdivision street, 2) the same street with planting changed to accentuate spatial changes, and 3) the same street with architectural groupings used to further define basic spaces.

These sketches illustrate some current research underway in various schools of landscape architecture. This particular study was the work of Robert Royston, Lewis Clark, and J. B. Frazier.

J. B. FRAZIER, *dept. of urban planning and landscape architecture Michigan State University East Lansing, Mich.*

MOON BUILDING

Forum:

Your article in the March issue about building for lunar living is very provocative and is appropriately superior to the usual space magazine stuff on this subject.

An interesting aspect of your article is the deeper thinking of the architects, who really are analyzing the problems of building and living on the moon, whereas the others simply propose an earth-type setup inside a "plastic" bubble (which is very unlikely to work).

HENRY STEINHARDT, *architect Steinhardt & Thompson New York City*

GRANDPA'S RAM

Forum:

The 30 times height factor of the "amazing new water pump" (which is really a hydraulic ram) mentioned in your *Products* department for March suggests that the modern version has improved efficiency over the older cast-iron, leather-valved models. But 25 per cent of the flow sug-

gests an efficiency of 25 by 30 = 750 per cent, which even the best Japanese engineering skill should not hope to attain.

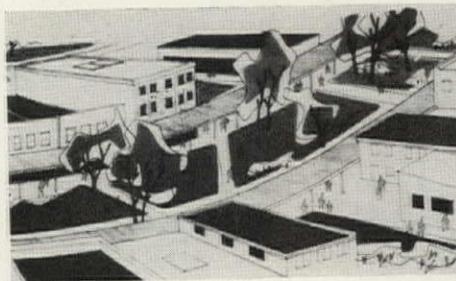
Seriously, the ram is a very practical device and it is unfortunate that in our modern demand for speed and mechanical refinement it has been lost for some 50 or 75 years, to be revived in modern materials by an enterprising foreign manufacturer. What grandpa could have done with a sheet of Teflon instead of those slimy leather flapper valves!

PHILIP ALLEN, *project engineer Franklin Institute Philadelphia*

GRASS ON MAIN STREET

Forum:

Your article, "Closed to traffic," in the February issue reminded me of a similar project for Rye, N. Y. which you published quite a few years ago (*FORUM*, Aug.



'46). At the time it had seemed to me to be an imaginative and eminently reasonable idea; it is interesting to see how it caught on, abetted, as your article points out, by the competition from shopping centers on the outskirts of our cities.

CHARLES B. LOOKER, *Associate professor of architecture University of Illinois Urbana, Ill.*

CRITICISM CRITICIZED

Sirs:

The article, "What Makes One School Better?" (*FORUM*, Nov. '58), is a gross example of the use of slanted information and photography, with no regard for the basic reasoning of architectural problems.

The unfair criticism by comparison between the Homestead School in Garden City, N. Y., and the Collins School in Livingston, N. J., completely ignores many

continued on page 99

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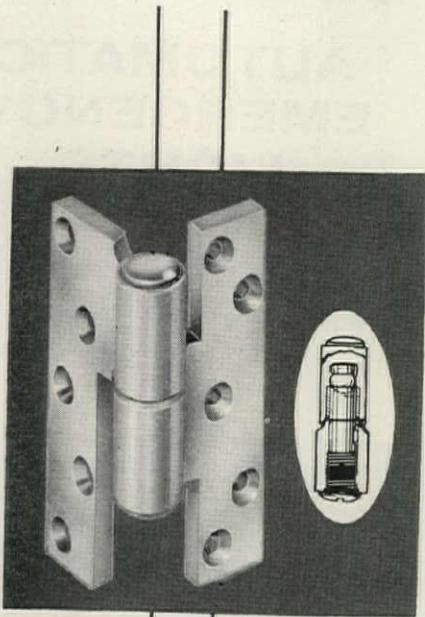
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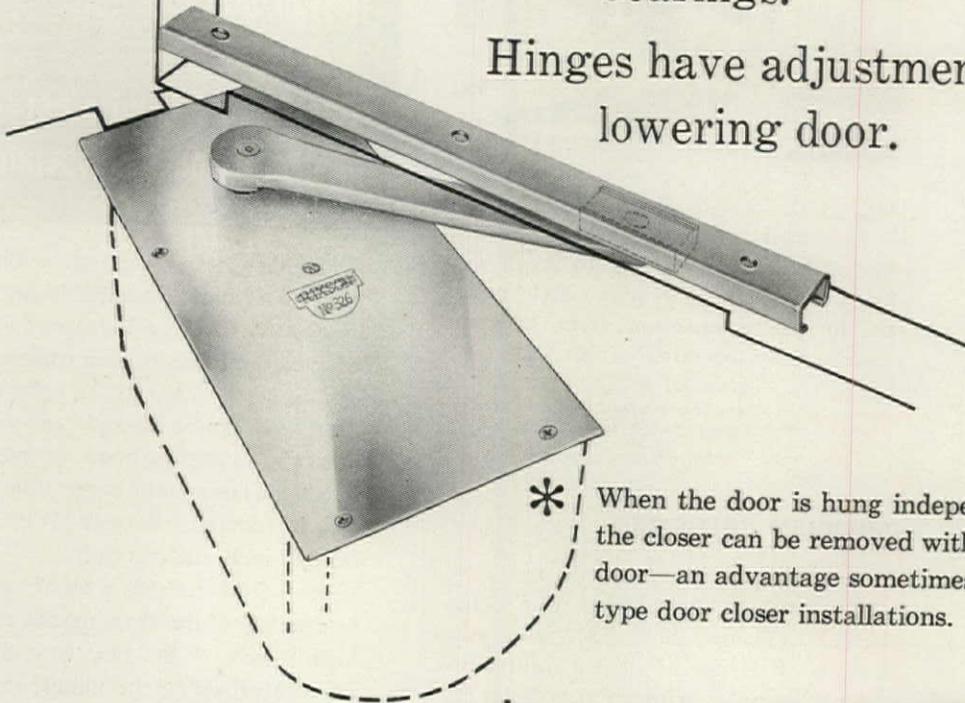
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facts and misstates others. Collins was designed after careful study by citizens groups, school officials, professional consultants, and the architect to meet a specific current condition, and also to meet long-range expansion needs, all at a cost that Livingston could afford.

FORUM states that the communities represent almost identical socio-economic factors. Garden City, a long established suburb, has approximately 400 undeveloped lots in its whole area. Approximately 60 per cent of Livingston's sprawling 13.78 miles is undeveloped.

Garden City spends \$869.06 annually per child in its schools. Livingston's cost per pupil was \$426.78. Median teachers' salaries in Garden City are \$7,000; in Livingston, \$5,200.

FORUM compares facilities and allotted floor areas in a K-3 school with those of a K-6. Collins' multi-use room is truly multipurpose, having facilities for older games such as basketball, a stage so that it can be used for auditorium purposes on a more mature scale, and tables and benches built in the wall so that it converts quickly into a cafeteria—a feature unneeded in Homestead.

FORUM complains about excessive space given to nonacademic purposes—the larger health, administration, teacher, and multipurpose rooms that are designed for the eventual size of Collins—yet glorifies the magnificent single-loaded corridors in Homestead, which take up 22.2 per cent of the entire interior building space! Collins, by double-loading the corridors, cuts this percentage to 15.5 per cent, which is eminently adequate to provide needed intercommunication between rooms and central facilities.

FORUM leads the readers to believe that the two buildings cost the same. Construction costs on Homestead, including architect's fees, came to \$542,418. Collins cost \$455,928. What is more, Collins' site development was twice as large as Homestead's, worth at least \$5,000. Also, sink cabinets and other built-in facilities, worth \$8,000, were part of the Collins costs, but were included in the unreported equipment cost of Homestead. Thus, for comparative purposes, Homestead cost about \$100,000 more than Collins—almost 22 per cent more! Despite this difference in cost, Collins is "adequately" housing 95 more students. FORUM compares educational square-foot costs, eliminating everything but classrooms—all that is basically needed in a K-3 school. On a total cost basis, and particularly on a cost-per-pupil basis, the shoe is on the other foot. Collins cost \$1,000 per pupil; while Homestead cost \$1,400.

FORUM stated that terrazzo flooring in the corridors cost \$1.50 per square foot.

Terrazzo actually cost 90 cents per square foot, an extra of \$1,000 for which Livingston got a permanent floor needing no maintenance.

The \$1,000 spent there is typical of the planning which has developed a school system valued in excess of \$8 million, in which the annual expenditure for the repairs and replacement for buildings and equipment is only \$36,000.

I'll leave it to the readers to decide whether this criticism was "critical and detached," as FORUM claimed.

WILLIAM KLABER JR., editor and publisher
West Essex Tribune
Livingston, N.J.

■ This letter, submitted "on behalf of the Livingston School System and Frederick A. Elsasser, its architect," was received five months after publication of the original article but is published out of fairness.

FORUM has no wish to debate population density, teachers' salaries, cost per pupil, and other statistical indexes capable of being used to twist a point. What the editors found at Homestead was generosity where it counted most—in giving children maximum spaciousness and stimulation in areas where they are being taught; at Collins, by contrast, a "long suffering devotion to duty" filled the school with such things as administrative apparatus but produced grimness and tightness in the teaching areas. Mr. Klaber's school-cost figures are, as he says, widely at variance with FORUM's, which came generally from the same sources and which FORUM still considers substantially correct in the use it made of them. Members of the Livingston School Board have promised to consider enlarging classroom spaces in future school projects.—ED. END

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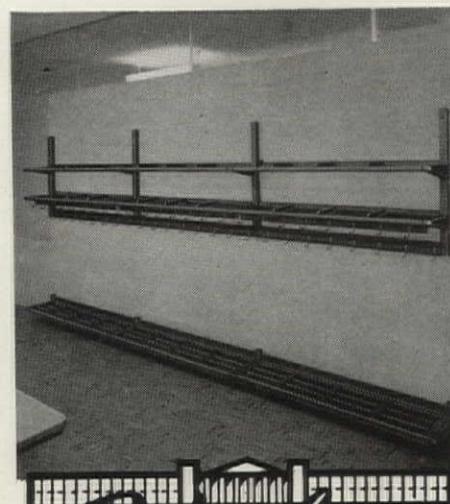
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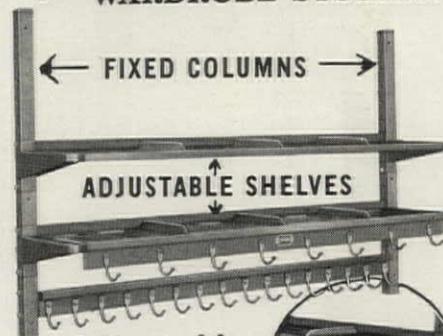
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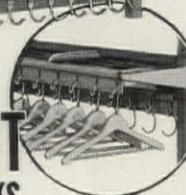
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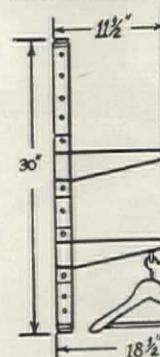
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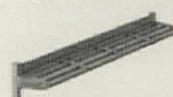
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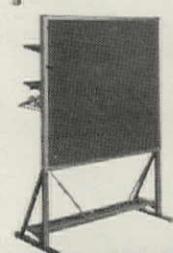
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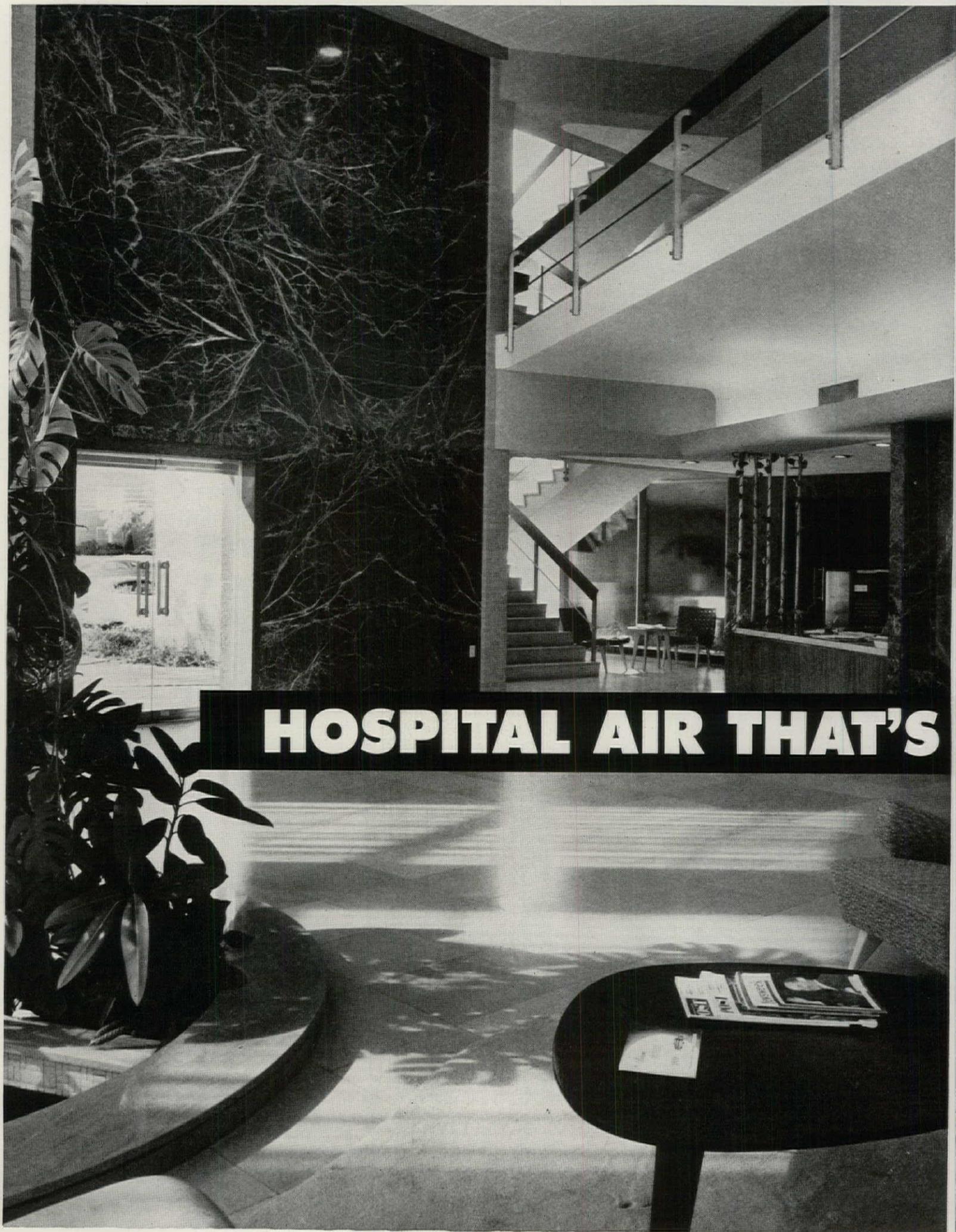
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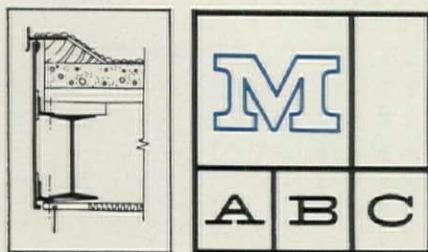
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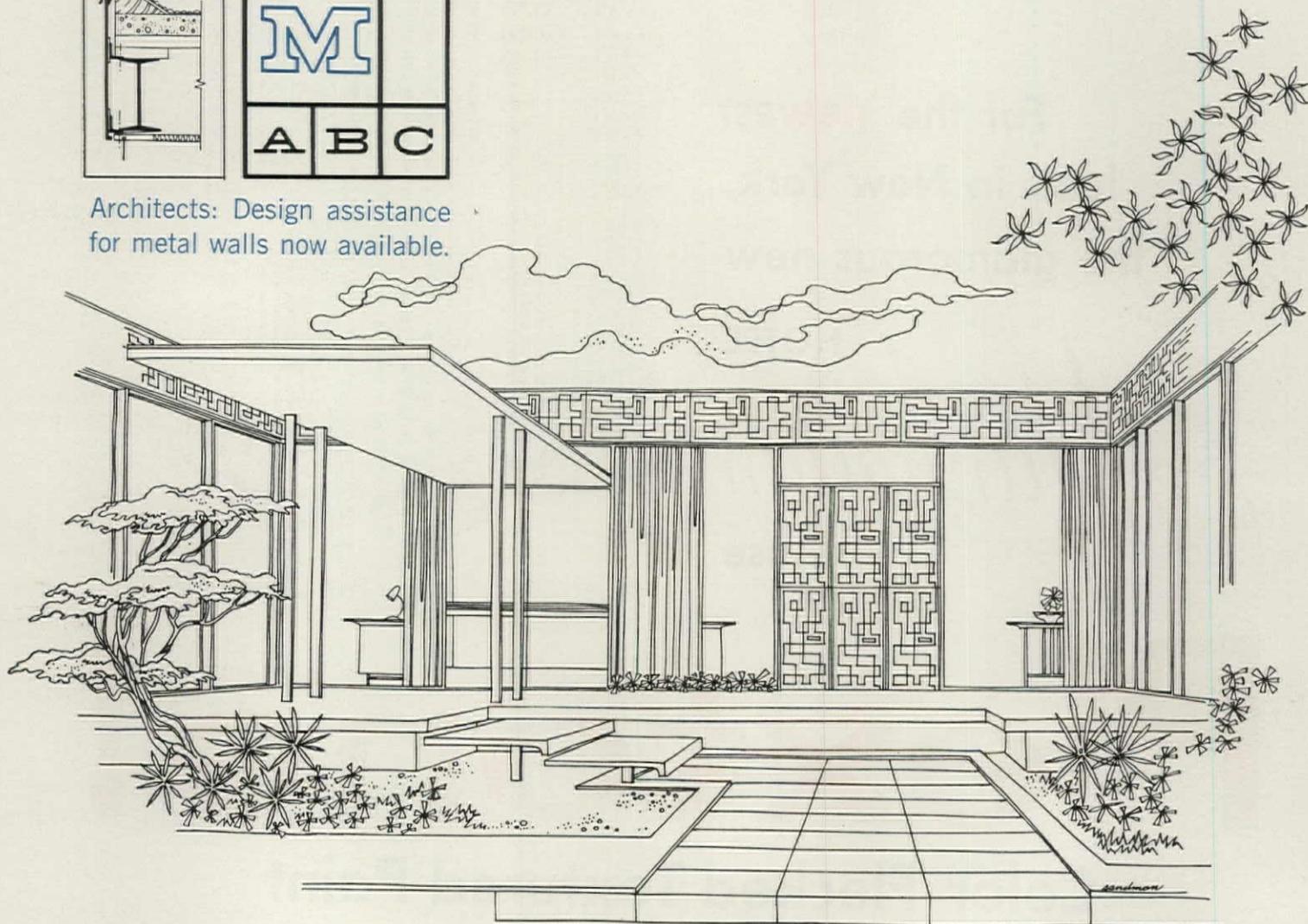
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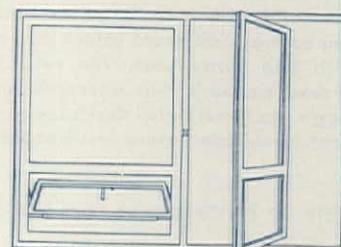
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ARCHITECTURAL FORUM
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Editorial

Why Johnny can't see

Among those who concern themselves with planning and design, it has become both urgent and fashionable in recent years to deplore the low state of popular environment in America—the jazzy roadtowns, the jukebox housing developments, the billboards and the borax, and, inevitably, the fin-tailed chariots from Detroit.

Just why do Americans persist in creating some of the ugliest cities in the world, and then run out to clutter up the countryside around them? Why is it that the average intelligent citizen, so sure of himself in his own business, is so lost in the new visual riches offered him, so basically unequipped to make discriminating decisions about his housing, his possessions, the community in which he lives? What happened to the simple sense of order, utility, and beauty that gave meaning to the golden ages of the past?

There are, of course, no simple answers. But there are plenty of indications that people are getting increasingly interested—as well as critical—about the looks of things. Witness, for instance, the immense new popularity of paintings and sculpture, art books and reproductions, the growth of community art groups, art courses, do-it-yourself art kits.

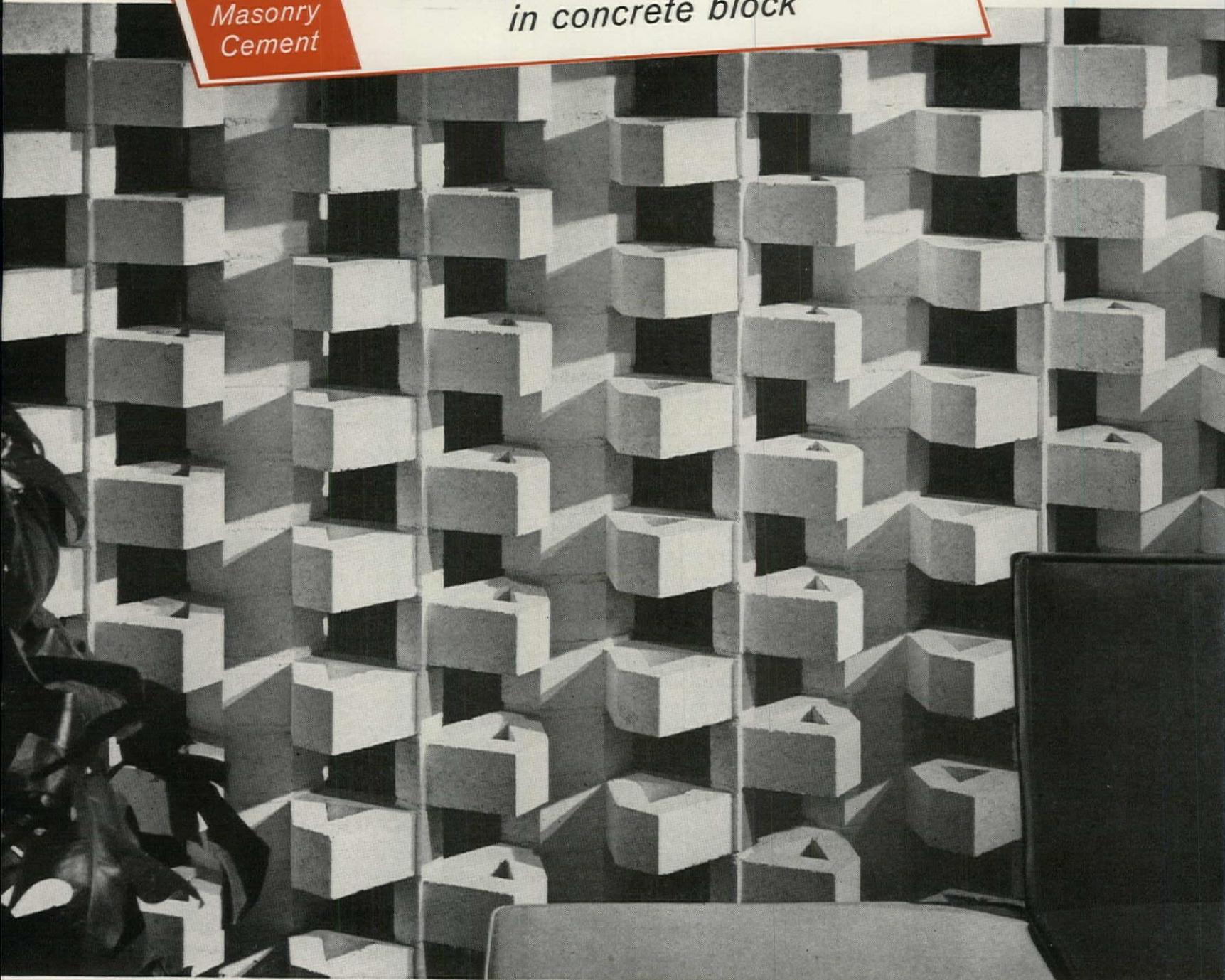
Yet why does even the creative, critical use of a man's eyes involved in Sunday painting have to await development until so late in life? Why is it that, for most adults, the discovery and understanding of beauty stopped long ago, after the poster paints and paper cutouts of the primary grades? By high school, most youngsters' trained awareness of space, form, color, texture, and proportion has shriveled in the face of more pressing vocational demands. For most of those who go on to college, the essentially false gap between art and life continues to widen and it is seldom bridged by an "appreciation" course in how to collect antiques or recognize the Flemish masters. Art, sadly, has become "art"—a luxury, a commodity, or an object of derision, with no apparent connection to the practical business of living.

The damage this divorcement can visit on planning and architecture, the most far-reaching of the environmental arts, is already quite apparent. It must also be apparent by now that the very habitability of a democracy depends not on the decisions of a few patrons, but of millions of individuals who will be spending more money on their physical surroundings than on anything else. As Walter Gropius has said (see *Excerpts*, page 209), we cannot sidestep the particular obligation of a democratic society—to work from the ground up. If the major planning and purchasing decisions of the future are to be informed ones, a new kind of consumer education must start early, and continue late. Planning and design can no longer logically be compartmented within the four walls of a high-

continued on page 107

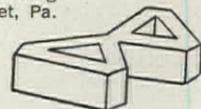
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Editorial *continued*

school art room, or a college architectural department, or the adult art course that most adults never get around to taking anyway. The lessons of design should start early, reach out and recur again and again from elementary school on up, in the teaching of social studies, in history, in civics, as they do in

actual life. The new tools of visual education—slides, films, television—present tailor-made opportunities for the introduction of visual arts by experts. Broad and lively courses unifying the environmental arts could well compete with the magic of narrower physical sciences which now hold the national spotlight.

Who knows, architects might even sit on school boards, pack lecture halls, guide field trips into the community itself. But the millennium of art will not simply happen. If Johnny is to see the possibilities in the world around him—to recognize the difference between good and bad—his eyes must be opened now.

L'Affaire Savoye



When the aroused architectural world heard last month that Le Corbusier's Villa Savoye near Paris would be spared destruction, few had the heart to ask: spared for what? But that is the rude question that will ever lie beneath the polite surface of similar rescue operations. Unless it can be answered, there is a danger that the preservers of the famed Villa Savoye and of other valued parts of our architectural heritage will earn for themselves the popular reputation of fond mothers who cannot throw out the teddy bears.

Fortunately, however, there appears to be a chance that a worthwhile use for the villa will be found. And there is also hope that *l'affaire Savoye*, which began last winter when the fast-growing suburb of Poissy, 17 miles north of Paris, expropriated the dilapidated villa with its 18 acres of overgrown grounds as the right site for a badly needed high school, will serve as an example for architecture-savers of the future.

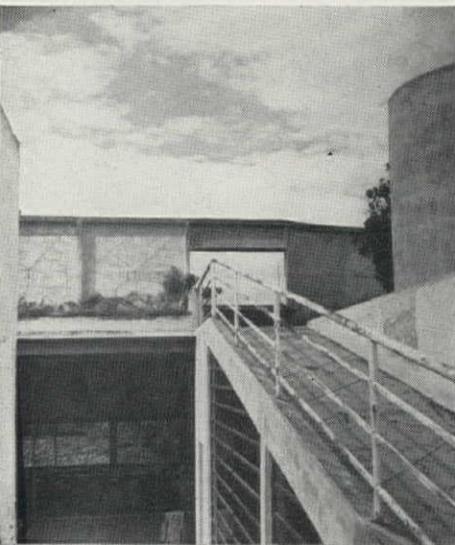
The villa, designed by Le Corbusier in 1928, looks today like the leftover set for a surrealist movie, but it is regarded, along with Frank Lloyd Wright's Robie House, as one of the world's two most important modern homes. It has had, indeed, a profound influence on modern architecture. Corbu used the skeleton of the house as a sort of scaffolding for a game of free space—open space pushed in under the house, space climbing and spiraling and

spreading and filtering in and through and out of the house enclosure. But, as may be seen in the pictures at left, time and nature and the German occupation have not dealt kindly with the villa. The white and blue paint has largely flaked off, the concrete has cracked, weeds grow in the courtyard, and hay has been stored beneath the gallery.

To save the villa, an extraordinary effort was mobilized by Le Corbusier's friend, the Swiss architectural critic, Sigfried Giedion. Toward the end of March the French government capitulated, announced that the Villa Savoye would be spared.

But spared for what? The first suggestion was that the villa be refurbished to house the Poissy school, but that proved impracticable. The next suggestion was that it be taken over by the French as a national monument, but French law dictates that monuments can only be dedicated to the dead. A third suggestion, one that makes a far more immediate appeal, is that the villa be used as a memorial research center where the task of scouting and cataloguing the major events in the overgrown history of modern architecture could begin.

It is hoped that Giedion's now-forming international fund-raising committee will settle on this use for the villa, to ensure the popular success of their campaign—and of other campaigns to come.





FRANK LLOYD WRIGHT 1869-1959

With the passing of Frank Lloyd Wright, American architecture has lost its one authentic giant. In sheer magnitude of accomplishment, no American approaches him. With a courage rare among mortals, he fought for three-quarters of a century first to establish, and then to defend, an original body of architectural principles. On these grounds alone he would deserve a brave man's funeral. But the matter goes deeper than that. For time has shown that Wright was not merely courageous: he was also, within broad limits, entirely correct. Contemporary American architecture stands very largely upon foundations he supplied. And this larger fact entitles him to a hero's rites.

Wright's work, like his personality, was never neutral: it may well have made as many enemies as it did friends. But surely no one, now that he has left us, can deny him his splendid scale. To measure this, he will inevitably be compared to those other three great figures of modern international architecture with whom he so long and so unwillingly shared the spotlight. But the comparisons, unless we are careful, will be meaningless. For although he was only from 15 to 20 years older than Le Corbusier, Mies, and Gropius, he was not really their contemporary. A relatively small difference in age marked the difference not merely of generations but of epochs. These younger men stood not beside him but upon his shoulders, for, by the time these men were ready to begin their first buildings, Wright's earlier work had already done much to prepare the world for them.

Wright was born (incredible as it seems for a man who lived to see rockets sent beyond the moon) only 43 years after the death of Thomas Jefferson! To have lived and worked so long would, by itself, have set him apart. Not one but several generations of architects have matured within the shadow of his work. For the younger men, at least, he was thus both a historic force and a living presence. Yet in all his basic attitudes, he remained a nineteenth-century man, much closer to Jefferson than to Eisenhower. It is this fact—and not merely his great age—which

makes it difficult to take just measure of the man.

Much that might have seemed willful, arbitrary, or obscure in Wright will cease to seem so if only we remember how different were his standards from those of present-day America. Actually, many of his apparent eccentricities stemmed from a sturdy, nineteenth-century consistency. He was an anarchist like Thoreau, an idealist like Emerson, a humanist like Whitman, an iconoclast like Twain. He detested regimentation, whether Moscow's or Madison Avenue's, and fought it wherever it touched him. He believed in love and therefore ended his loveless first marriage in much the same fashion as Emerson had given up his pulpit after the death of his first wife. He had believed in American democracy but, as he saw it sink into modern mediocrity, he denounced it, no matter how mighty its organs of power and opinion. He challenged ugliness, no matter how profitable. He hated war, *all* war, and said so. He based himself upon these old-fashioned virtues; and these gave to his actions a prickly consistency which led him into collision, decade after decade, with that whole apparatus of government, law, army, and church which the English so pungently call "The Establishment."

His nineteenth-century origins also explain other attitudes in the man. The farm background of his Wisconsin childhood gave him his love of nature, his uncanny sense of site and landscape. It probably also explains his distrust of the city and the standards of urban life in general. He admired the deep and wordless knowledge of farm life; but this led him to a distrust of scholarship and higher education which was simply parochial. Whatever it denied him, the engineering school at the University of Wisconsin gave him the mathematical basis for his brilliant structural design.

Wright always insisted upon his absolute independence from the esthetic forces of his times. He seemed to consider it an affront to his integrity as a designer to suggest that he might be influenced by his contemporaries. "Influence" was for him synonymous with "plagiarism." He had spent so many

arduous years fashioning his own idiom of expression that he could not tolerate the suggestion of a connection, no matter how remote or indirect, with the men around him. He denied it. But he was, like all really great artists, extremely sensitive to the world around him. Verbally, he might deny the influence of Sullivan, of the Japanese and *L'Art Nouveau*, of Cubism and *de Stijl*, of Indian and pre-Columbian art. Architecturally, his buildings prove the contrary. Like a seismograph, his work did register every significant tremor in the world of art. But unlike a seismograph, his great creative talent transformed these stimuli into forms peculiarly his own.

Nor was the miracle of Wright's response to these stimuli exclusively a matter of esthetics. Knotty technical problems were also involved and Wright's mastery of them establishes the uniqueness of his contribution. The process is very clear in the lovely Millard and Ennis houses which belong to his so-called "Mayan" period. The shining gravity of the Mayan temple sprang from its sculpture-encrusted limestone masonry. Wright could not have "copied" these, even had he wanted to. The budget would not have permitted either carved sculpture or limestone, and the building codes of a California often shaken by earthquakes would have frowned on rubble masonry walls. Instead, Wright turns directly to his cheapest material—concrete—and fabricates it into its cheapest form—cast block. Some of these are plain; some are cast into geometric patterns which, for all their basic simplicity, give a rich and intricate tracery when assembled into the wall. And the whole is made earthquake-resistant by an integral lattice of steel reinforcing bars.

The apparently effortless way in which Wright repeatedly resolved such problems lends an air of deceptive simplicity to his solutions. Actually, he had demonstrated this capacity to absorb technological advance and to convert it into new esthetic discoveries very early in his career. When all his colleagues were going to great lengths to conceal their electric lighting, steam heat, and steel frames, in

traditional forms, Wright was using them as a means of escape from the prison house of eclecticism. Out of them he created new plans, new profiles, new forms. For him, steel meant the hovering cantilevers and flowing window walls of the Robie house. Central heat meant the open plan, and panel heating made possible the floor-to-ceiling casements which dissolved the barrier between indoors and out. Electricity made possible entirely new concepts of both lighting and fixtures. Out of technical advance Wright makes esthetic invention: in this sense, he is the inventor of the modern American house.

This artistic prescience won him a small circle of friends and clients and a steadily expanding influence internationally. But it also brought him into headlong and chronic collision with powerful forces in his own society. In him, the keepers of official art detected a dangerous iconoclast, and they managed to ostracize him for decades on end. He was ostentatiously ignored by governmental bodies at every level—municipal, county, and state; and though he was decorated by the Emperor of Japan and made a citizen of Florence, he, like Dante, was never recognized by his own national government. In the face of this ostracism, unwilling and unable to surrender his artistic and philosophical aims, Wright was often isolated and alone.

There is, of course, nothing especially novel in a great artist's being ignored by his period. He is usually canonized only when very old or (better yet) safely dead. What was unusual was Wright's response to ostracism. He seemed actually to thrive on it. He became a guerilla fighter in the artistic underground. His headquarters were the esthetic *maquis*, and from this he would sally forth to raid the keepers of official art, to attack with great zest the Blimps and Plushbottoms of his times. There is no denying he was good at it. He had a sort of genius at publicity, as many organizations, including his own state of Wisconsin, learned at their expense. He was not always polite in these skirmishes and sometimes he was wrong. But there was, goodness knows, justification enough for his anger. He lived

to see embassies, academies, state capitols, and world's fairs awarded to men who, whatever else they were, were certainly not his peers. Since the orbit of his private life seldom carried him to those golf courses and clubrooms where such commissions are often awarded, Wright was dogged by the *fait accompli*. Survive it he might, and did, but he could not and would not let it go undenounced.

He wrote and spoke fluently and he loved the lime-light. These circumstances sometimes involved him in controversies in which he had no business being. And yet, if we plot the whole course of Wright's long battle for organic architecture, we will not be able to deny its astonishing consistency. Few men have fought with more unflinching, unyielding commitment to principle: marriage, children, bank account, reputation—none of these outweighed his commitment to his art. What these principles were he tried his best to make clear to his fellow Americans. That is why he wrote so many books; that is why, in later years, he stood before so many microphones and TV cameras. But a verbal exposition of architectural principles can never be fully satisfactory, even in the hands of a disciplined verbalist—and this Wright never was. His style was lush, unpruned, a thunderous mixture of Whitman and Carlyle. Sometimes it was very perceptive, as in the wonderful essay on the Japanese print. Sometimes it was laced with wit ("If you see a picture in which perhaps a cow is looking out at you, so real, so life-like, don't buy the picture: *rather buy the cow*"), but it was often obscure. He himself did not edit his writing and no one else was allowed to.

Hence it is to his buildings, rather than his writings, that we must turn for the clearest exposition of his principles. Here there is little possibility of misunderstanding. Already, in that first great constellation of buildings which is inscribed between the Larkin (1904) and the Midway Gardens (1914), his principles are set forth with electrifying precision. They announce a new vocabulary of form, a new palette of color and texture, a new attitude toward both nature and man which parallels the

exactly contemporary experiments of Cézanne and Picasso. The fact that these works of art have still the power to move us so, after half a century, is the best possible proof of the prescience of the artists, the validity of their principles.

It is strange indeed that men who should have known better could have misunderstood these principles, could have denounced them as un-American: for a more authentic American than Wright has never lived. His strengths and his weaknesses are ours. His artistic declaration of independence was, at the esthetic level, the exact equivalent of our noblest social and cultural perspectives: the maximum development of the individual in a new kind of society—free of the fetters of the past, of the hierarchy of kings and clergy, of hereditary power and privilege. Just as the Bill of Rights denies them, so Wright's architecture rejects all their iconography of caste, power, and privilege. His houses—even the largest and most expensive of them—are democratic in spirit, just as Monticello, for all its elegance, is also democratic in spirit. The analogy is not accidental. For Wright not only greatly admired Jefferson; like him, he was persuaded that democracy was the forcing bed of genius, talent, and ability. Its function was to produce for each generation a cadre of true leaders. As the terrifying organs of power closed down on mid-century America, this kind of social order seemed increasingly Utopian. But esthetically Wright's philosophy was certainly successful, producing some of the most beautiful houses America had ever seen—a beauty which the world could recognize as uniquely American even if Americans themselves could not.

The personal lives of all great figures are subjected to a greater scrutiny than those of lesser men. Frank Lloyd Wright had his full share of such attention and this often led to clamorous headlines. Yet if we examine the circumstances, we find they usually involve his trying to lead a private life in the way he thought it must be lived. We might not always accept his standards, but we can only respect the candor and courage with which he acted upon



TALIESIN NORTH: PHOTO BY RICHARD MILLER

them. Because his society so often placed fetters upon actions which he knew to be both necessary and moral, he felt compelled to hew out for himself a private kingdom of behavior. By any objective measure, this kingdom had its irrational dimensions. It had some strangely feudal aspects—his relationship with his students, with his workmen, and with his admirers and the merely curious who came in increasing numbers to gaze at him at work. If toward them he sometimes seemed both arrogant and angry, his dilemma must be understood. Like all artists, Wright needed an audience; yet this audience devoured his time, his energies, his patience. So, on occasion, he lashed out at it with what seemed to be arrogance but was actually more a kind of incredulous exasperation, on the part of a brave man who dared to be himself, at men who allowed themselves to be intimidated. He loved young people and was generous with his time to them, yet he was not a great teacher and knew it. (He once put it this way: he had hoped to be the source, the fountain-head, of a great river of design. Instead, people merely copied him—"they drove 2-inch galvanized

pipes into me and siphoned off what they needed," was the way he put it.)

Yet the physical expression of Wright's private kingdom took the form of two of the loveliest houses in the world. To the two Taliesins, in Arizona and Wisconsin, he brought real splendor; the excitement of a presence larger than life; a touch both passionate and gentle; a composition at once lyrical and strong. No one who had the privilege of visiting the Taliesins when Wright was in residence there could have failed to have felt himself ensconced in a special kind of oasis, in which the raw and hostile forces of surrounding life had somehow been reorganized into a landscape of blessed peace and plenty. In these two wonderful houses, of all the wonderful buildings he designed, we can most clearly see the sort of world his genius would have built for us Americans, had we but fully used it.

Frank Lloyd Wright, in leaving us, has bequeathed us an architecture as much enriched and deepened as was the English language upon the death of William Shakespeare. Whether we know it or not, we are all of us his debtors.

FRANK LLOYD WRIGHT

"I bequeath my soul to God. . . . For my name and memory, I leave it to men's charitable speeches, and to foreign nations, and the next age."

—FRANCIS BACON

We mourn with you the death of the world's greatest architect. He, who almost singlehanded, a half century and more ago, created an architecture of the twentieth century; an American architecture of which we are all rightfully proud. His monument is assured in the great buildings which outlive him.

PHILIP JOHNSON *New York City*

Death came to Frank Lloyd Wright on the twentieth anniversary of the opening of the administration center he designed for us. It has been said that no business building in this century more surely combined originality, beauty, and functional values. This and other buildings he designed for us, including the Johnson Research Tower, mark the man himself as an authentic original in our time. I believe the fame he achieved in his long and vigorous life will increase with the years and that his influence on future generations as a thinker as well as an architect will be profound.

H. F. JOHNSON *Racine, Wis.*

Farewell to this genius of architecture. This is the great man whose essential truth is in his buildings and his writings. His is the greatest influence on architecture to truth and beauty; his the influence on man to richness and liveliness of spirit. Farewell.

ANSHEN & ALLEN *San Francisco*

I admire in Wright's work the development of Sullivan's principles in new and varied forms, his persistent spirit of revolt against the dangers of a modern academicism and the limitations imposed by rigid doctrines. Above all I admire the full enjoyment of life expressed

in his best works and writings, and it is this side of Wright that may have the best and most enduring influence on the younger generations.

JOSE LUIS SERT *Cambridge, Mass.*

A greater influence on students, architects, clients, and people could not have been put in one lifetime.

A. QUINCY JONES *Los Angeles*

When history sifts down to its short list of lasting names of this century, Frank Lloyd Wright will be on that list. Little did Pope Julius the Second suspect that his greatest claim to fame was his quarrels with Michelangelo. It is to the discredit of our business and government not to have given Wright greater opportunities, and our profession will bear the brand of not recognizing him as "the architect of the century." We are still too close to him, and it is difficult to distinguish between the great message he, in his concept of architecture, has given us and the personal style which should remain his own. As time goes by, his contribution will ring clearer and become part of the architecture of generations to come.

EERO SAARINEN *Bloomfield Hills, Mich.*

For Italian architects Wright was not only the greatest living genius but also the incarnation of ideals which make being an architect worth-while. The antifascist fight coincided for us with a growing passion for Wright's architecture, because it stood for individual freedom and democratic courage. He was the only creator we could compare with the greatest masters of

Italy's past. We loved and honored him. Now we feel desperate, for a modern architectural culture seems inconceivable without him. In Venice University I spent an entire day with the students going over his buildings, reading passages from his books, and listening to recordings of his speeches. He seemed to be living among us as he will forever. We share our American colleagues' grief, for Wright was the world's greatest architect of all times.

BRUNO ZEVI *Rome, Italy*

Frank Lloyd Wright will be remembered as a champion of the human spirit against the conformities of our era. His valiant spirit will redeem our architecture.

JOSEPH HUDNUT *Dover, Mass.*

A fine and good man has passed on. He was a genius not only of the building art of America but also in his life and art in general. He has in his creations showed a passion for humanity. His forms in art will surely retain their greatness more than 100 years ahead. Personally I have lost a real friend.

ALVAR AALTO *Helsinki, Finland*

Frank Lloyd Wright was a great architect who early used free forms which made for the interior flow of space. Further he used daylight sources as a painter does a palette of colors which means that all directions and all locations in a room are in repose.

WILLIAM W. WURSTER *Berkley, Calif.*

Frank Lloyd Wright was a distinguished architect as to form and shape and design, of course. But his

contribution to our day and time transcended any such technical accomplishment. He gave meaning to what we call the free spirit of man. He showed that in a material endeavor we can give recognition and tribute to an Almighty Being. He had a fine sense of appreciation of the dignity of man, the foundation of human understanding and brotherhood.

ALBERT M. GREENFIELD *Philadelphia*

I consider Frank Lloyd Wright the greatest creative architect in history. The masterpieces of architecture of the past were ultimate perfection of architectural styles that had been explored for a century or more. In his case he created an entirely new architecture full-blown, the mark of true creative genius unprecedented in history. All contemporary architecture is beholden to him for guidance and inspiration. I was honored to have him for a friend the past 25 years, and cherish the memory of his wit, wisdom, and human qualities.

EDWARD D. STONE *New York City*

Honorable tributes followed by calculated oblivion are but part of what is in store for the work of Frank Lloyd Wright. Wrecking crews are ready for his fame as for his structures. But it will be very hard to eradicate Wright's seed concept, "Architecture I know to be A Great Spirit." From this a new architecture will grow.

EDGAR KAUFMANN *New York City*

The demise of Frank Lloyd Wright brings to mind the tremendous contribution that this great man made to American and world architecture. The world is far richer for the fact of his having been born. He was controversial only because he was so brilliant and traveled in a world for which there were no charts. We will continue to realize dividends from his brilliance as a designer, but also for the reasons of the

depth and erudition of his philosophy. Just as the Greeks, the Romans, and the great cities of the Renaissance in Europe continue to reap dividends from their original conceivers, so are we earning profits in our own way of life and heritage for all years to come.

WILLIAM ZECKENDORF *New York*

In a period of specialist constrictions and nationalist conformities his lifework has expressed the full gamut of the *human* scale, from mathematics to poetry, from pure form to pure feeling, from the regional to the planetary, from the personal to the cosmic. In an age intimidated by its successes and depressed by a series of disasters, he awakens, by his still confident example, a sense of the fullest *human* possibilities. What Wright has achieved as an individual in isolated buildings, conceived in "the nature of materials," our whole community, if it takes fire from his creativity, may eventually achieve in common designs growing more fully out of "the nature of man."

LEWIS MUMFORD *Amenia, N. Y.*

He contributed to the enlightenment of mankind. If anyone could build up the emotional and spiritual quality of our technical age it was he. His life and his ideas are of unsurpassed entity; his buildings are organisms of radiating intensity. As the greatest inspirer in architecture within a century, he fought incessantly against mediocrity, conformism, and the depreciation of the individual. His genius will be for many generations a bright example of integrity and highest achievement.

W. M. MOSER *Zurich, Switzerland*

In his undiminishing power he resembles a giant tree in a wide landscape which year after year attains a more noble crown.

LUDWIG MIES VAN DER ROHE *Chicago*

Frank Lloyd Wright's works will stand as his monument for centuries to come. Those of us who are privileged to live and to work in homes and buildings of his design are indeed fortunate. He never looked back but always ahead to the future. He was always young and has been a great inspiration to all who have really known him.

HAROLD C. PRICE *Bartlesville, Okla.*

Somehow Frank Lloyd Wright's death has stung us because his vitality appeared to have no bounds and no end. With all his irritating ways—irritating perhaps because of our own unconfessed guilt—he stood as the most precious of all symbols: that of independence of thought and action in an age of conformity.

PIETRO BELLUSCHI *Cambridge, Mass.*

Frank Lloyd Wright has impressed the whole civilized world with his architecture. While I was president of Florida Southern College, where he has his largest project, I found people coming from many nations to see his works.

Wright was aware that we not only live in our environment but we likewise live by means of it and because of it. Therefore the whole purpose of his efforts was to design buildings that would do something to those who lived and worked in them. He never lost his interest in learning how people lived in his houses. He claimed that they quarreled less and loved each other more.

The best word that I can think of to describe Wright's architecture is the word human. While one is in his buildings one feels more, sees more, and lives more.

LUDD M. SPIVEY *Palm Beach, Fla.*

Wright gives insight to learn that nature has no style, that nature is the greatest teacher of all. The ideas of Wright are the facets of this single thought.

LOUIS I. KAHN *Philadelphia*

Fifty years ago my thesis on graduation dwelt on the growing influence of the Chicago school and its leaders: Louis Sullivan and Frank Lloyd Wright. Wright survived Sullivan and became recognized during these 50 years as the greatest architectural genius of his time, an innovator, a man of courage, one of the great.

JOHN WELLBORN ROOT *Chicago*

At the occasion of the bestowal of the Gold Medal of the City of Florence upon Frank Lloyd Wright—a medal which had never before been given to a foreigner—Carlo Lodovico Ragghianti gave the address. A Tuscan proudly jealous of Italy's contribution to architecture, he said, "Just as Dante initiated a new era in Western Civilization by the creation of a new language, so has Frank Lloyd Wright given architecture a new language and changed the appearance of cities throughout the world." We are all of us, it seems to me, far from understanding the 70 years of Wright's significance and importance to the architecture of environment, organic architecture as to materials, function, and style. However, we begin to "feel" the necessity for his Broadacre City—the humanization of structure and the creation of an environmental architecture for democracy—as the machine, the highway, and the box manufacturer are about to take over in the sprawling metropolis.

OSKAR STONOROV *Philadelphia*

For 50 years he was a stirring ideal for us, as he had become for many more when he had finally reached the high and long mountain ridge of his career. The faith I had in him and through him in humanely conceived forms set into the landscape was one of the very things which brought me to this country, more than a third of a century ago. There was tragic loneliness for him in spite of so many stimulated and devoted souls.

RICHARD NEUTRA *Los Angeles*

Frank Lloyd Wright was very well known and admired in Europe long before he was recognized in his country. The Robie house in Chicago and the Larkin building in Buffalo were fundamentally new architectural milestones which focused attention on this independent artistic expression of the New World. Influence of his early work has been traced in Holland, Belgium, and also in Germany. But, vice versa, also Wright's works of later years show signs of his influence from the European movement. His romantic and explosive handwriting, however strong, prevails in all his building. His superb if somewhat upsetting showmanship has helped to bring the cause of architecture into the public consciousness. A great man and artist has left us.

WALTER GROPIUS *Waltham, Mass.*

In the death of Frank Lloyd Wright it is not the loss of a great old man that we should most regret, but the disappearance of one who had been a great young man.

In paying our tribute to the spectacular achievements and projects of Wright's latter years we should not let ourselves lose sight of the fact (as Wright was often very humanly inclined to let us) that the substantial base of his influence on world architecture had been realized over 45 years ago. In the celebration of such work as the S. C. Johnson Laboratory at Racine, Falling Water, the Price Tower and the V. C. Morris shop in San Francisco, it should not be forgotten that the Robie house in Chicago was completed in 1909, the same year Wright went to Germany to supervise the publication of a portfolio of his work in response to European interest in it. And, as J. J. P. Oud, the Dutch architect, wrote in a special Wright issue of *Wendigen* in 1925, "the time when the adoration of Wright's work by his colleagues on this [the European] side of the Atlantic had reached its culminating point, European architec-

ture itself was in a state of ferment, and cubism was born."—That is to say, between 1909 and 1914.

An American artist who made his basic contribution to American and European architecture before his 45th year and who could continue to surprise and provoke by gestures and virtuosity until his 90th is a vitality for which we should be grateful. In this, Frank Lloyd Wright stood as one of the great world figures in contemporary art and probably America's greatest.

JAMES J. SWEENEY *New York*

Frank Lloyd Wright was a unique character—artist, innovator, inventor, actor. He was born in the Fountain of Youth and bathed in it happily for 90 years. He cultivated the art of throwing vitriol in impassive faces to arouse attention. His own lively boyish interest in everything and everybody led him into fields he knew little about, such as large-scale metropolitan planning, but even there he was the sworn enemy of smugness and complacency. He never had a doubt of his inspiration, and, whether we comprehend or subscribe to his organic and other somewhat bizarre theories or not, he gave his profession a new life when the engineers had almost taken it over. Since it meant so much to him, it is too bad he did not live to see the Guggenheim Museum dedicated, but he will, in any event, be remembered for other and more enduring works.

ROBERT MOSES *New York City*

... provocative, controversial, stimulating. He is probably at this moment telling St. Peter how to redesign the "Pearly Gates."

ROBERT DOWLING *New York City*

The desire of people in the industry to comment on Wright has been so overwhelming that only a portion of the tributes received by FORUM could be presented above. More will appear in the June issue which will also include a comprehensive review of Wright's work, old and new.—ED.



The big mirror

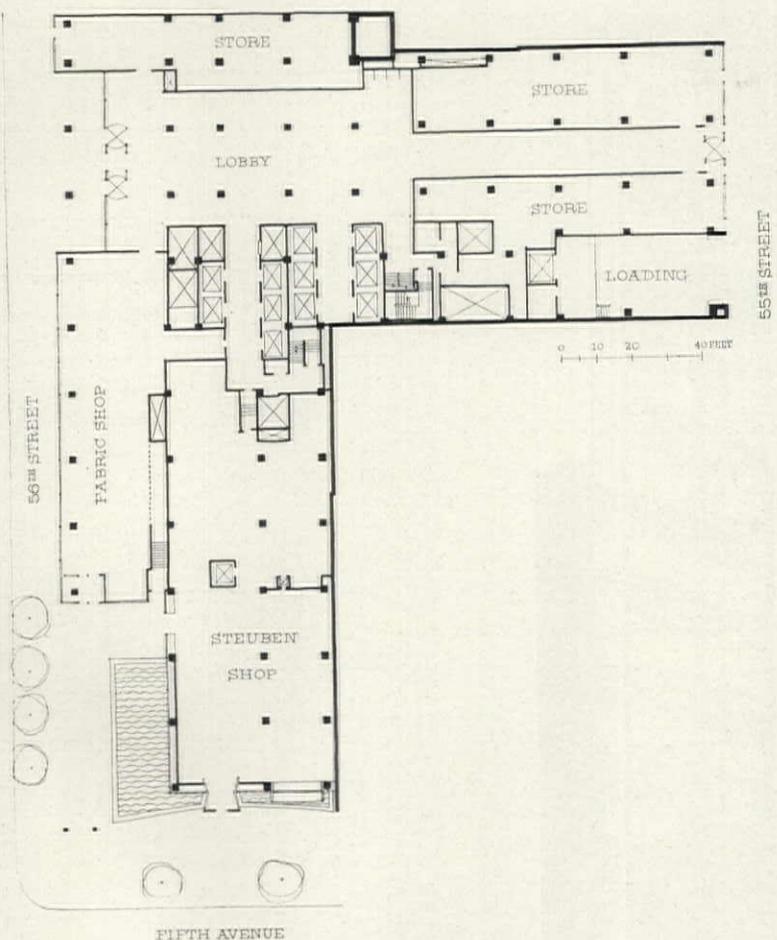
Behind the ultimate all-glass wall Corning puts glass to every conceivable building use

When Corning Glass Works announced in 1956 that it would build new midtown Manhattan offices for itself and others in the glass industry, New Yorkers had few doubts about what material would be prominently displayed. But when Corning opened its new building on Fifth Avenue this spring, the result was no glass menagerie. It was instead a tall, transparent tower of considerable elegance and restraint.

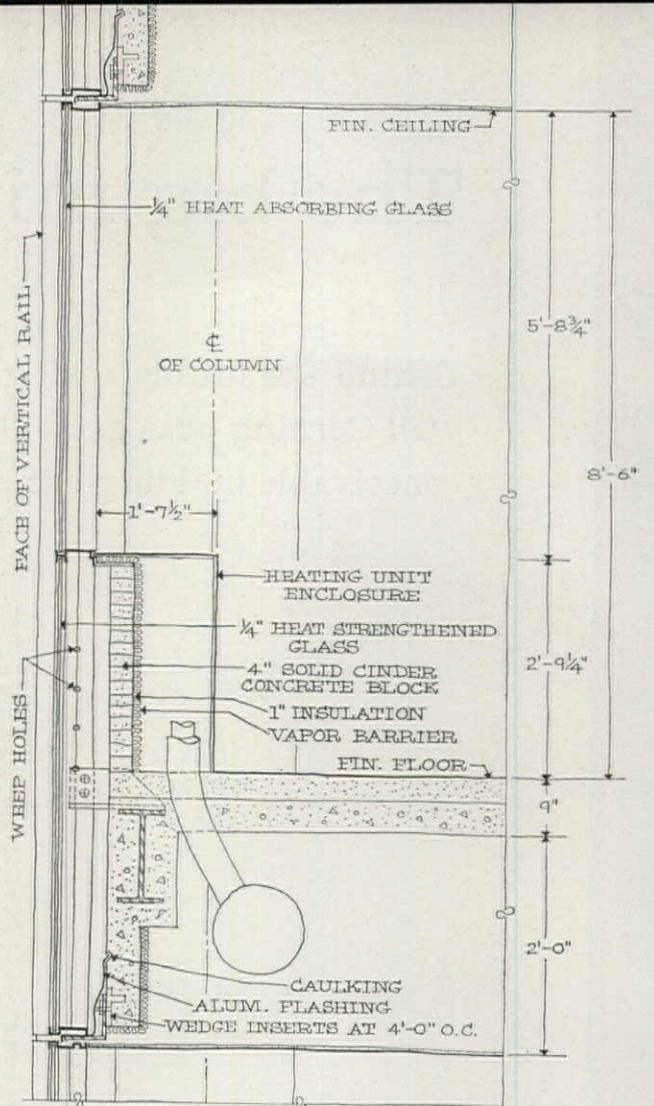
Among the dozens of uses of glass in the new skyscraper, the prize one was the covering of the building itself: a crisp curtain wall entirely of heat-absorbing green glass held in unobtrusive aluminum frames, rising 28 stories from the first new open plaza space to grace the avenue in years.

Compared to such block-wide, free-standing corporate monuments as Lever House and Seagram's on nearby Park, Corning's choice of an 80-ft. corner lot (right opposite its old Steuben Glass building) was bound to reflect some architectural limitations. Within the L-shaped, 30,000 sq. ft. package of lots owned by Realtor William Zeckendorf and leased to Corning, Architects Harrison & Abramovitz & Abbe had to shape their new building around an older Fifth Avenue structure not acquired in the deal. They used the back of the L to give the office building itself access to both side streets (plan, left). In front, they set the main tower 12 ft. back from the Fifth Avenue sidewalk, and 30 ft. in from the 56th Street property line. This allowed the glass façade on the avenue to rise uninterrupted by New York's usual jarring setbacks farther up. At the same time, it created some 3,000 sq. ft. of new open space on the corner.

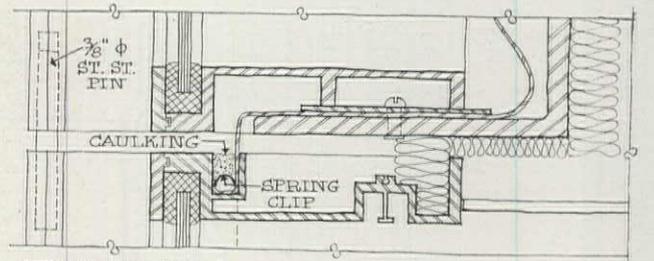
Much of this plaza is taken up by a reflecting pool, and by two husky metal flagpoles set close to its flaring corner. These amenities have not pleased everyone, for the pool and poles cut sharply into circulation space. Some springtime strollers were puzzled also by the big windows of the new Steuben shop, where handsome matched slabs of green marble darkened the interior for spotlighted displays of crystal, but left the show window themselves curiously shallow and empty (see overleaf). In its over-all effect, however, there was little doubt: Corning's new house of glass was one of the handful of new skyscrapers in New York worth a walk to see.



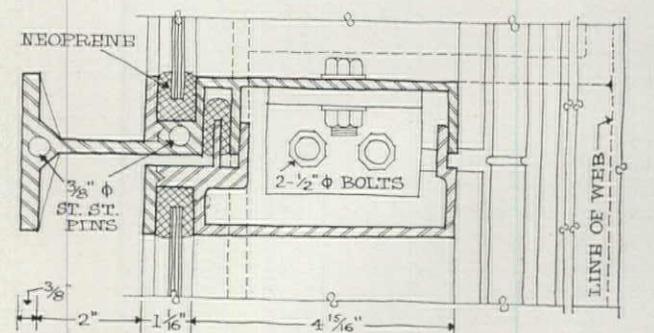
CORNING GLASS WORKS BUILDING, 717 Fifth Avenue, New York City. ARCHITECTS: Harrison & Abramovitz & Abbe. INTERIOR DESIGN: Designs for Business (office areas). ENGINEERS: Edwards & Hjorth (structural); Jaros, Baum & Bolles (mechanical); Ebner Associates (electrical); Bolt, Beranek & Newman (acoustical). GENERAL CONTRACTOR: George A. Fuller Company.



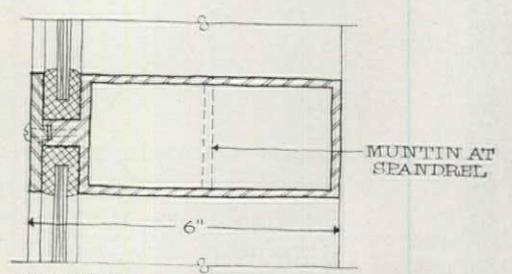
VERTICAL SECTION OF GLASS CURTAIN



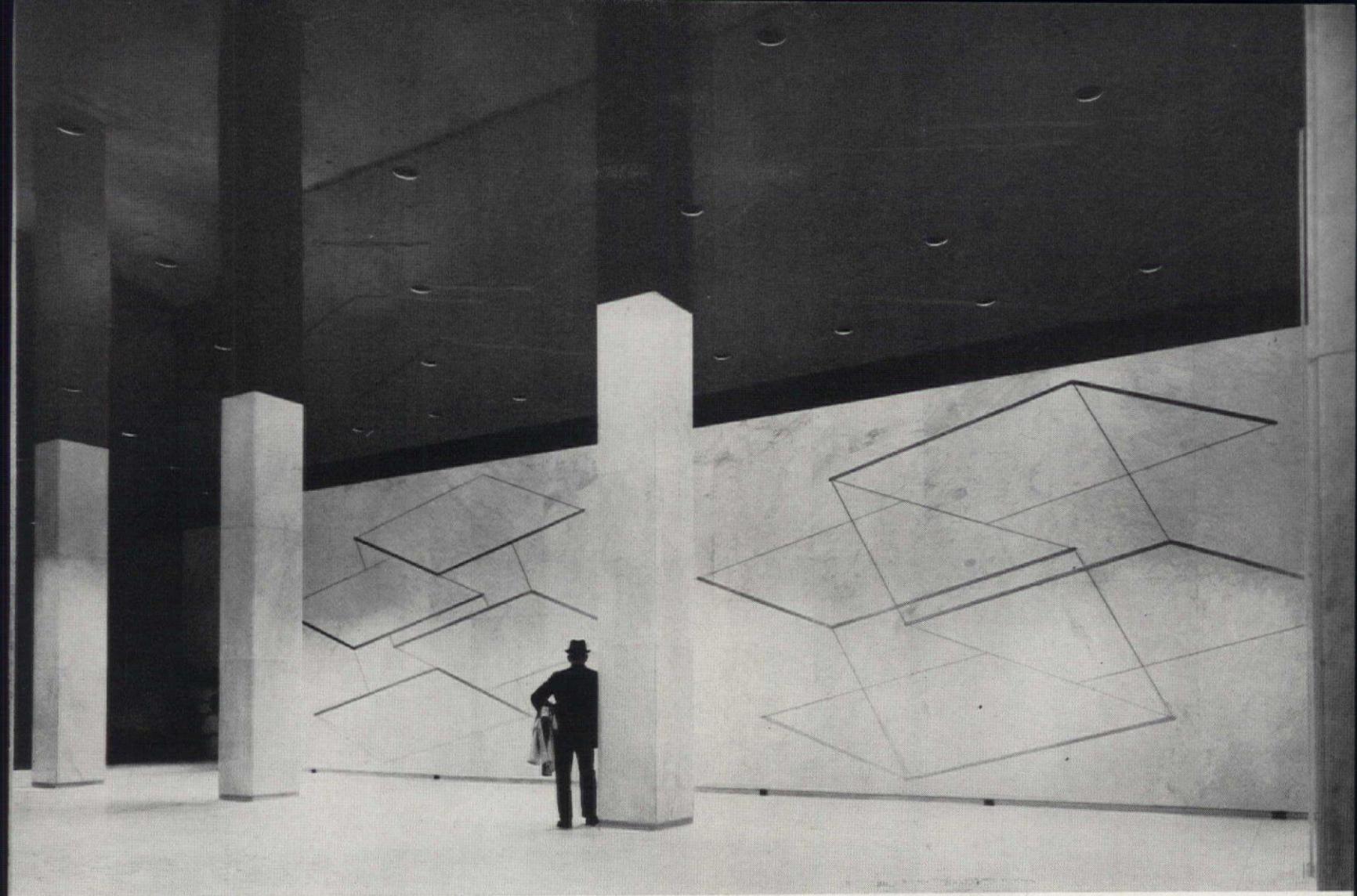
HEAD (SECTION)



MULLION (PLAN)



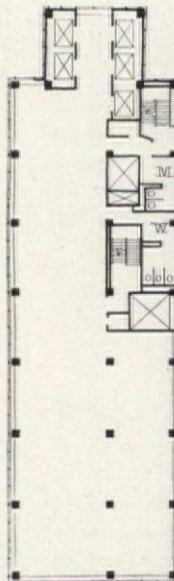
MUNTIN AT VISION PANELS (PLAN)



"Structural Constellations," a 60-ft. mural by Joseph Albers, is made of parallelograms cut and gilded into the white marble wall of the long lobby stretching from 55th to 56th Streets. A striking ceiling of black carrara glass mirrors activity below, hides recessed spots which bathe the white terrazzo floor in light.

All-glass wall (left) rises out of the reflecting pool in the plaza, making its own changing interpretations of older buildings up the avenue. At ground level, a green marble wall set behind the glass darkens the interior of the Steuben showroom for displays. The corner of the new Owens-Corning Fiberglas Fabric Shop can be seen at left. Above the shops, windows and spandrels of the office building alternate every 6 ft. in a framework of neoprene gaskets set in aluminum, which is anodized dark gray to make its pattern subordinate to the glass itself. The spandrel glass is tempered against breakage from heat, and set 7 in. out from black-painted backup block to give the same deep reflections as the windows. The bright, slim mullions protruding on the exterior anchor a window-washing platform on its daily rounds, and give the smooth glass wall of the skyscraper an elegant vertical direction.

New tower butts against the older Columbia Pictures building, whose party wall has not been completely masked out by new stone facing. Corning, Steuben, and Owens-Corning occupy two of the 6,620 sq. ft. tower floors (see plan) and lower floors totaling one third of the building's 345,000 sq. ft. The rest is rented out.



PHOTOS: (LEFT & OPP. P.) J. ALEX LANGLEY; (ABOVE) © EZRA STOLLER

Glass partitions: Executive suite (right) on 25th floor displays alternating partitions of clear, opaque, and translucent glass. Reception alcove (below) is separated from adjoining offices by milk-glass partitions. President's office (below, right) has, besides a fine view of the Manhattan sky line, long glass-fiber curtains in front of heavier short drapes of the same material used in offices throughout the building. Corning makes almost everything but window glass; the building's 4½ acres of green-glass curtain wall, for example, were actually fabricated by Pittsburgh Plate.



Glass ceilings: Secretarial space in Corning's second-floor general offices is set off from exterior cubicles by glass framed in movable metal partitions. Acoustical ceilings of glass fiber incorporate rectangular panels of Corning's new light-diffusing lens materials. Glass fiber is used also in insulation, wall coverings, and furniture.

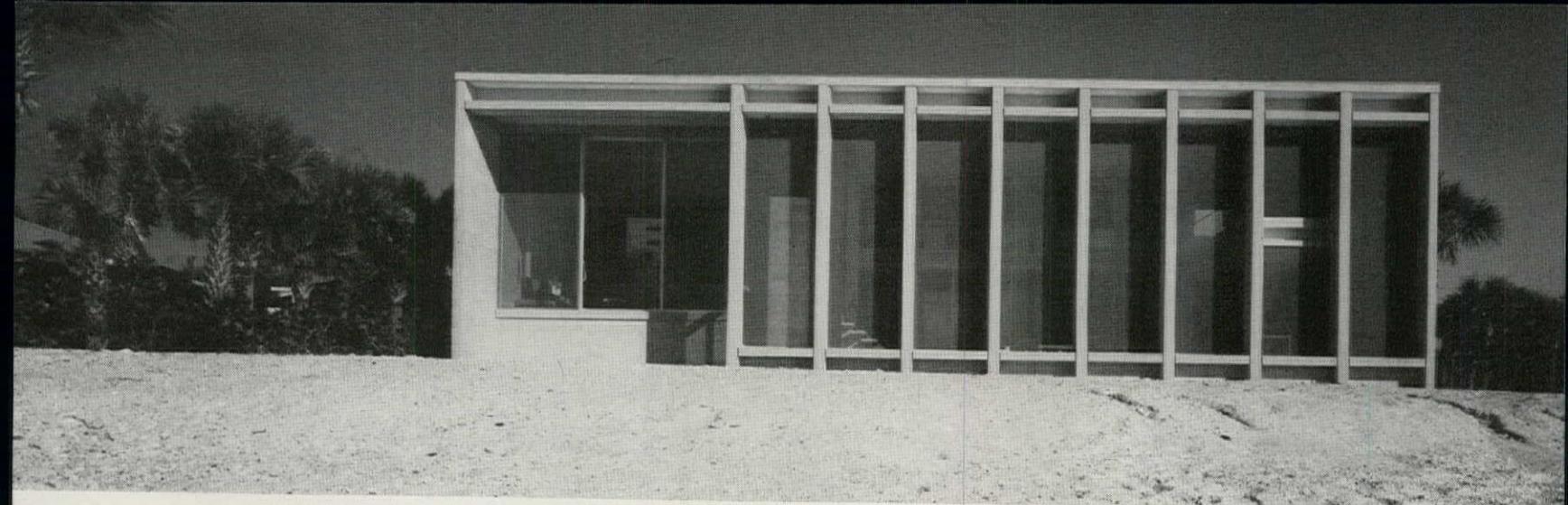


Glass displays: Salesmen's offices are visible from central areas through glass-enclosed shelving cases which display some of Corning's consumer, industrial, and military products. For the new building, Corning even collaborated with a lockmaker to produce new lever-type door handles of its familiar Pyrex glass.



PHOTOS: J. ALEX LANGLEY; (OPP. P.) © EZRA STOLLER





Cabana in concrete

Paul Rudolph floats floors
at various levels behind
a formal, unrevealing façade

On Casey Key, a strip of sand near Sarasota, Fla., retailing at \$225 per front foot, Paul Rudolph has designed an exquisite, contradictory little cliff of a year-round residence. Unlike the other year-round and vacation houses lined up along the placid Gulf—and unlike his own past residential designs—the Deering house is rugged; it has a tall, strong frame of masonry. True, it retains the precise grace and formality of Rudolph's past designs, but the architect's delicate touch has stiffened in the formidable set of piers he has planted in the sand to support this structure—piers which establish a strong, regular rhythm along each side of the house, then suddenly abandon this rhythm with no structural reason. And it is a house whose façades, in Rudolph's own phrase, are "willful distortions" of what happens indoors.

Within the tall shoe box of space shaped by the piers there are ten rooms on five levels, including the garage (which is half dug into the beach). These rooms step up behind the façades almost like a bleacher overlooking the Gulf. Under the single flat roof their ceiling heights vary from 16 ft. 6 in. to 8 ft. 4 in. The lowest room (with the highest ceiling) is a majestic screened porch; then, up a few steps, behind a wall of tall sliding glass doors, is the living room proper; up another several steps is a smaller sitting room. On each of these staggered floors there is a view across the one below and through the range of sturdy piers to the long horizontals of beach and horizon.

One aspect of the Rudolph technique which remained restrained in the Deering house was his delicate color control. The concrete blocks of the walls are almost beach-colored, and the piers are faced with cypress planks, faded by the sun. Because of this light coloring and because of the amplitude of light admitted into the high-ceilinged space, the environment does not really change much when you walk inside. You still feel the sky with you, and the sea. Also, the big rooms are furnished quite sparingly, so they seem almost as uncrowded as the beach.

Glass panels slide to open the long sides of the house. Ductwork for air conditioning is installed, but air conditioning may never be carried through because natural air movement is so adequate. There are only 88 ft. of frontage in the plot, so the end walls of the house are windowless, for privacy, except for a latticed opening off the big porch.

This is a rare kind of residence; on its fragile shelf of sand it is designed eternally, as scaleless as a Greek temple. Rudolph's admiring competitors in the busy world of Sarasota architecture say: "It's quite a house, all right, probably his best. And some day when we're all gone, it's going to make quite a noble ruin, too."



Seaside elevation. To the left is the living room (over the garage); the rest of this elevation is screened porch.

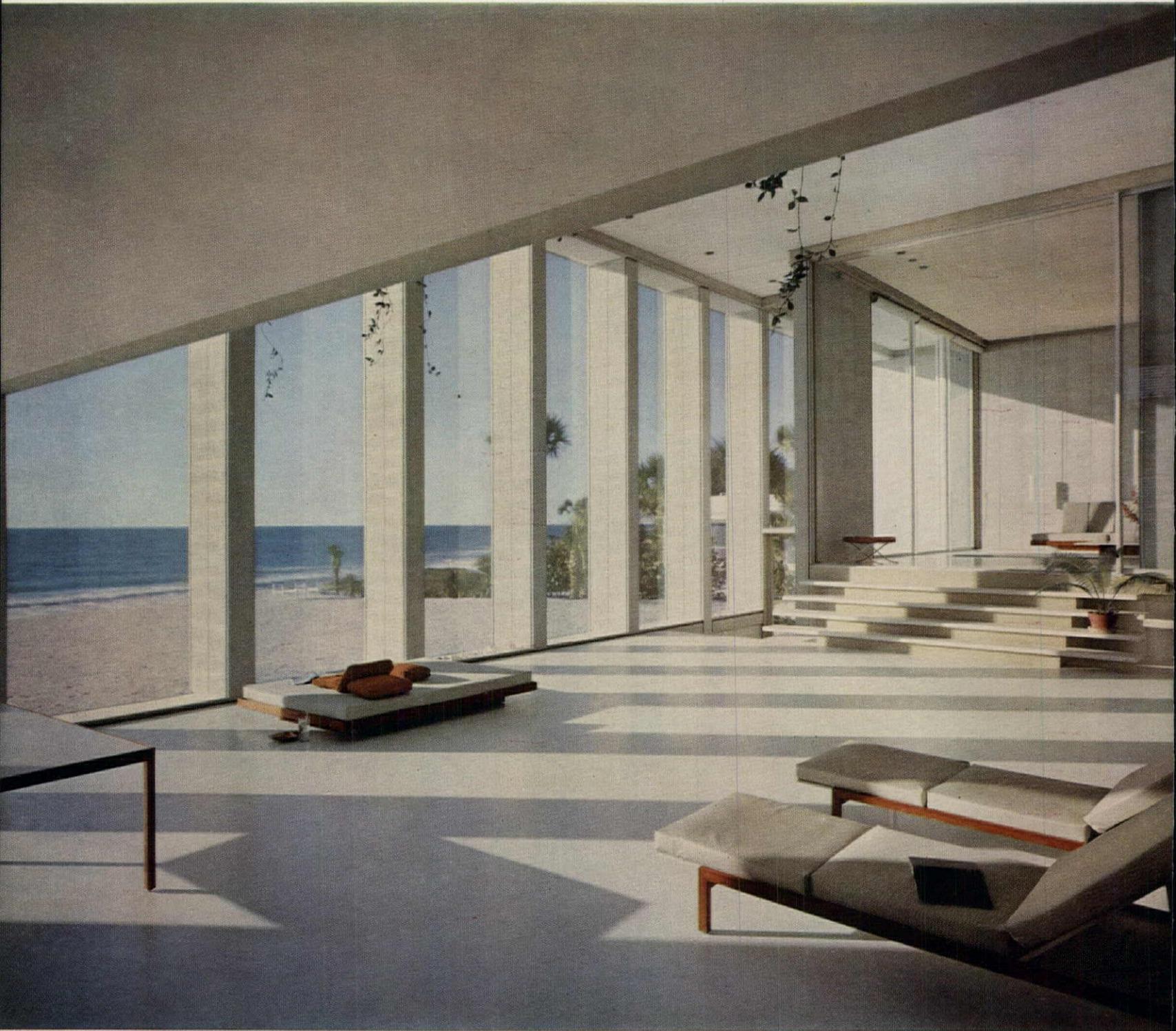
Dining area on porch is beneath dropped slab of balcony. Heights change from room to room to create a varied sequence of spaces.

PHOTOS: © EZRA STOLLER



CABANA IN CONCRETE

ARCHITECT: Paul Rudolph
INTERIORS AND LANDSCAPING: by the architect
GENERAL CONTRACTOR: Jack Twichell



Porch, 44 ft. long and 16½ ft. high, steps up to the living room. The designer deliberately tried to achieve a feeling of "one thing built within another" in this residence.



Bedrooms are low-ceilinged, and look out across the screened porch toward the Gulf of Mexico. Breeze sweeps through the house.



Entrance foyer is under the bedroom shelf. The thickness of the concrete block is never displayed uncovered; instead the architect used its face "as a mosaic."

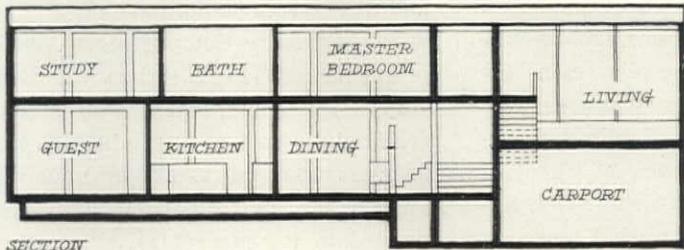




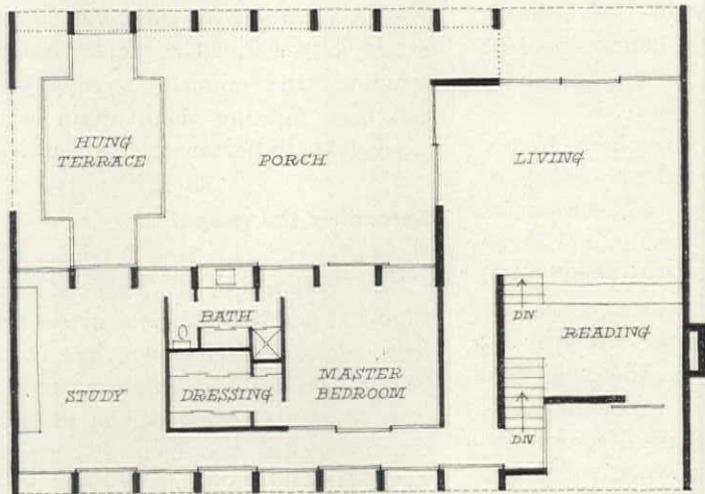
Inland facade (screened from road by palmetto trees) reveals inner division of space only in night and evening.

Entrance (below) is between dining area and garage. Concrete block piers are faced with cypress planks to avoid any feeling of instability in the tall stacks. Lattices preserve privacy.

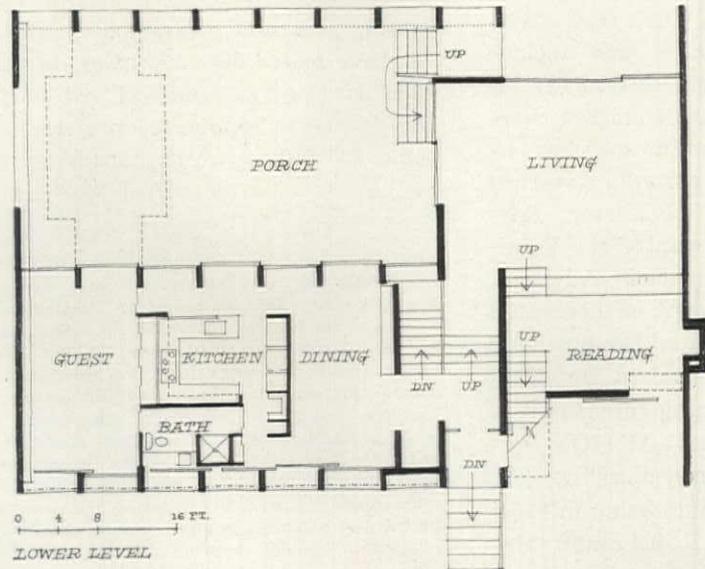




SECTION

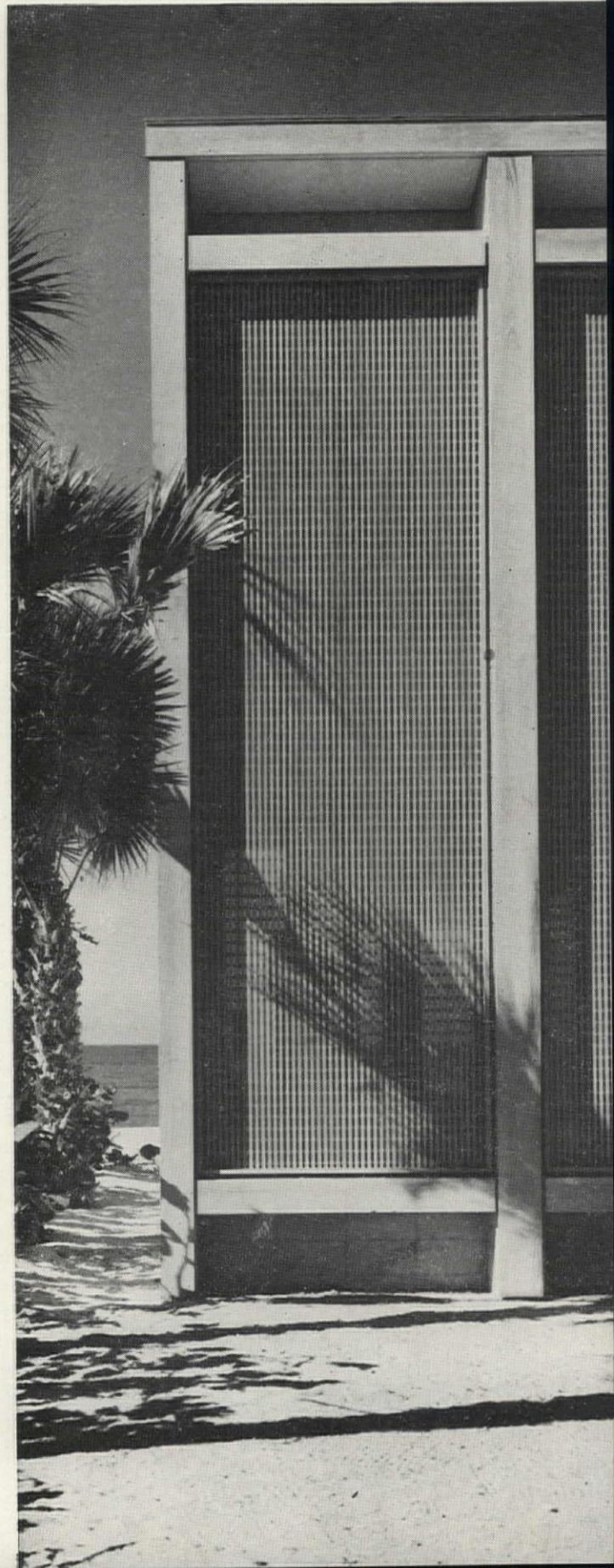


UPPER LEVEL



LOWER LEVEL

END



ACTION's rousing Mr. Rouse

Under its energetic new president, America's national urban renewal organization starts a new crusade: a "total approach" to the city



"So far, much of our effort has been expended in pushing slums around. We have been talking negatively, about going in and cleaning out 'problems.' We have been getting rid of blight piecemeal, fighting the battles of one isolated redevelopment project after another. Few people realize that now, for the first time, we actually have the tools to make the *whole* city into what we want it to be. What we must do is raise our sights, our level of demand. The benefits to human beings could be vast. And, believe it or not, the arithmetic is irresistible!"

This, in condensed form, is the highly sanguine urban renewal philosophy of James Wilson Rouse, 45, successful Baltimore mortgage banker and shopping center developer, active civic and building industry leader, and, since last October, president of the five-year-old American Council to Improve Our Neighborhoods. It will also be the spirit of ACTION's first national conference on the American city, which will bring some 500 businessmen and officials from 50 cities to Newark, N.J. for three days this month to mobilize a full-scale attack on U.S. urban problems.

The scope of ACTION's new "five-year campaign," which will include projects more ambitious than any it has undertaken to date, will emerge more fully at Newark, amid speeches by Rouse, Adlai Stevenson, Governor Robert Meyner of New Jersey, Raymond Saulnier, chairman of the President's Council of Economic Advisers, Ralph Lazarus, president of Federated Department Stores, and other business, government, and city leaders. But from what has been happening recently, it is already apparent that ACTION has lifted its own sights considerably.

When it first came into being in 1954, following a HOUSE & HOME round table

and the recommendations of a President's Advisory Committee on housing problems*, ACTION (then the Better America Council, Inc.) was strongly oriented toward the enlightened home builders and real estate men who had pushed for its formation. It also was limited in its concept to a "patch and paint" campaign to rehabilitate marginal American neighborhoods that were becoming slums. But it did bring together, for the first time, various real estate, business, labor, public interest, religious, and minority groups which had been fighting their urban battles separately, and often at cross-purposes.

Spreading the gospel

The broadening of people's knowledge and perspective about urban problems, along with its own, has in fact become ACTION's mission and its greatest contribution to the maturing urban renewal movement in America. As a national nonprofit service organization, it has acted as both a generator of interest and a clearing house of ideas. The most significant contributors to ACTION itself have been private corporations and businessmen, who so far have footed 85 per cent of its operating costs of \$1.5 million, not including \$500,000 in special projects and some \$4 million worth of advertising

*Rouse was a member of both, served on ACTION's board from the start, became president last year when GE's Roy Johnson moved to Washington as director of the Advanced Research Projects Agency. At home in Baltimore, Mortgage Banker Rouse helped finance the city's first two redevelopment housing projects, has three shopping centers in operation and more planned for other cities. He is also a founder-member of the Fight Blight Fund to finance slum rehabilitation, of the Greater Baltimore Committee of businessmen sponsoring downtown renewal, and of Baltimore Neighborhoods, Inc., a new organization aimed toward maintaining stability in racially changing neighborhoods.

space and time donated by the Advertising Council. (One enigma: somewhat less support than expected has come from those directly engaged in the building industry, who stand to gain considerably from the billion-dollar reconstruction of cities.) Among the special projects, grants from the Ford Foundation are supporting eight specific research studies in housing and community development which will form the basis for much of the discussion at ACTION's Newark meeting.

"Almost without knowing what it was doing," says Rouse, "ACTION uncovered the depth of knowledge and concern big business has about city problems and its willingness to advocate and support better living and working conditions as a healthy framework for good business." With ACTION's help, General Electric has held four seminars on the roles GE executives could, and should, play in their communities. Under ACTION, Sears, Roebuck called together store managers to tell them about their stake in local urban renewal, started publishing its own "Urban Renewal Observer," and now awards scholarships to graduate schools of city planning to help insure a supply of professionals for the movement. Connecticut Light and Power held an ACTION clinic for its executives, now has men serving on planning commissions and other urban renewal groups in six cities.

As part of its "shotgun program," ACTION also has shown a cartoon film and TV documentary to wide audiences, has kept up a barrage of reports, pamphlets, and letters, and liaison with some 1,000 correspondents in the field. It has held seven major regional clinics on urban renewal—in St. Louis, Cambridge, Dayton, Berkeley, New York, Dallas, and Atlanta—which have attracted some 2,000 leaders from 300 cities. As follow-up, ACTION has supplied 167 cities with its "Evaluator," a community-audit checklist for local leaders to find their own answers. Last February it sponsored its second building industry congress where builders met representatives from 32 cities having cleared land for sale and development. This month ACTION will take a traveling seminar of 25 top corporate executives on from the Newark meeting to study problems and solu-

tions in that city as well as in Baltimore, Detroit, and New Haven.

"For the past three years," says Rouse, "we have agitated, stimulated, and excited urban renewal wherever and however we could. Compared to the controversies of a few years ago, there is now so much unanimity it's almost frightening. Now we're at the point where we must build something on it.

"As a nation, we have only very recently been forging the tools with which to deal with the problems of our cities. Our first major realization of civic responsibility for growth came with zoning. And zoning, for most cities, came only in the thirties—for many cities later than that. Planning, which we now accept as an essential part of city government, really became a usable power only in the early forties. The enforcement of housing codes dates only from the late forties and fifties. And the indispensable power to condemn and acquire land for redevelopment by private enterprise for the public good is the most recent and revolutionary tool of all.

"Despite the increasing use of these tools, however, in no American city today are we even keeping pace with the rate of deterioration. Instead of going in and fighting the battle of one 'project' after another, what we need to do now is forge a total approach to the city, to lift the sights of individual cities to the point where they will chart their total needs in living and business space, schools, public buildings, highways, recreation—and coordinate them in comprehensive planning on a metropolitan basis.

A city of neighborhoods

"A major consideration in every public improvement contemplated by a city should be its effect on the construction, or destruction, of neighborhoods. The most significant single public improvement in the next 10 to 15 years, and the greatest opportunity for good planning or bad, will be the highway system. In and around cities, new highways must be used to do two things at once: 1) channel the main stream of traffic out of residential areas, and 2) act insofar as possible as boundaries to give these areas shape and definition

as real neighborhoods. Other public works—schools, parks, playgrounds, hospitals—must also be considered for their effect on neighborhood formation, not merely as isolated departmental projects in themselves. The big job is to break up the grim, massive inner reaches of our cities into neighborhoods of human size and scale, where people can live and shop, go to church, play, raise families, and feel that they belong. First these neighborhoods must be defined by natural boundaries and centered on common facilities. Then the junk yards and worn-out buildings must be removed, the commercial uses concentrated together insofar as possible, traffic routed outside, parks and playgrounds provided within. We must create neighborhoods in fact, not just area labels on a planner's map.

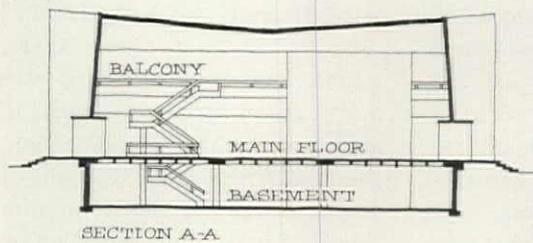
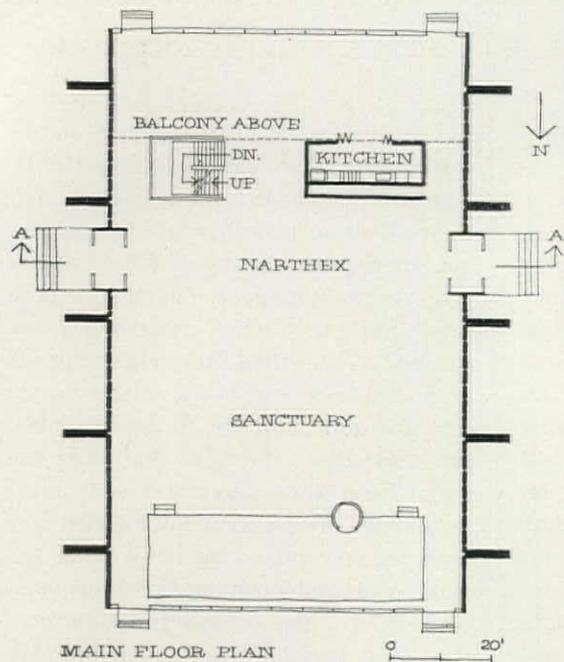
"The comprehensive plan must also provide a new central business and cultural 'neighborhood' for the city, updated to meet the requirements of the automobile age. This will mean major reorganization of downtown, with access highways, peripheral parking, and a pedestrian core where people can walk from offices to shops along covered walkways and through pleasant parks and squares. It must be an environment where people can not only do business, but can rest and smile and breathe fresh air as well.

"It's about time we stopped apologizing for beauty, feeling we always have to try to find some 'practical' reason or 'economic use' for doing something. To create a park because it makes a more beautiful city is reason enough. Beauty is an enormously strengthening, vital force in the city. It is a protest against disorder. People are far less willing to defile an area that is truly beautiful than an ugly one. Ugliness itself promotes disorder, and disorder in the end promotes decay, and decay winds up in the kind of uneconomic, slum-ridden areas we see around the core of every city today.

The economics of vision

"Is this an 'impractical' dream? I think not. I am convinced that it is a far more practical, achievable thing to plan for the whole city than it is to plan small and in pieces. A timid, tentative plan doesn't have the guts to show

continued on page 230



ARCHITECTS: Schweikher, Elting & Bennett
 STRUCTURAL ENGINEERS: Henry A. Pfisterer
 Joseph E. Spagnuolo, Frank Klein
 MECHANICAL ENGINEER: Fred Dubin
 GENERAL CONTRACTOR: Corbetta Construction Co.
 LANDSCAPE ARCHITECT: Franz Lipp

AARON SISKIND



Paul Schweikher's Unitarian Church in Evanston puts symbolic expression ahead of practicality and achieves added strength by taking a chance

A modern church for a modern faith

BY PETER BLAKE

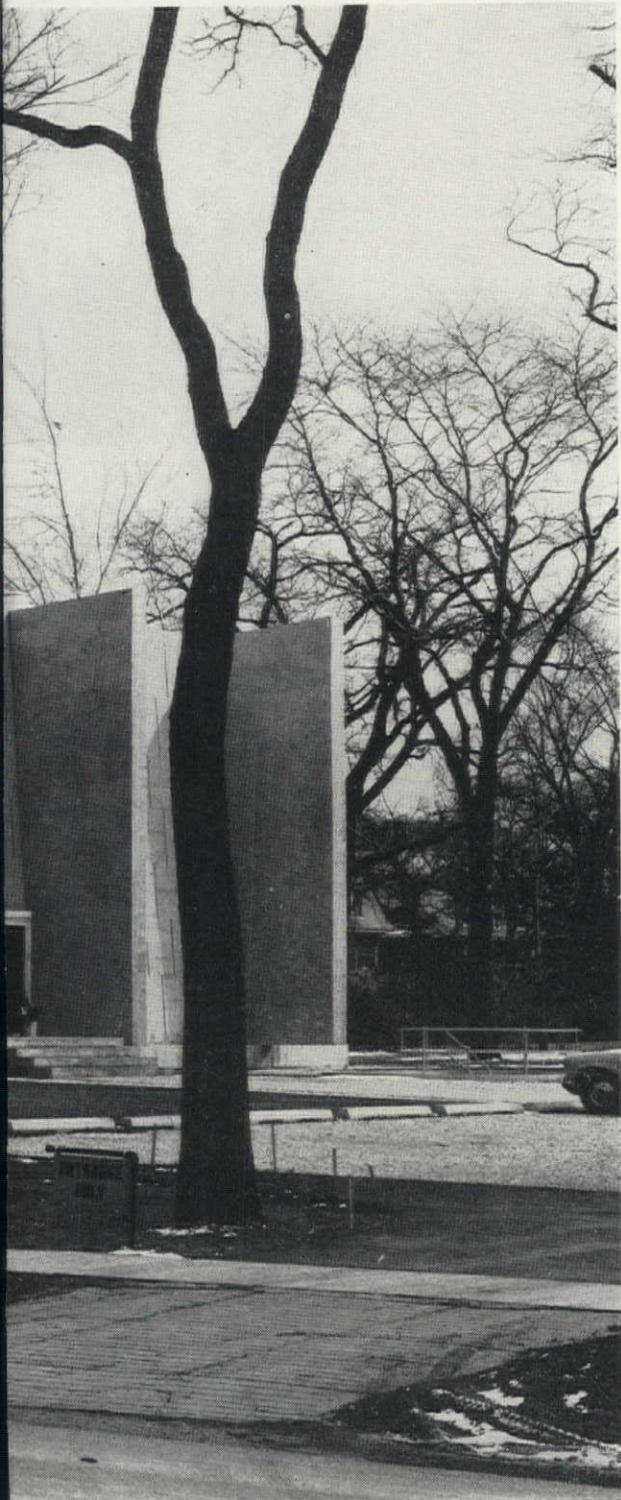
How should one judge a church? By its structural efficiency? By its square-foot cost? By its acoustics, its lighting, its circulation patterns? Certainly, all these are important criteria. But a church is, above all, a poetic statement, a symbol of a faith. In the final analysis, no church is a good church unless it is good poetry.

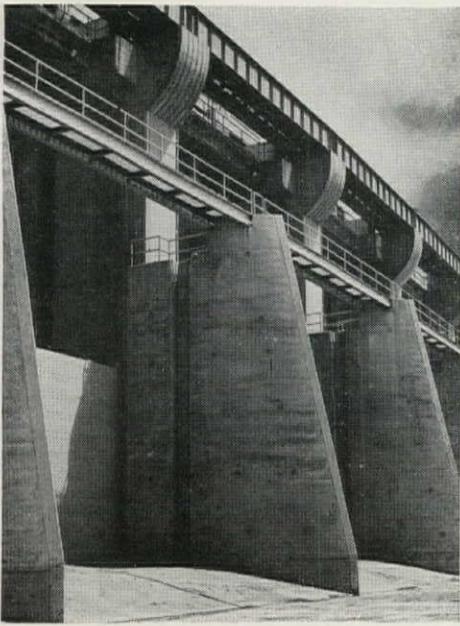
The new Unitarian Church in Evanston, Ill. has a number of functional flaws: its concrete finishes leave something to be desired; its cost (\$264,800 exclusive of land) was higher than expected; its acoustics and its lighting will have to be improved. Yet, despite these drawbacks, this church is a strong, poetic statement (1), full of meanings that may become better understood as the building ages.

Paul Schweikher, the architect mainly responsible for the design of this structure, evidently asked himself several serious questions about the nature of religion (and, hence, the nature of religious symbolism) in the modern world. The answers he came up with are frequently original and always bold. This is no "safe" modern building by a long shot—both Schweikher and the congregation took a number of risks in trying to arrive at an affirmative answer to this question: "Are we capable of producing declarative religious architecture today?"

In the days when the church was the accepted symbol of power, such a question never arose. For the church automatically attracted the best talent in engineering, in architecture, in painting, sculpture, and in music. As a result, churches and cathedrals invariably represented the finest architectural achievements of their time. Later, when temporal power eclipsed the power of the church, palaces and other symbols of such power tended to attract the best talent—and the church, both as a spiritual and an architectural influence, became less important.

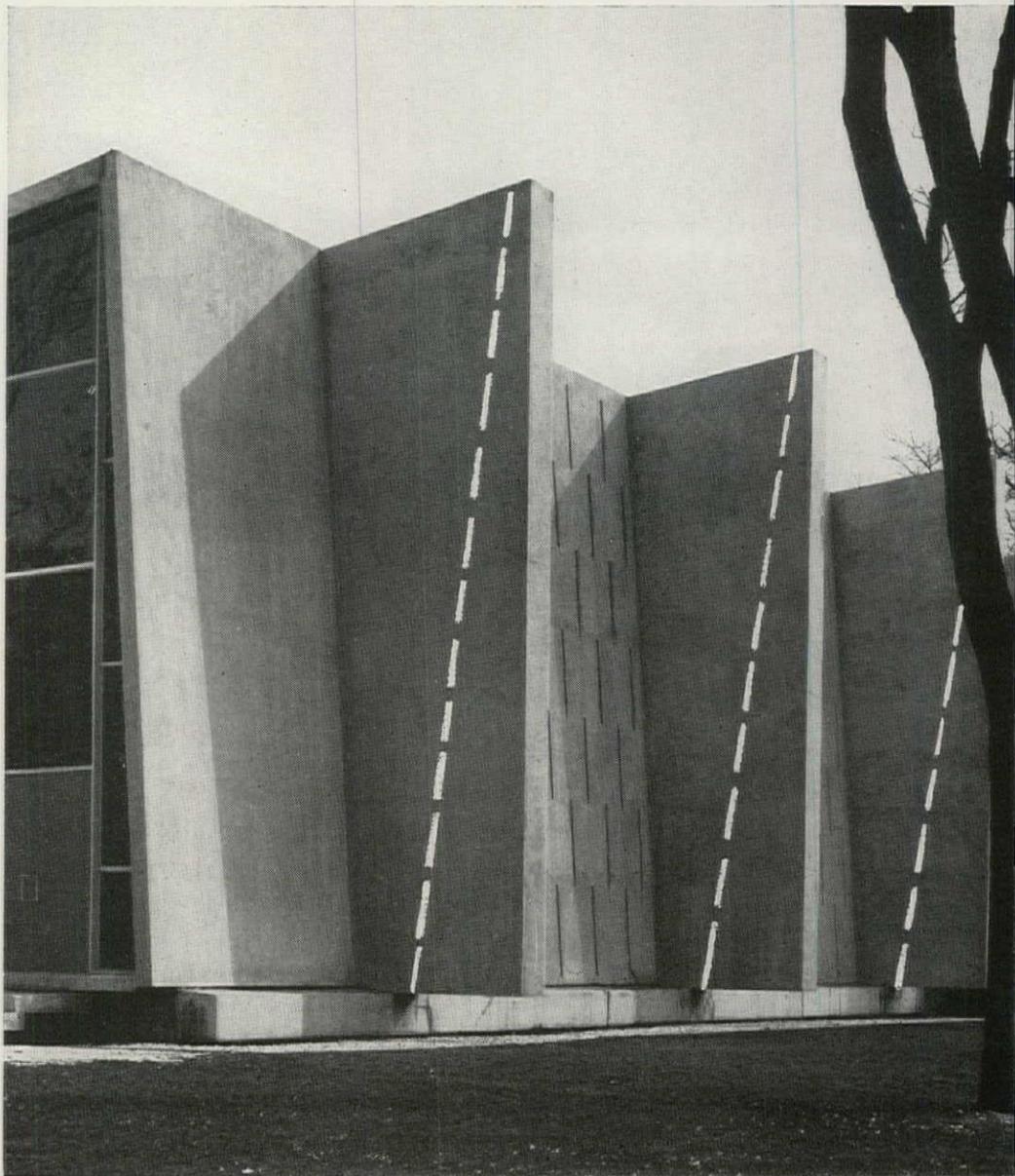
Pursuing this argument, Schweikher evidently tried to determine what type of structure today had become the sort of magnet for the highest possible architectural achievement that churches and palaces seemed to represent in the past. The answer was perfectly clear: today it is in the raw and dramatic





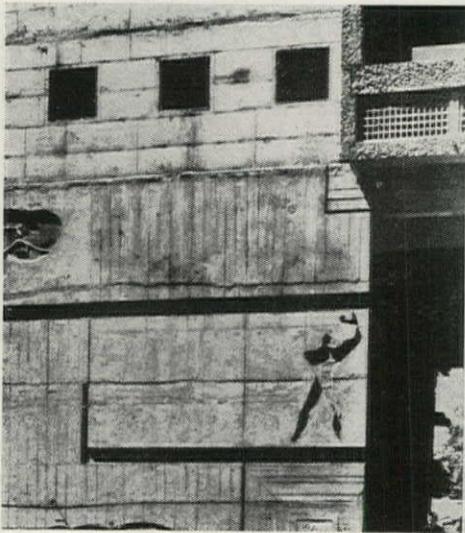
2

Allusion to concrete dams and similar industrial structures is evident in the comparative photographs of a Missouri Valley dam and a detail of the Evanston church. In the latter, the structural expression is deliberately poetic (rather than literal), for the rigid frames could have tapered down to their actual supports (dotted lines) but were made much deeper for emphasis. The bottom edges, cantilevered out over "thin air," give the structure an unexpected lightness.



3

PHOTOS: (ABOVE & BELOW) AARON SISKIND; (TOP LEFT) HANS WILD; (BOT. LEFT) LUCIEN HERVE



4

The church's concrete (right) was rather too well finished, thus shows every little crack and stain—including herringbone cracks around glass slots caused, possibly, by different coefficients of expansion in the concrete and glass. Le Corbusier's béton brut, as at his apartment building in Nantes (above), is deliberately rough from the start and looks weathered right away.



5

forms of great industrial structures that "power" seems to spell itself out to most of us. Schweikher decided, therefore, that his church must come to grips with this fact—that it must reach out for the bold forms of power as symbolized in dams (2) and factories and bring these dramatic engineering shapes back into the church (3).

This rationalization is by no means farfetched. The Unitarians are concerned with the "real" world around them; to hold their services in a sham building (or a neutral one) would make no sense at all. Their church should say, quite emphatically, that "we are concerned with the kind of power that motivates our world, and we want to see if we can not make it a vital part of our concern."

Schweikher therefore made his church a poetic dramatization of the sort of raw and bold structure that was part of the "real" world outside. In fact, he exaggerated the size of his precast concrete frames far beyond that required by the engineers (and balanced them on very small points, so that the concrete frames read not as engineering, but as a sort of poetic interpretation of engineering); and he deliberately went counter to most common building practice by making his tilt-up sandwich walls of raw concrete inside and out. The result is an assembly of powerful shapes, much bolder than the more familiar, polite church forms in use today.

Still, do such bold forms alone make a building a church? Not a Roman Catholic church, certainly. But the Unitarians are a very special group; their new churches do not show the cross, and their services are more like serious meetings of discussion groups than rituals of the sort associated with most

religions. The spirit of Unitarianism—simplicity, tolerance, and adherence to the ethics of Christianity—all this seemed to be well expressed by Schweikher's great, undecorated concrete shapes.

He had several famous precedents for his decision: Frank Lloyd Wright's 1906 Unity Temple in Oak Park had been a bold structure of exposed concrete; and Le Corbusier's symbolic architecture of recent years has demonstrated some unusually imaginative ways of building with this "reconstructed stone" (4). But Schweikher was, apparently, a little too preoccupied with the symbolic content he was trying to achieve—for neither Wright nor Le Corbusier would have left their concrete as smoothly finished as Schweikher did. Both of them know only too well what happens to smooth concrete when stains and cracks begin to appear, as they have in this building (5). (Three experts questioned as to the reason for these small but insistent cracks came up with three equally impressive—but very different—answers; however, perhaps the simplest way to sidestep the problem is to make the concrete look as brutal to begin with as you want it to look in the end. As it is, Schweikher and his Evanston clients will have to wait for time and weather to give their concrete its proper "patina.")

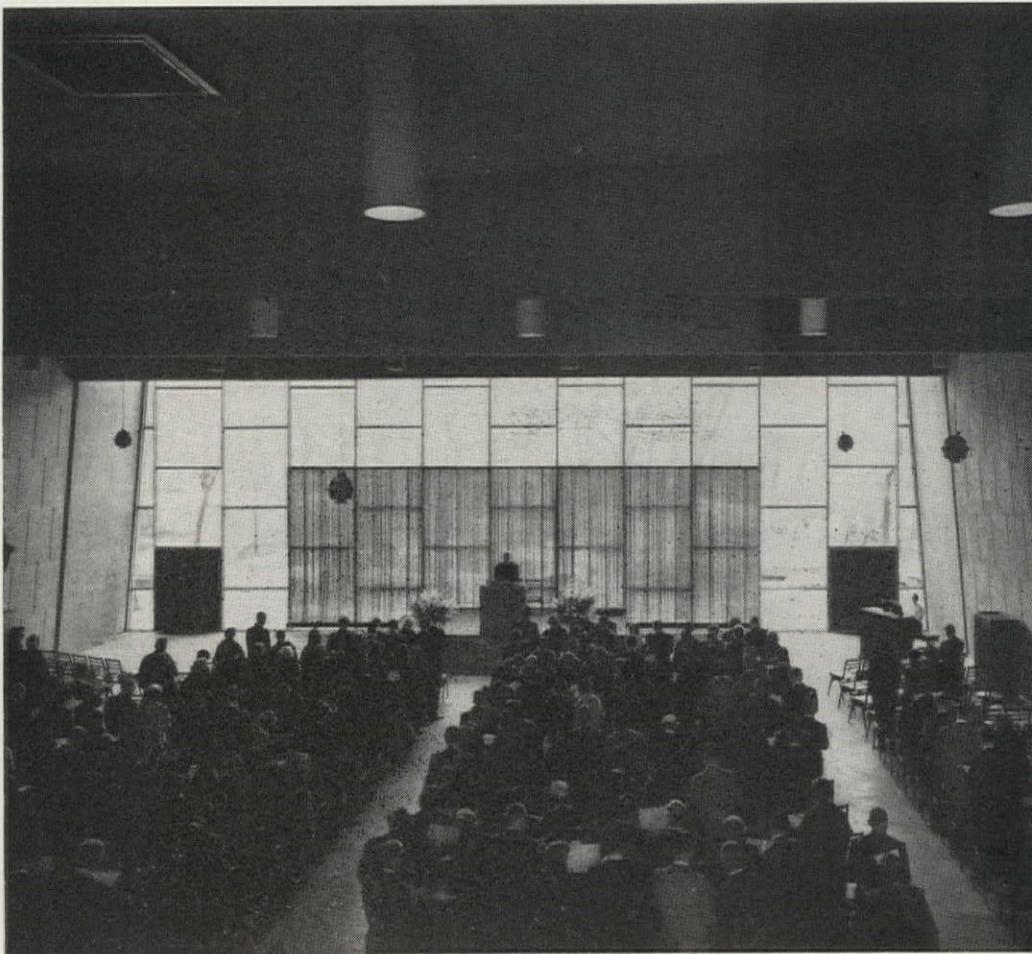
The symbolic concept of the Evanston Church does not stop with the structure. Like Frank Lloyd Wright, who said about his 1952 Unitarian Church at Madison (6) that "we have allowed the outside prospect to come in, facing the audience to become part of the background for music and preacher," Schweikher let his audience face surrounding trees and pleasant, old houses across the street (7). This

PHOTOS: (BELOW) AARON SISKIND; (LEFT) © EZRA STOLLER



6

Frank Lloyd Wright's Unitarian Church at Madison, Wis. (above), has a masonry backdrop for the minister and deep roof overhangs above the glass walls to reduce glare. Schweikher's Evanston church (right) has a large, presently unprotected glass wall that tends to dazzle the audience and silhouette the minister. The translucent curtain is a temporary measure; the original plans called for an aluminum grille outside the glass for better sun and glare protection.



7



8

View from the pulpit shows that the minister can see most of the 8,000 sq. ft. room. This arrangement was intended to symbolize Unitarianism, but seems to be an obstacle to any real sense of intimacy between minister and congregation. A curtain or screen to divide the room in half is being considered.

PHOTOS: AARON SISKIND



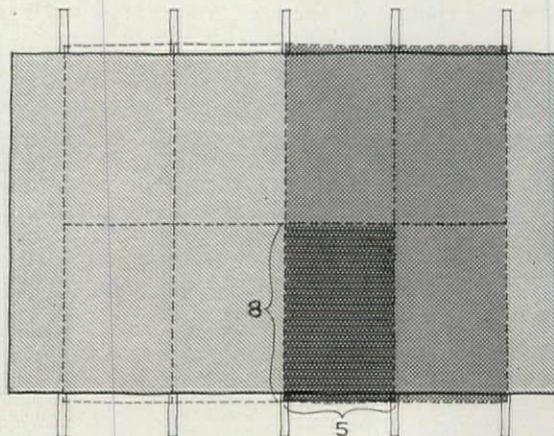
9

Tilt-up sandwich walls of concrete (with a glass-fiber core) are penetrated by regularly spaced slots, filled with cast glass. The lighting effect on the inside is highly successful during the day and just as successful from the outside at night, when the slots of light shimmer in the darkness. Danish chairs are a pleasant touch in this austere room.

“opening out” to the world surrounding the church is again a good symbol of Unitarianism. But at Madison, Wright had created a backdrop of stone for the minister, and protected the glass areas on both sides of the pulpit by deep roof overhangs that cut out sky glare; whereas Schweikher opened out his church with an uninterrupted, all-glass wall, unprotected by roof overhangs, and relied for glare protection on an aluminum grille attached to the outside of the glass, which was also tinted gray. Unfortunately, the congregation has not been able to afford the grille as yet, so that a temporary curtain must form the backdrop for the minister. Even so, there is a problem of excessive light that still remains to be solved.

The notion of “unity” which is the central concept of Unitarianism led Schweikher to make his building a single, big room with practically no dividing walls or screens (8). This, again, is a fine poetic notion but much less successful in practical terms: because the minister looks out over a vast, 6,600 sq. ft. space (rather than a 2,800 sq. ft. auditorium seating only his audience), there is little sense of intimacy during services between minister and congregation (9).

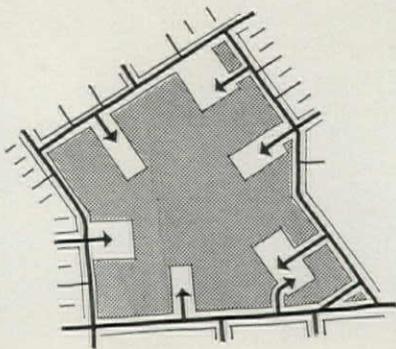
It almost seems as if the flaws of this church are inevitable by-products of its symbolic and poetic achievements. Quite obviously, Schweikher was much more concerned with an expression of the latter qualities than he was with purely functional problems. (For example, the plans, sections, and elevations are all elaborately based upon the “Golden Section,” much as in Le Corbusier’s work, and this



fact undoubtedly gives the building an intangible sense of unity—see above. But the acoustics, which are partly determined by those same sections and plans, seem to have suffered.

This dichotomy is a common fault of modern architecture, and has been a fault in new architectural developments in many periods. Perhaps we have yet to reach the point at which symbolic content and practicality can be completely joined in a perfect building—or, perhaps, we never shall. Meanwhile it is refreshing to see a building whose faults are all due to the basic strength of a bold, central idea—rather than to fussy details, slickness, or “playing it safe.” By seeking and finding a strong symbol, and by trying to endow it with new meaning, Paul Schweikher took the sort of forward step that will advance architecture more rapidly beyond the pedestrian goals of simple functionalism.





The Gruen plan would transform downtown Fort Worth (air view above) into a pedestrian island, ringed by express highways and six huge parking garages (rendering below). No store or office in this traffic-free square mile would be more than a three-minute walk away.



What's happened in Fort Worth?

The most talked-about plan for downtown rebuilding anywhere has so far produced mostly talk—plus some important lessons for other renewal-minded communities

BY JEANNE R. LOWE

Three years ago Fort Worth was given a plan for its future so striking and exemplary that it caused planners and city officials everywhere to ask: "What do you think of the Fort Worth plan?" Many cities have copied or adapted parts of it for their own use. Yet today the question is: "What happened to the Fort Worth plan in Fort Worth?"

The answer, on the face of it, is: "So far, not much." The plan, drawn and presented with great drama by Victor Gruen & Associates, called for the boldest of downtown redevelopments (see maps, opposite). By 1970 it would remake Fort Worth's heart into a mile-square, traffic-free shopping and business oasis, rimmed by a depressed loop highway feeding shoppers' and commuters' cars into six perimeter garages, from which traffic would move only by electric shuttles or on foot through leafy pedestrian malls and plazas. Service deliveries to buildings would be made through tunnels. Of the plan's essential features, only one so far is partially in sight: a two-part section of the peripheral highway, not placed exactly according to the plan, and in part elevated instead of depressed, but which possibly may be tied into the parking garages later. And last fall the voters sweepingly voted down a long list of civic improvements and bond issues, including an \$8.5-million downtown civic auditorium, which does not seem to bode well for the remainder.

It would be easy at this stage, as some are doing, to write off the Fort Worth plan as dead. Three years, how-

ever, are short in the life of planning. And, as one women's club leader puts it, there are many important people in Fort Worth patiently working for it. The original plan met not only expected snags but others for which it was totally unprepared. These may be listed in order of importance as, first, a lack of any preparation of the citizens to receive the plan, then a lack of any long-standing cohesive committee of civic leaders to push it, and finally a failure to take into account the social, political, and economic factors needed to implement the plan. Most of the past three years has been taken up by a confused struggle to correct these democratic deficiencies.

Bomb bursting in air

The Fort Worth plan literally exploded one night in 1956 before an assembly of some 200 leading citizens. Many months before, the city's leading utility president, J. B. Thomas, worried about Fort Worth's traffic-constricted downtown growth compared with that of her sister rival, Dallas, had secretly commissioned Gruen and associates to prepare a master plan, in a remarkable free gesture, to open the city's eyes. The audience was stunned and dazzled by the vision unfolded by Gruen and his partner, Edgardo Contini, as was the client himself when he first saw it. Broad, revolutionary, yet logical, the plan held forth the vision of a remade city, unimaginable up to then but plainly or seemingly realizable.

Gruen did not hold forth the plan as

something easily accomplished. It would require, he said, "a unanimity of public and private efforts rarely achieved in our time." Thomas warned that it would take "guts, money, and imagination." But beyond these phrases it was soon apparent that there was no ready mechanism in the community for carrying the plan into effect. And as time went on, there were second thoughts. Conceding the great courage and shock value of Gruen's vision, particularly in limiting the automobile, professional city planners nevertheless saw trouble ahead because of the abrupt way so ambitious a plan was presented.

Basically, Fort Worth is quite different from most cities, including nearby Dallas. Some of its citizens still fondly call it Cowtown. Its roots are still in the land and oil; ten-gallon hats and high-heeled boots are common sights downtown. The city still has marks of the frontier; its leading department store sells grain, and the biggest event of the winter season is the Fat Stock Show out at Amon Carter Square.

Fort Worth had only a small planning department and no influential citizens' committee. The biggest force in Fort Worth's growth was one man, Amon Carter, who, up to his death in 1955, threw his tremendous wealth, enthusiasm, and weight—including ownership of a leading newspaper, the *Star-Telegram*—into promoting and running Fort Worth, getting new industry and defense contracts, bulling through a separate Amon Carter Airport practically next door to Dallas'. The tendency

to one-man rule left little basis for broader citizen leadership. Even City Council, once traditionally composed of prominent citizens, declined in caliber and esteem. Hence the Gruen plan had to start from scratch with a kind of *ad hoc* Greater Fort Worth Planning Committee made up from its first carefully selected and enthusiastic audience, mainly downtown businessmen.

The first cropper

Trouble first appeared when the committee and city moved to get two basic pieces of enabling legislation from the state, one an urban renewal law granting the city power of eminent domain to condemn and redevelop blighted areas, the other authority to finance, build, and operate parking garages. The first was safely pushed through the 1957 legislature, despite fierce organized opposition by private parking-lot operators; but the second came a cropper, even though it already had passed the House, when a surprise adversary suddenly arose in the committee's own ranks back home. George Thompson, president of Fort Worth's third largest bank, Continental National, and part owner of two parking garages, went on record before a Senate committee against the public garage bill as being unfair to private taxpaying garage operators. The bill was killed by voice

vote in committee, and Thompson resigned from the Greater Fort Worth Planning Committee.

Since then, Thompson's continued outspoken opposition has hurt, though the remarkable fact is that he is the only prominent citizen who is openly fighting the revolutionary rebuilding scheme. It was Thompson who coined the criticism, "I don't want to do business in a botanical garden," referring to the proposed pedestrian mall and plaza plantings, though the best city planning shows that Texas' arid city centers as well as others would be grateful for some greenery. And he has gone on to attack the cost of the whole project.

Slip in the ballot box

The second cropper came in overlooking Fort Worth's peculiar tax base. There is little major industry within the city proper, and what there is, mainly aircraft, makes payments to the city "in lieu of taxes" on an unsatisfactory basis. Thus, the bulk of Fort Worth taxes are collected from home owners. Moreover, the city, which has annexed 50 square miles in ten years, has even more ambitious annexation plans that will enlarge the problem, not only by spreading the tax base still farther but by increasing the flow of business to the suburbs, which the

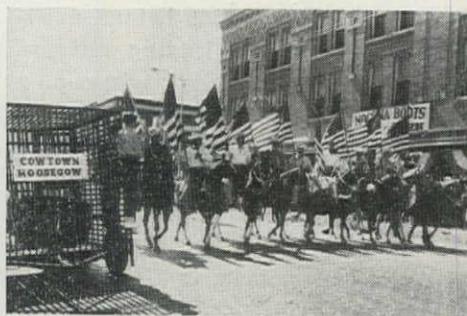
Gruen plan was specifically designed to limit. The first reaction of suburbanites to the plan was simply that it meant higher taxes. Their second was: "Why should we subsidize downtown?" And unless the suburbs can be made to see, through patient education and hard facts, their stake in a more attractive, prosperous central city, no plan in Fort Worth can succeed.

This was demonstrated last autumn when a host of city improvements met a truculent economy mood among voters, not unique to Fort Worth but a widespread reaction to recession. Struck down were not only the new civic auditorium, considered a major step in the plan, but also a city hall addition, new incinerators, police stations, libraries, park and recreation improvements, and even a renewal project in the suburbs. About the only significant item that passed was some \$23 million of street improvements, including \$2.4 million for purchasing right-of-way for the last two legs of the perimeter freeway, a sum returnable by the state and federal governments after the highway is built. Part of this freeway loop was voted in 1952, before the Gruen plan was conceived, and is now being built. The state gave the city a choice on the remaining part of the loop of having it built as an elevated expressway wholly at state expense or having the city pay the extra costs of making it a depressed roadway, as called for in the Gruen plan. The city chose the former, with the acquiescence of the plan's backers.

Mayor T. A. McCann publicly stated that the overwhelming defeat of bond issues showed that City Council did not have the confidence of the voters. Moreover, it was apparent that the voters were not well prepared or informed on the issues. Where the necessity of a project was clearly seen, as in completion of the freeway loop to ease traffic congestion, it was carried. Completion of the loop, however, will only intensify the need for more parking facilities. Backers of the Fort Worth plan think the situation can be saved by providing in the road engineering access ramps and approaches to the proposed perimeter garages. The city's attorney believes that the city could construct



PHOTO: FORT WORTH STAR-TELEGRAM



Cow-town reputation of Fort Worth has been subdued by the boom of the city's aviation industry, but parades of cattlemen still provide nostalgic enjoyment.

Pedestrian mall idea was tested last fall by closing a downtown street to vehicular traffic and planting it with shrubs—and also, unfortunately, an Army Redstone missile.

garages without state legislation, but Mayor McCann says, "Due to the apathy of the people, we will not undertake it at this time." Meanwhile, private parking lot area has increased 20 per cent in two years.

Regrouping of forces

Last year's defeats prompted Fort Worth's leaders to regroup their forces and rethink strategy. Presentation and proselytizing of the plan went on quietly before civic and suburban groups, wherever speakers could get an audience. A three-day "pedestrian-mall" demonstration last fall, halting traffic in five downtown blocks, was well received, and a longer demonstration will be tried later this year. But in general all hard-selling of the Gruen plan has been deferred until fences are mended and the ground prepared for a more careful step-by-step approach.

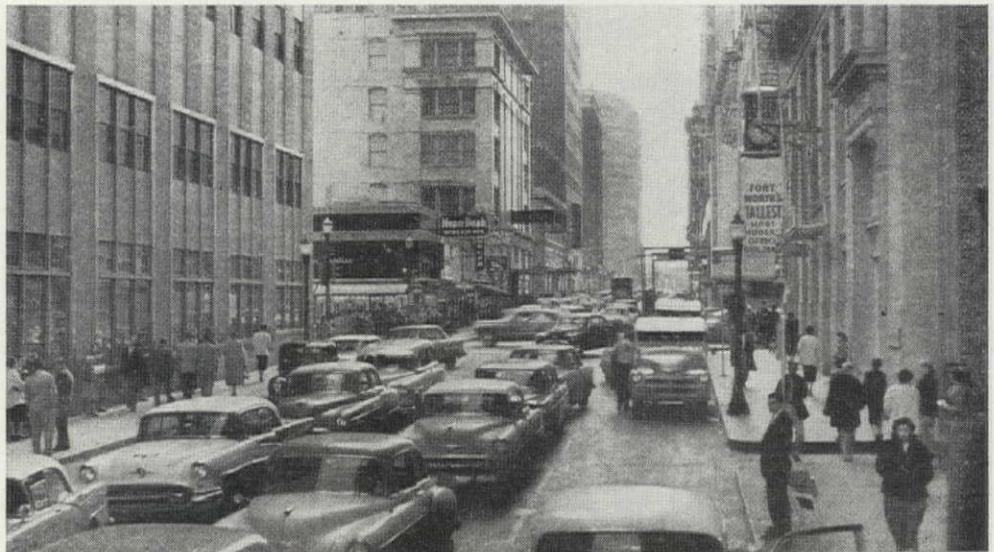
At a meeting of the plan's leading backers and other citizens after the defeat last fall, a new organization was formed—a Committee for Greater Fort Worth to go into political action at the grass roots. Its immediate object is not the Gruen plan, which is studiously being kept out of the new campaign, but the creation of a civic climate and confidence in leadership by which the plan's basic features may eventually be achieved. As a first step, the committee put up a nine-man "businessman's" slate to run for City Council last month—and elected five—on a nine-point program including a tax study to equalize residential and business taxes, creation of a public relations program to inform the citizens, and establishment of a first-class city planning department. Also included among the first-things-first is a new \$50-million municipal water supply to be voted on next fall.

Master-planner Gruen concedes that his plan was "ahead of acceptance, but that it was calculated to create acceptance." Says he: "The master plan for Fort Worth has fulfilled its initial function as a catalyst of private and public interests and as a realistic and achievable program which serves as a beacon for planning activities for many years ahead." That it has started something

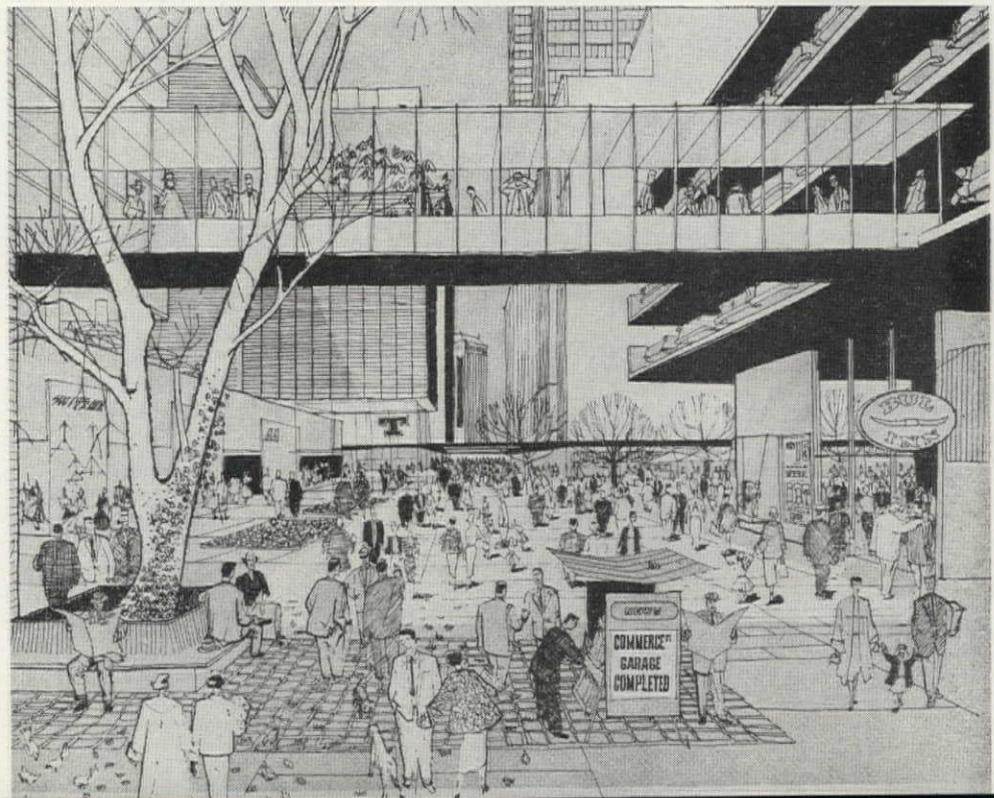
in Fort Worth, even its critics will agree. As one expert on urban renewal has explained the plan's wide influence elsewhere: "Gruen got out of the rut of thinking in terms of fixing up what exists and came up with a vision that people could see for the first time. No plan has done more to stimulate thinking in a positive direction."

Nothing essential in the plan has yet been lost, but it may take 25 to 30 years, according to present thinking, to

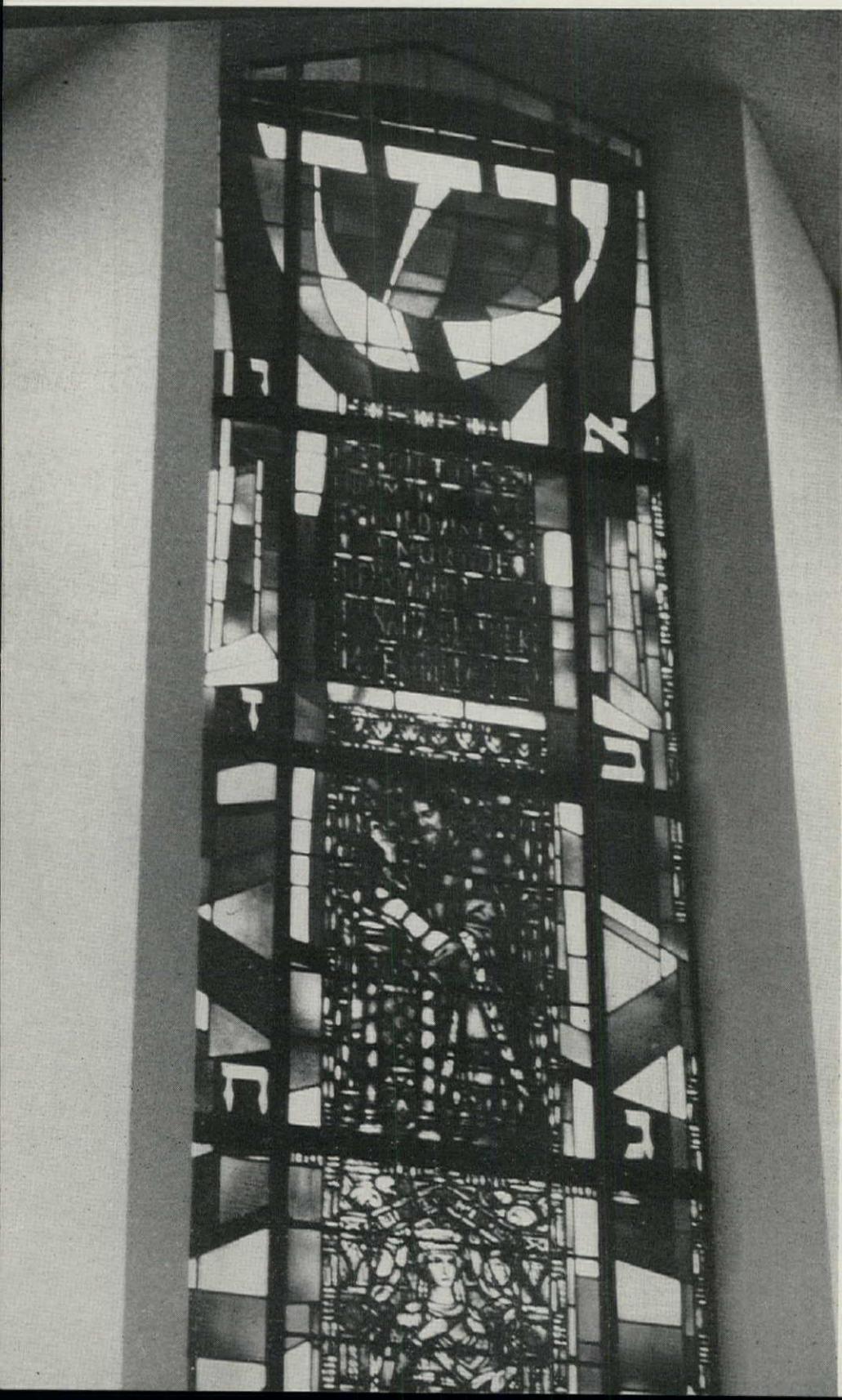
reach accomplishment. J. B. Thomas, the Fort Worth plan's farsighted father, is realistic yet hopeful. "For a long time," he told a meeting of leaders last year, "we had one strong man in this town. There are many of us 60 and over with no harness marks on us. We don't know how to work as a team." More recently, he said: "People in Fort Worth used to think things just happened. Now they realize you need to work and plan."



Proposed transformation of downtown Fort Worth is dramatized by these two scenes: above, a view of traffic-choked Seventh Street as it was when the Gruen plan was proposed—and still is—and below, the same street as visualized by the planners.



Vigorous art in the temple



In the Jewish faith, "Thou shalt make no image to worship" is an important Biblical dictum. Because of this, with few exceptions, the artisans of this old religion have turned for centuries to intricately patterned, rich decorations to express their religious devotion—not figures. The Jewish faith encouraged no Giotto's, no Leonardos (although there have been some wan imitations of these representational masters in the modern synagogue). Temples were decorated with craft, not art. In recent decades, however, as art has swung vigorously toward abstract expressionism of one or another school, no patron has welcomed leading artists more enthusiastically than Percival Goodman, a New York architect who is one of the world's leading designers of synagogues. Shown on these six pages are photographs of five of his designs with their contents.

Goodman, a genuine patron of the arts—painting, weaving, sculpture, and glasswork—does not merely decorate his designs with them; he designs around them. As is very evident in his commissions, he likes his art powerful, not fragile. Whether the subject is a painting, weaving, or sculpture, his artistic appreciations are for large, simple shapes, strong hues. In a well-dressed, prim world he seems to be advocating the return of vigorous ancient ritualism.

Another example of Goodman's reconciliation of past and present: commissioned to build a new temple for a congregation in Albany, N.Y., he discovered that the members were fond of a set of conventional stained glass windows in the temple being demolished. Goodman requested Robert Sowers to consider incorporating these into a new design in glass (photograph, left) adding vigor to their charm.

Wall hanging designed by Samuel Wiener was commissioned for Temple Beth Emeth in Albany, N. Y. The doors of the ark were carved by Sculptor Nathaniel Kaz. Behind the ark are the stained glass windows by Robert Sowers shown on the opposite page.





JERRY COOKE—LIFE



Wall hanging in Temple Beth El, Springfield, Mass., was designed by Robert Motherwell. All hangings shown are executed in a rug technique by Edward Fields, Inc.

Decorations over the ark in the main sanctuary of Fairmont Temple, Beechwood Village, Ohio, are by Sculptor Ibrim Lassaw, who also designed the Menorah, the seven branched candelabrum. View into the sanctuary is shown across the page (right).



BRADLEY SMITH



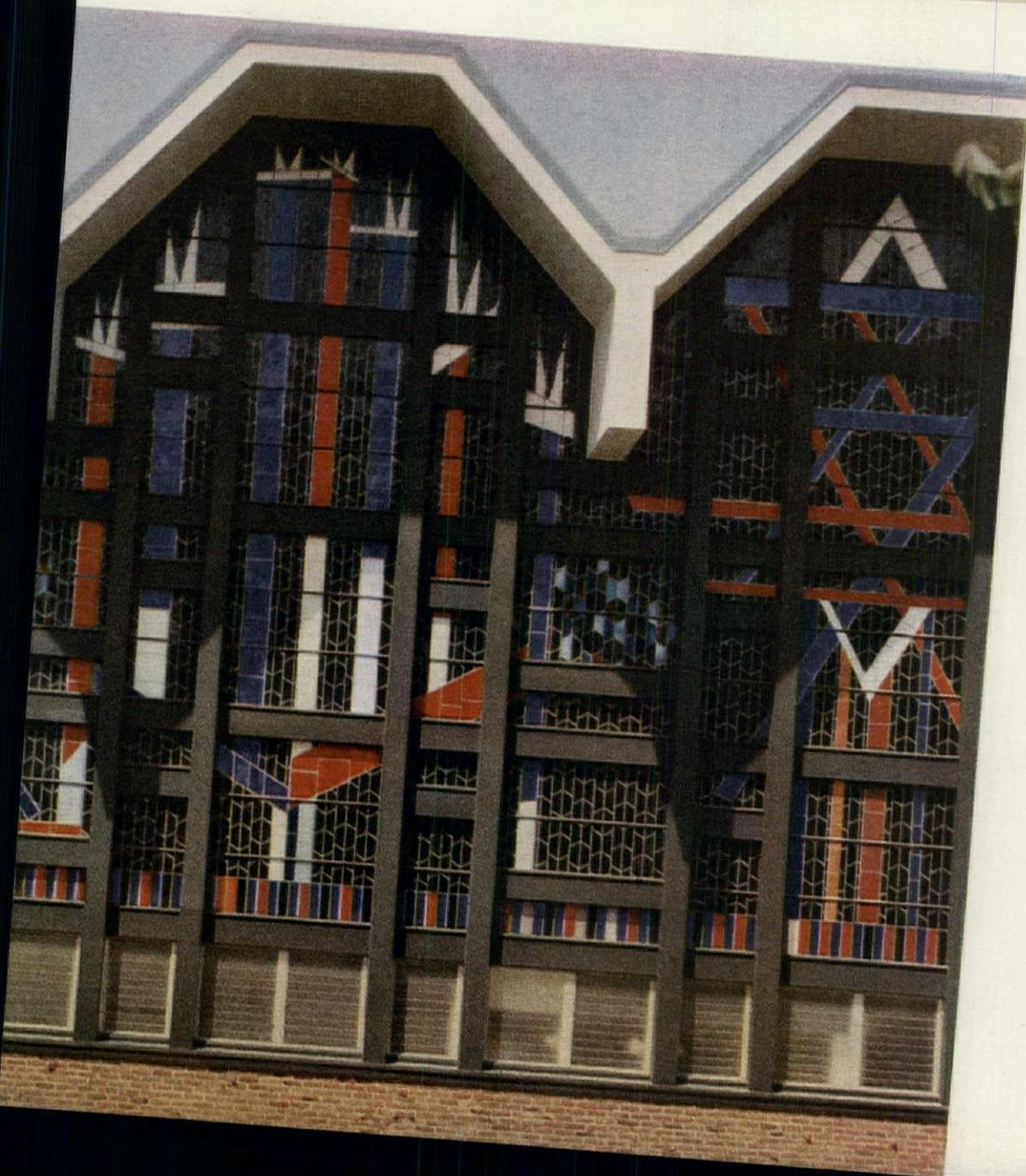
*Nickel silver Menorah for Temple
Israel in Tulsa, Okla. (right)
is by Sculptor Seymour Lipton.
The wall behind is vivid red.*



PHOTOS: (LEFT) JOHN W. COUGHE, PHOTO SERVICES; (ABOVE) BRADLEY SMITH



Stained glass window in Temple Beth Emeth, Albany, N. Y. is by Robert Pinart.



←

Sanctuary wall of stained glass for the Mishkan Tefila Congregation in Newton, Mass. is by Robert Sowers. Its combination of opaque and translucent colored glass makes it decorative both inside and outside—a new approach to an old art.

→

Wall hanging over the doors of the chapel ark in Fairmont Temple, Beechwood Village, Ohio, was designed by Abraham Rattner.





SOM puts the bones outside the skin

BY PETER BLAKE

The U.S. architects who helped perfect the smooth glass-and-metal skin will now put it behind an emphatic structure of precast concrete, creating a double wall system for a new bank in Brussels

No "style" of U. S. building has had so great an influence on European architecture in recent years as the sleek metal-and-glass curtain walls perfected by architectural firms like Skidmore, Owings & Merrill. Wherever Europe's postwar building has boomed, the precise look of buildings like SOM's Lever House has been emulated with relish, if not always with good taste.

Now SOM's Gordon Bunshaft (with Project Manager Frederick C. Gans, and Design Assistant Whitson M. Overcash Jr.) is about to build his first, big commercial office structure in Europe; and in doing so, he has decided to turn away from the sleek skin he helped make famous and, instead, to develop a rugged, three-dimensional façade of structural, precast concrete elements reminiscent of the limestone facings of older European buildings. The site for this proposed building is Brussels, and the client is the established Banque Lambert.

It is not that Bunshaft has come to dislike the sleek look. But he feels strongly that some degree of continuity in urban design is mandatory where the existing townscape contains handsome buildings of the past, as it does in Brussels. Moreover, he believes that concrete is essentially *the* material for Europe.

Amusingly enough, the Lambert

family came to SOM because they wanted the most American-looking office building that U. S. architecture could produce for them. In terms of planning and equipment, the architects were perfectly willing and able to give them just that. But in terms of structural expression, they felt that something very different from Lever House was needed: for the imposing site of the proposed nine-story building is on Brussel's great, peripheral Avenue Marnix, not far from the King's Palace. It was felt that the texture of a glass-and-metal curtain wall would be out of place in such a setting; instead, the architects developed a structural system of precast, "Schock-béton" units that are expressed on all façades and echo the scale of neighboring buildings.

The resulting pattern is no applied ornament. It is an entirely structural grid which will carry all floor loads transmitted to it (see cover). The elements of the grid are cross-shaped, with the vertical legs of each cross tapered to a point halfway between floor and ceiling lines. At this point, the precast crosses will be pinned together with a stainless-steel connection. Structural Engineer Paul Weidlinger, who developed the precast shapes in collaboration with SOM, feels that the narrow-waisted columns that result from this arrangement express most

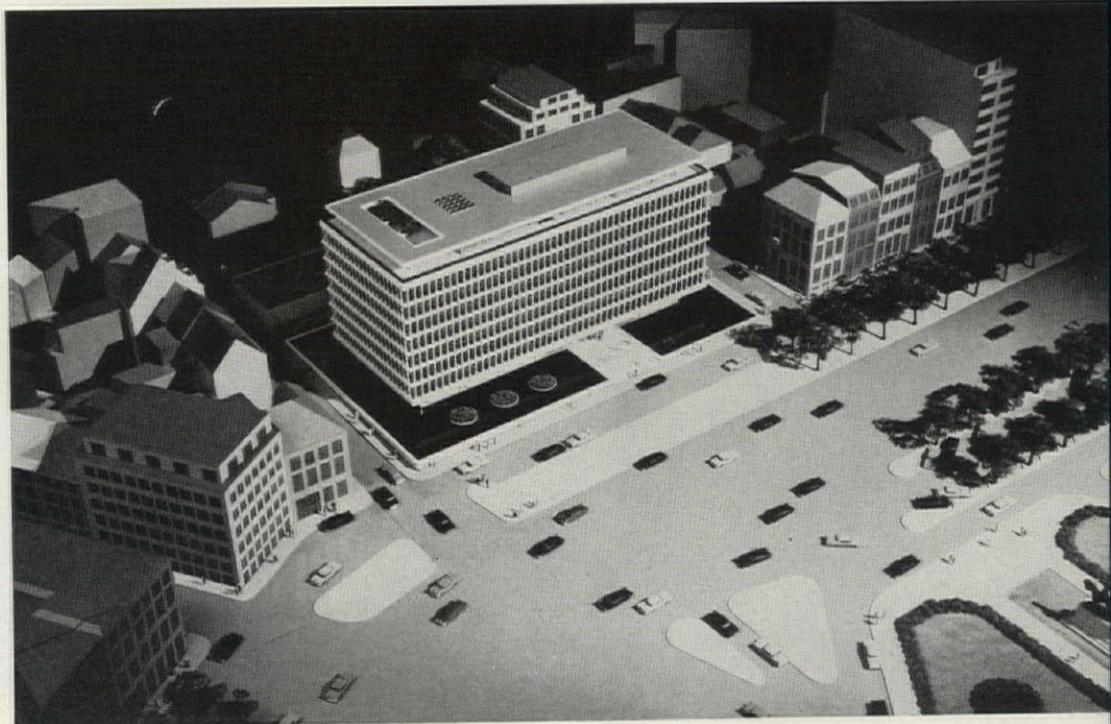
PHOTOS: © EZRA STOLLER



Structural grid for the façade of all office floors will consist of cross-shaped, precast concrete units pinned together at points halfway between the floor and ceiling lines. Glass wall will be recessed behind the grid.



A monumental setting opposite the Place du Trône will be created by putting the bank's entrance bridge roughly on axis with the equestrian statue on the square, and by setting the building 35 ft. back from the street. (Model by Theodore Conrad.)



clearly the flow of structural stresses. (His reasoning: the column's bending moment is greatest at the spandrel beam, smallest at the "waist"; hence, the column should be widest at the beam, narrowest at the halfway mark.) The horizontal bar of the cross will act both as spandrel beam and as formwork to receive the floor slabs which will be poured against it on the job (drawings, pages 150 and 151).

The vertical organization of the building shows a very glassy, recessed ground floor containing the banking room and the lobbies, which will be so transparent that the entire site will "read through." A wider office block (seven stories high) will rise above the ground-floor area, and above it, a penthouse structure. The penthouse will contain a 10,000 sq. ft. residence for the Lambert family. A separate lobby at ground floor and a private elevator will form the entrance to this penthouse.

Structurally, the building will follow this same organizational pattern: massive columns at ground-floor level will support a deep concrete slab, cantilevered out all around the outside column line to support the structural grid of the office floors. The precast grid—its tapered columns about 5 ft. on centers—will rise to the height of the penthouse floor, where the interior columns

take over to carry the roof loads.

In terms of budget and building maintenance, the structural grid makes sense. As a matter of fact, the Banque Lambert will have a *double* wall—the outside wall being the structural, precast concrete grid; and the inside wall, recessed 2 ft. 6 in. from the face of the grid, being a standard glass curtain that will enclose the office space. Between these two walls, there will be a shallow arcade to permit window washers to work without elaborate equipment. This same arcade will also protect the actual office walls against the weather. This complete separation of structure and skin will cost no more to build because the recessed glass skin will have no contact with the structural frame and no resulting complications.

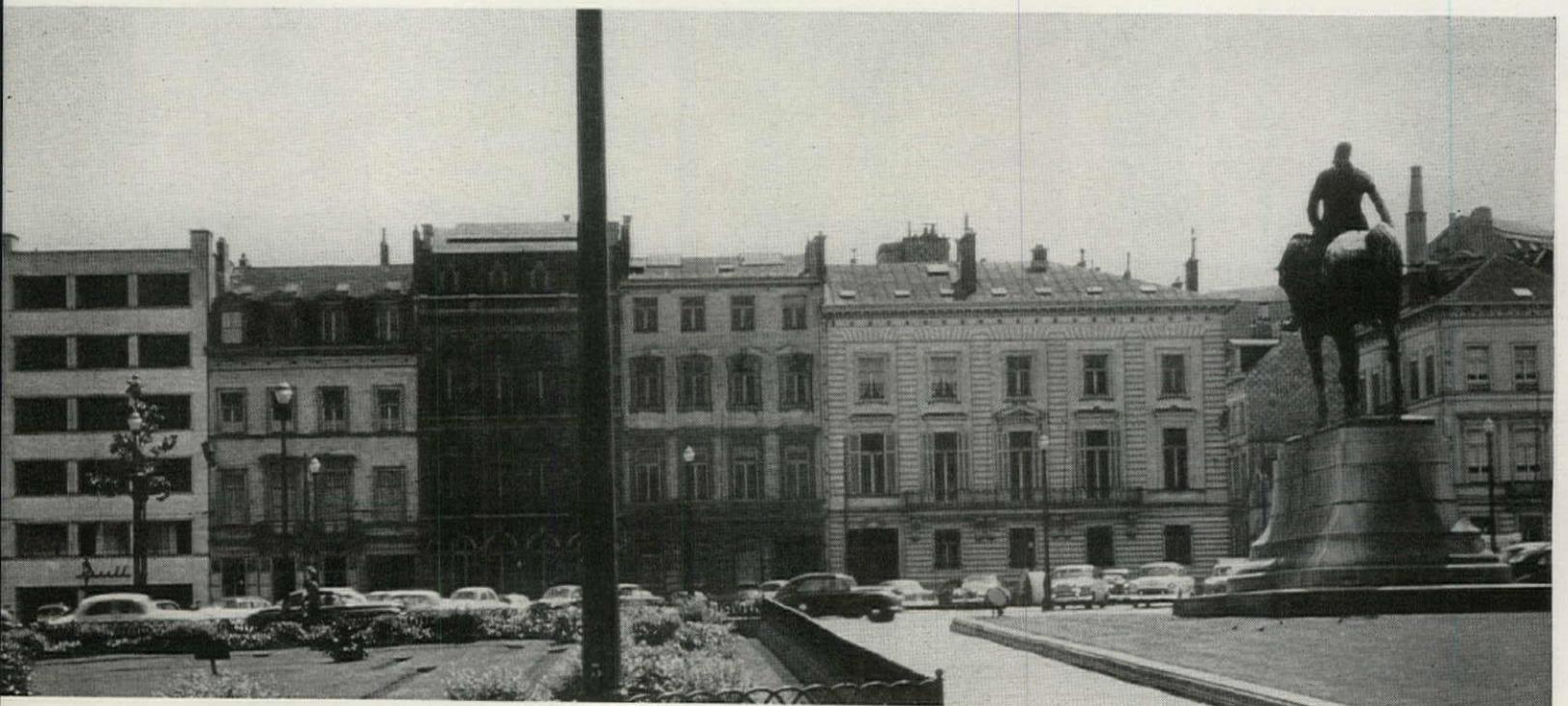
Setting governed design

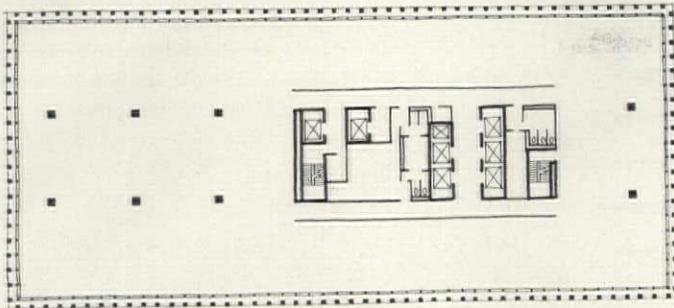
The site is not only generous but important as well; and the architects treated it with appropriate deference. The building will be set back 35 ft. from the square which it faces; it will sit in a large reflecting pool lined with polished black granite; and its lobbies will be reached by flat, slablike walks that bridge the pool. The main entrance will be asymmetrically placed to put it more or less on axis with the Place du Trône and an existing equestrian

statue of King Leopold II in that square. A secondary automobile approach will be from the rear of the building, where the architects have proposed a new private drive, a parking lot, and an entrance to the underground garage and loading platform. The two-story basement will also contain a large bank vault and mechanical equipment.

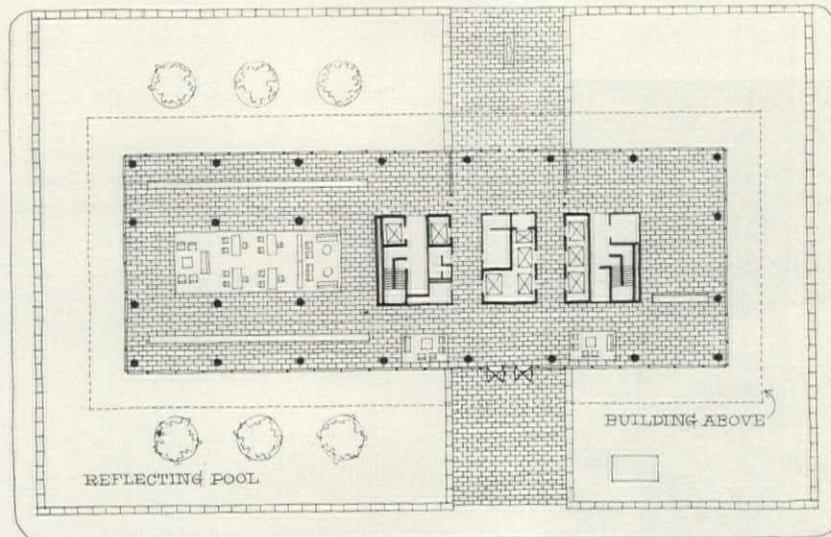
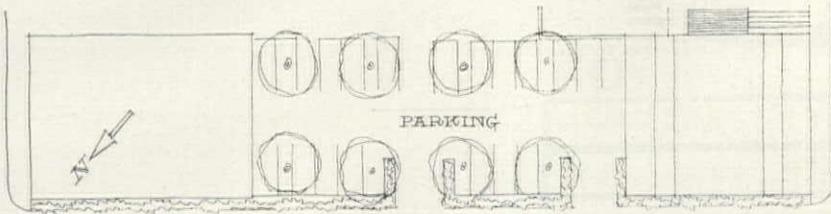
To obtain zoning approval the architects had to show that their building would be neither too large (and thus dwarf the palace) nor excessively commercial in appearance. To prove that they intended to avoid these pitfalls, the architects took numerous photographs of the surrounding townscape and sketched in the proposed building to show how it would look in relation to existing structures. Actually, the Banque Lambert will not be as large as zoning regulations would permit.

It is too early to tell what effect SOM's foray into European building will have on European architecture—and, specifically, on Europe's current love affair with sleekness. But it is not too early to note that SOM's experiments at Brussels have begun to be reflected in some of their latest American work. At least two tall buildings now being designed by SOM will have arcaded façades, and one of these will also have an exposed and freestanding frame of reinforced concrete.



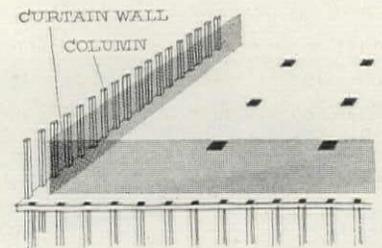
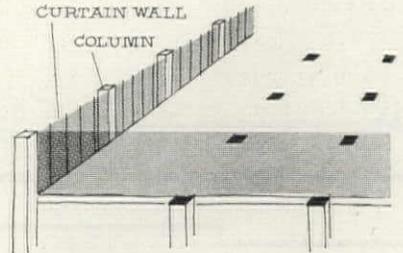


TYPICAL UPPER FLOOR



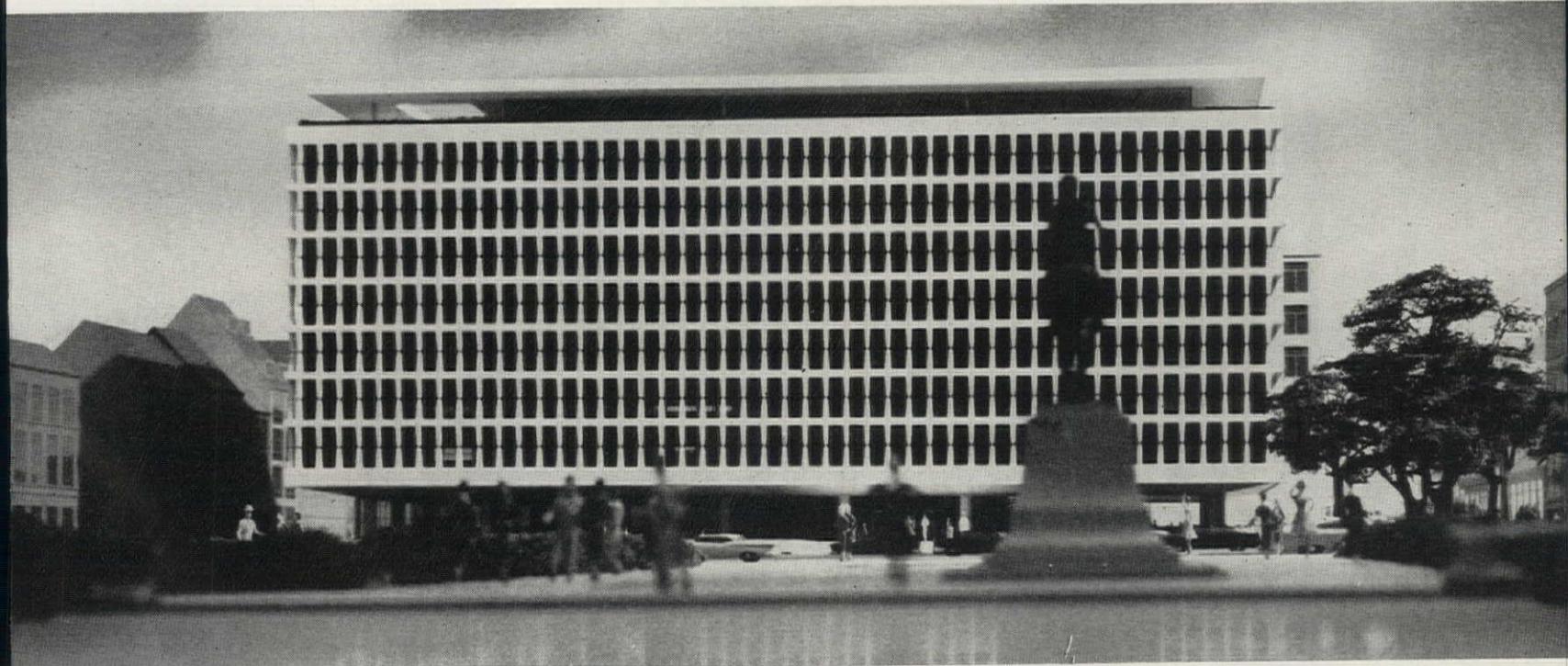
GROUND FLOOR

Framing diagrams (below) compare a typical structural system with that proposed for the Brussels bank. In the former the exterior columns are husky and widely spaced, and the curtain wall is "stretched" directly over them. In the Banque Lambert the exterior columns will be smaller and closely spaced and the curtain wall will stand behind them.

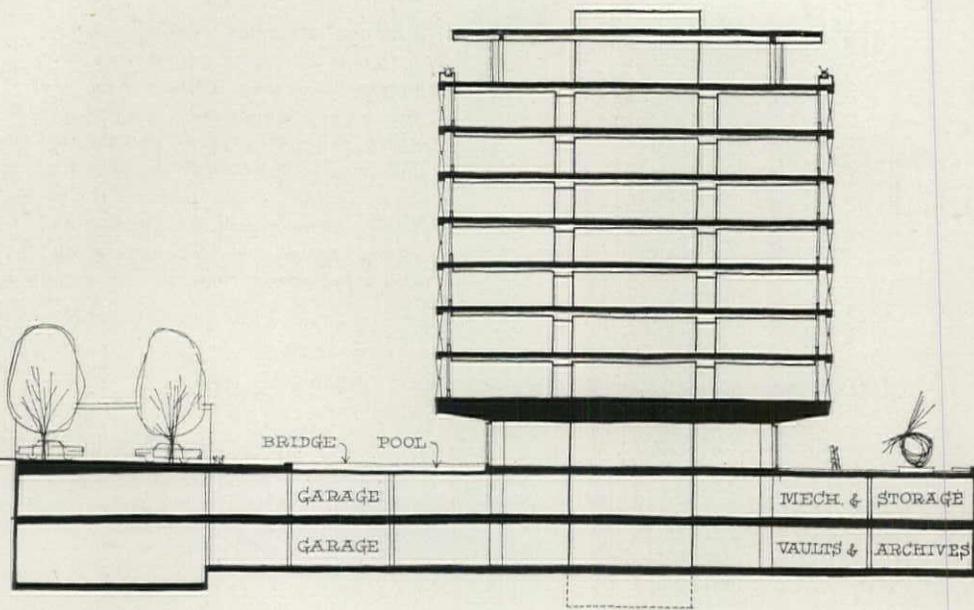


Street floor (plan, left) will be accessible both from the Avenue and from a private drive at the rear of the building. A separate lobby will serve visitors to penthouse. Office floor (left, above) is largely free of columns.

© EZRA STOLLER



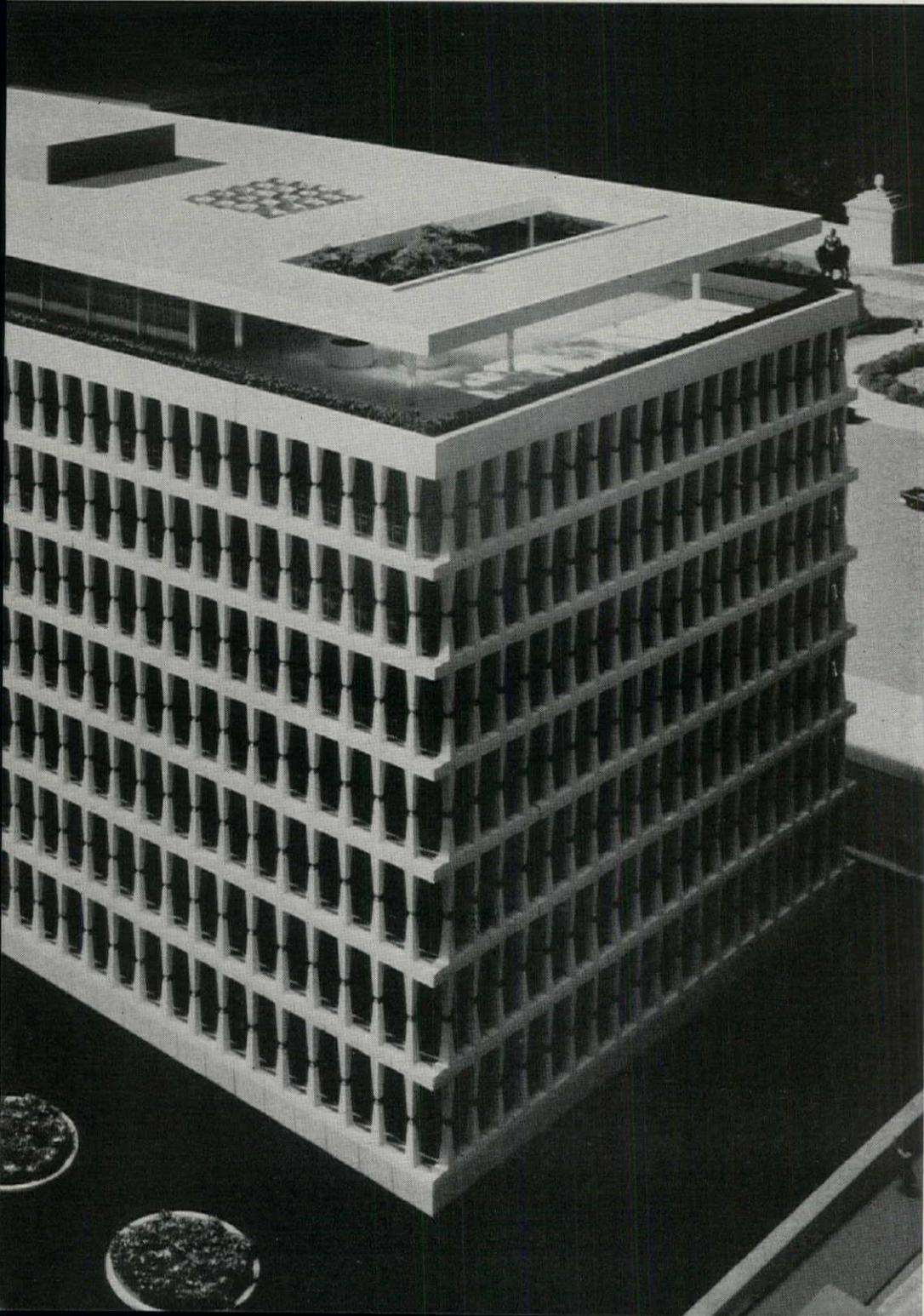
BRUSSELS BANK



Section through building shows parking garage and vaults below the pool. Loss of usable space per floor (owing to the double wall system) is about 1,000 sq. ft., but building cost is same as a standard wall system.



PHOTOS: © EZRA STOLLER



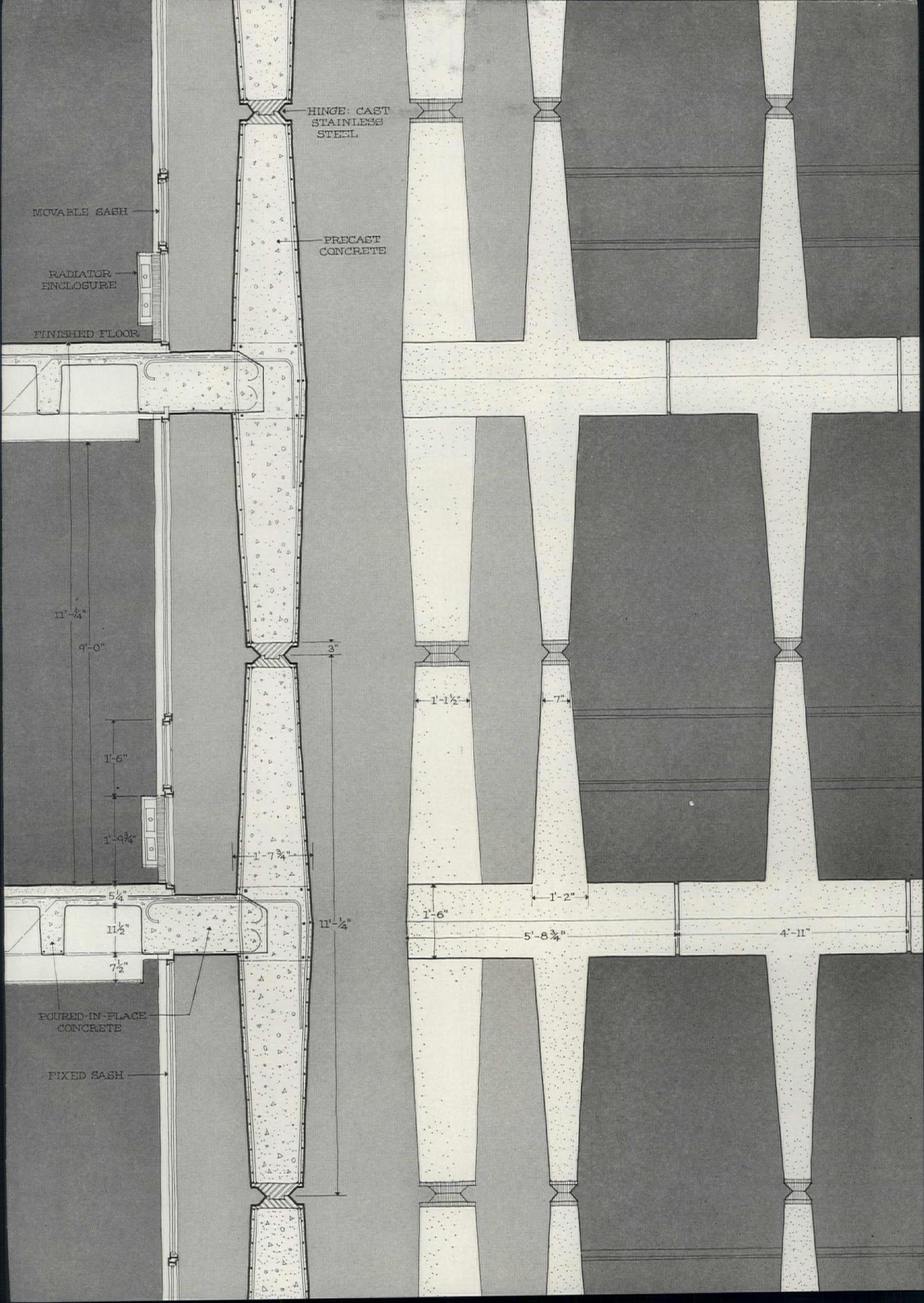
Penthouse contains a 10,000 sq. ft. residence for the Lambert family, which will double as entertainment space for musicales and balls. Columnless corners make the structural grid appear more graceful.

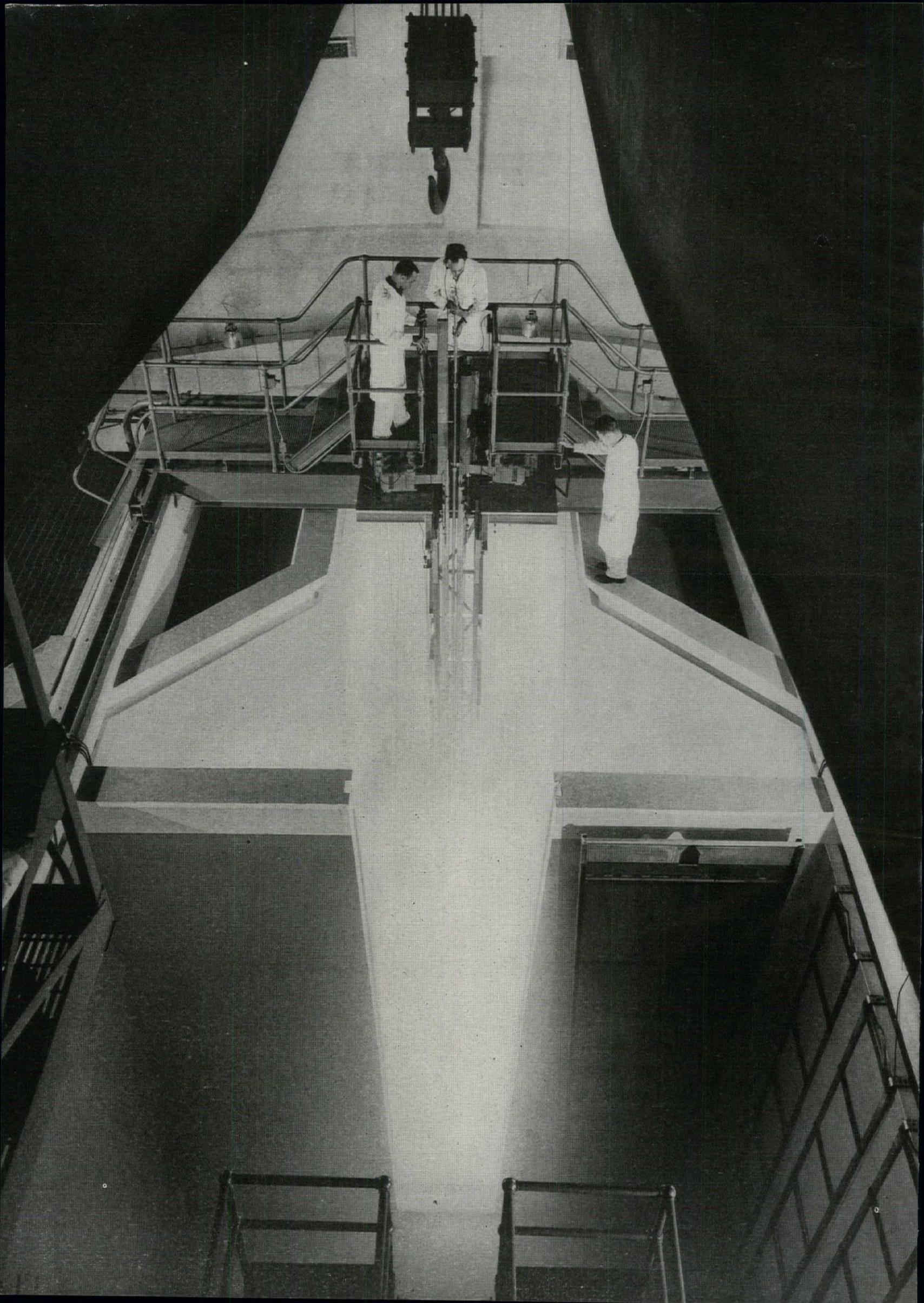


ARCHITECTS:
 Skidmore, Owings & Merrill
 STRUCTURAL ENGINEER:
 Paul Weidlinger
 MECHANICAL ENGINEERS:
 Syska & Hennessy
 GENERAL CONTRACTOR:
 Entreprises Blaton-Aubert



Structural details: Cross-section through the structural grid wall explains the connections between "Schock-béton" units and shows how spandrel beams will be poured against the crosses without special formwork.





Architecture for the atom

New building shapes are beginning to grow up around the young atomic industry

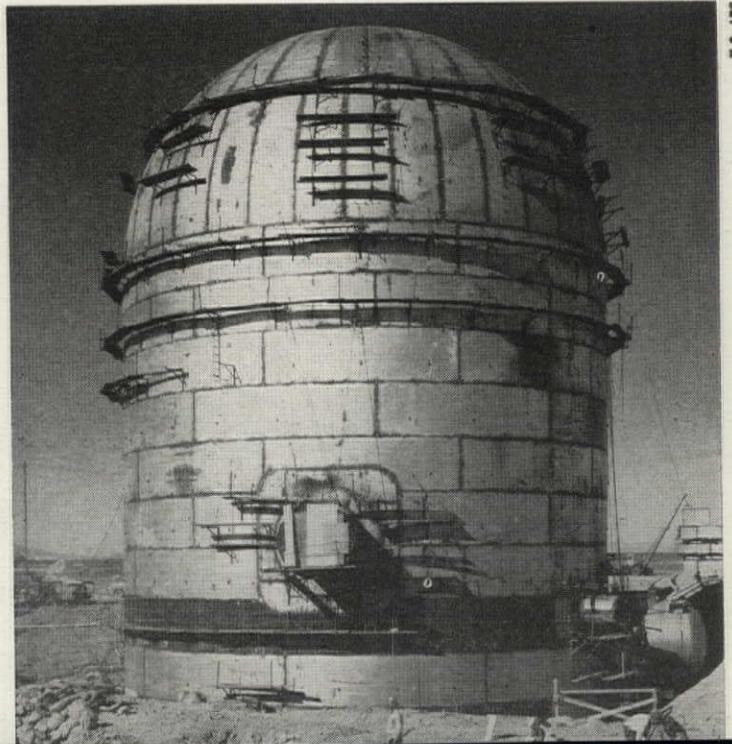
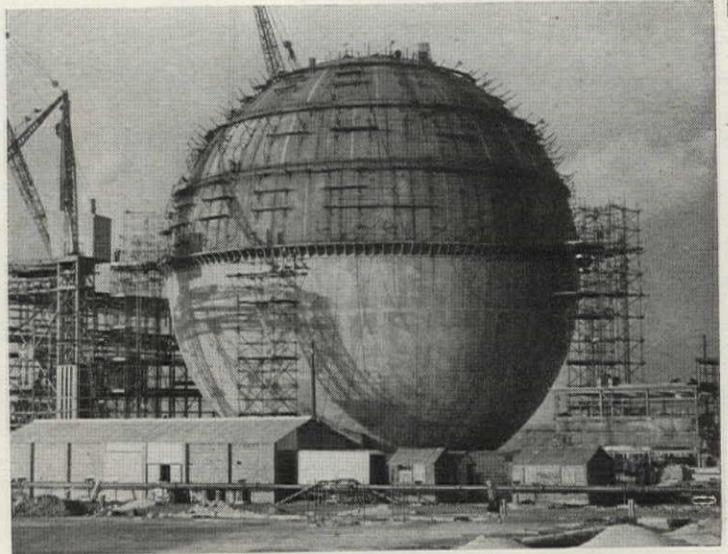
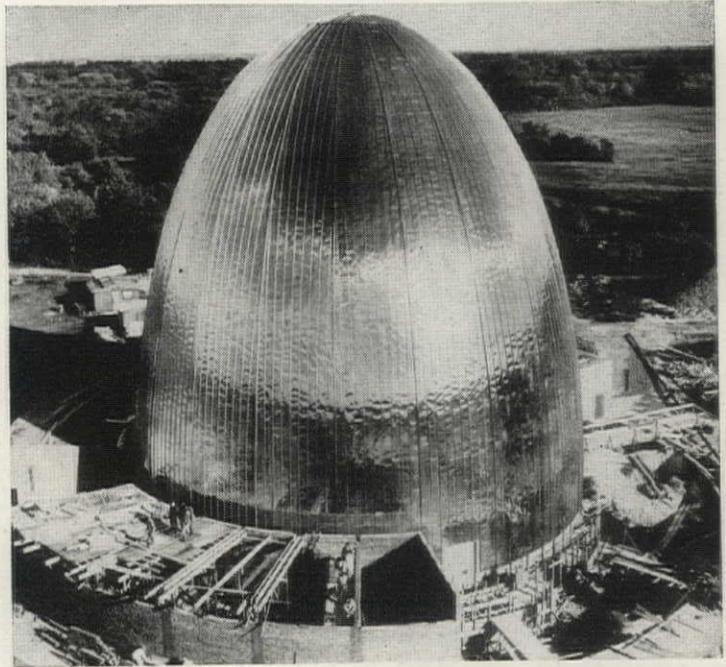
A few weeks ago the Atomic Energy Commission and the Joint Congressional Committee on Atomic Energy finally let their retarded foster child, atomic power, out of the nursery. After years of haggling and vitriol, but precious little progress, these guardians of the peaceful atom agreed that the nation's program should have a goal: to make atomic power competitive in high-cost power areas of the U.S. within ten years and abroad within five.

This belated step, small beside the technological achievements of nuclear science over the past two decades, means that there is now some reason for the building industry and adventurous architects to look expectantly to the atomic power field. And as the forms on these pages show, there is an exciting challenge in molding these new structures more expressively into the industrial or exurban landscape.

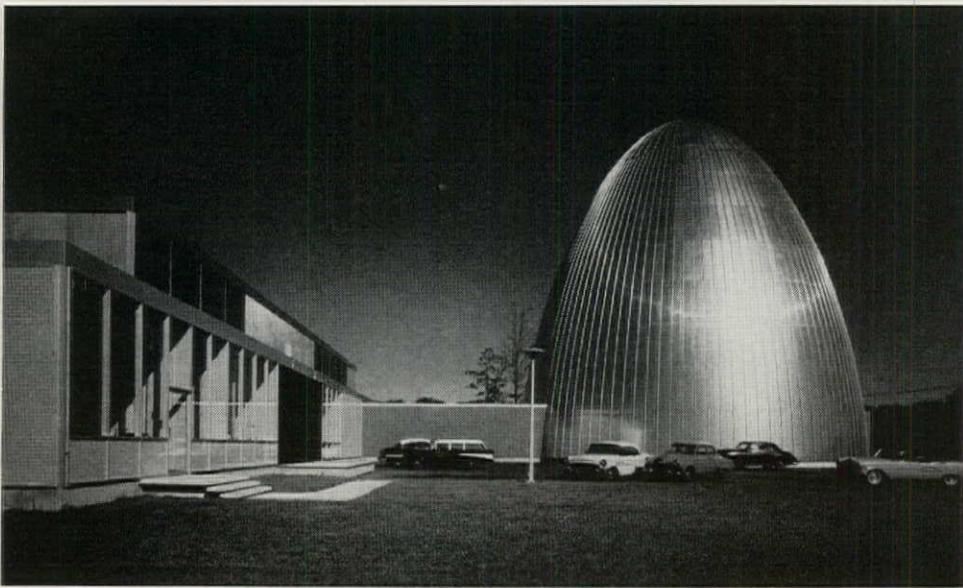
To be sure, the volume of such building will not be large, at least to begin with. Immediate expenditures are not likely to total more than \$150 to \$180 million a year. Since each of the few plants so far built or in construction (pictures, page 156) costs more than \$50 million, the number of new plants to be expected under such an estimate will, indeed, be small. By 1968, however, when the atom is expected to be fully competitive with coal and other conventional power sources, forecasts

Research reactor at Plainsboro, N.J., immersed in "swimming pool," was designed by AMF Atomics. Reactor is heart of a joint project (see page 154) for ten companies.

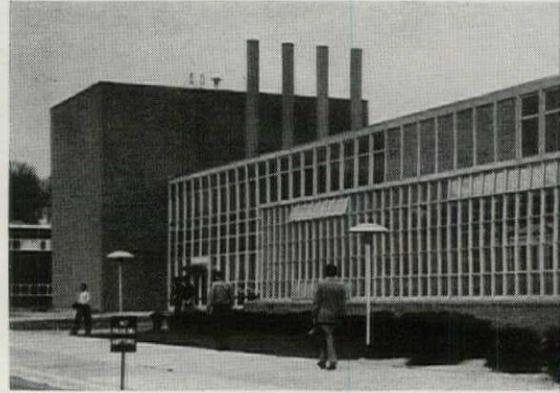
Three reactor buildings (right) show the variety of shapes evolving. Aluminum-sheathed dome (top) is in Munich; 140-ft. diameter steel ball (center) is in Scotland; steel cylindrical shell (bottom) will house experimental AEC reactor in Idaho.



ALEXANDRE CHRONES



Industrial laboratory for nuclear research in Plainsboro, N.J. (left), coordinated by AMF Atomic, was designed by Skidmore, Owings & Merrill with structural engineering by Severud-Elstad-Krueger.



College laboratory, at the University of Michigan (above), has reactor contained in windowless, gas-tight box (at left in photo). Building was designed by Detroit Architect Cornelius Gabler.

JON BERNHEIS—TIME

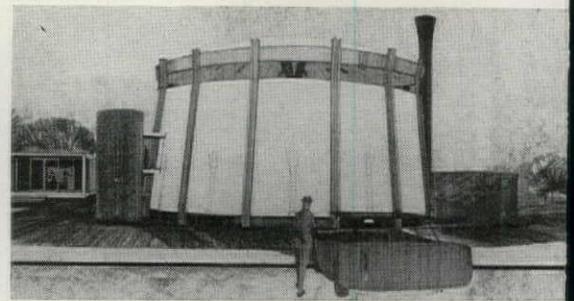
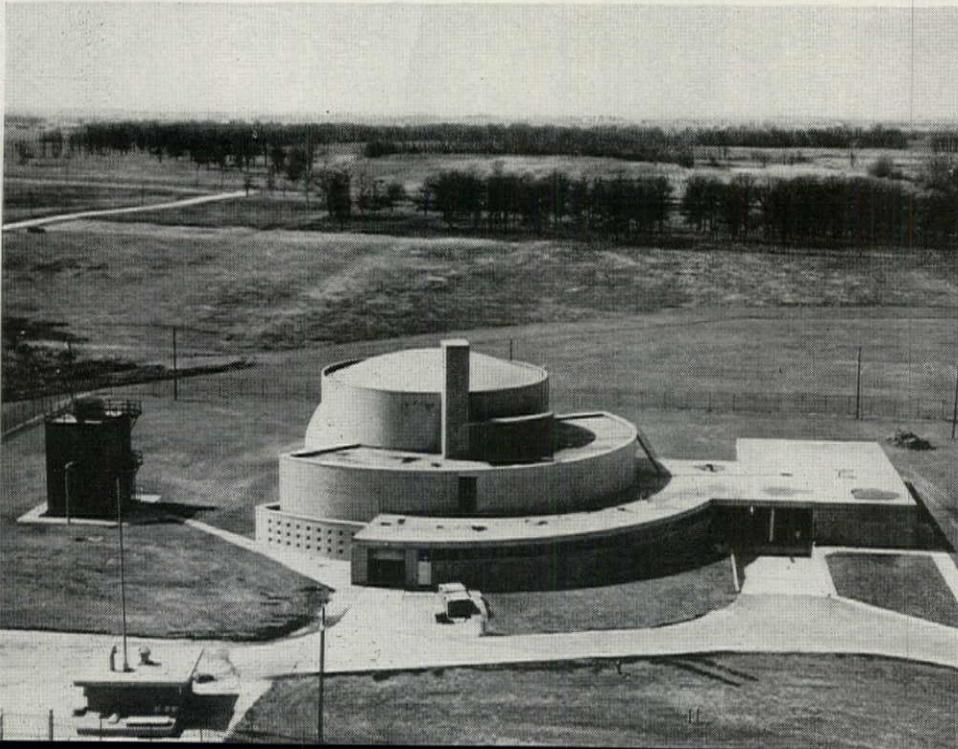


Research reactor, at Pleasanton, Calif. (left), is center of an atomic power project jointly financed by General Electric and Pacific Gas & Electric. Site includes experimental physics lab and a radioactive materials facility.

Research center of Argonne National Laboratories (below, left) was designed by Architects Shaw, Metz & Dolio. Reactor is used for biological research and for testing of reactor fuel components.



ARGONNE NATIONAL LABORATORY



Texas laboratory (above), designed by Architects Caudill, Rowlett & Scott, will house two nuclear reactors and will be located about 3 miles from Texas A&M campus. Opening is scheduled for 1960.

of expenditures for atomic power run as high as \$325 million a year. Meanwhile, opportunities will grow to achieve something substantial in this field beyond raw engineering.

Atomic power domes

Obviously, architects do not have the engineering or scientific capacity for the bulk of design that goes into an atomic power plant, and anything successful here, as in an increasing number of modern structures, must come from a close collaboration of architecture and engineering. The rewards may be more than visual, though that would be reward enough. In the giant domes and spheres, for instance, that form the dominant functional element of most atomic power plants thus far, shielding and protecting the power reactor against explosive accident, the results may be lumpy or strongly expressive of function (see pictures, page 153), according to the way in which shape, proportion, and materials are selected and used. And there is more of a relation between esthetics and mathematical efficiency, widely proved experimentally in the field of shell structures and of aerodynamics, than most engineers are ready to observe.

There are other areas in which architecture may contribute even more broadly not only to the appearance but also to the workings of the new atomic age. One is the deceptively simple but subtle area of smoothing, cleaning, organizing, and accenting the riot of engineering so that its strong forms "read" more readily and meaningfully to the viewer. A good example is the AMF Atomics research facility at Plainsboro, N. J. (page 154), in which, under the hand of Skidmore, Owings & Merrill, all the physical elements of the enclosures have been smoothed out, related, and rendered both legible and expressive. This, too, has its relations to efficiencies of function and use. Another architectural area is the nice placement of plant in its landscape, in relation to surroundings, natural features, highways, towns, other industry, or nearby housing, so that, while being conspicuous, it need not be an eyesore.

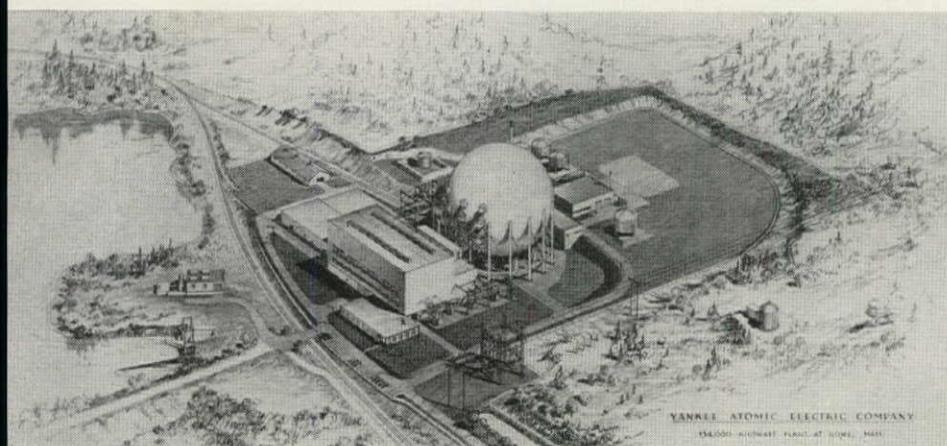
The precedents for this architectural mixing into engineering affairs go deep into the industrial revolution and, indeed, into the genesis of modern architecture itself. A large part of the ugliness that afflicts industrial and road-



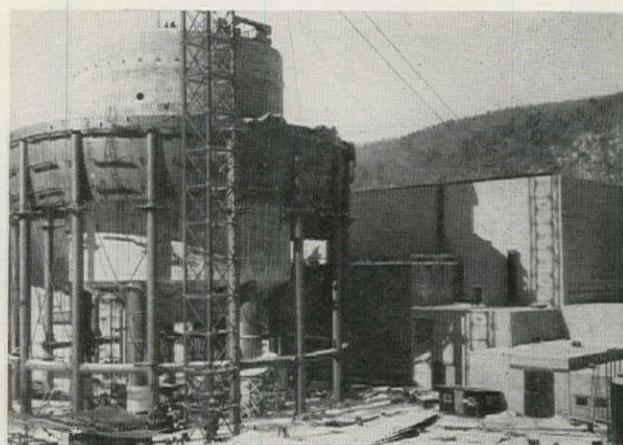
Synchrotrons

Giant synchrotrons present another facet of atomic buildings. The new half-mile tunnel (above), at Brookhaven National Laboratory on Long Island, will be a "race track" for high energy particles, traveling at energies of 25 to 30 billion electron volts. The photo (at left) shows the tunnel's interior, scheduled for completion next year. The circular building (below) houses a Russian synchrotron, in operation since 1956.



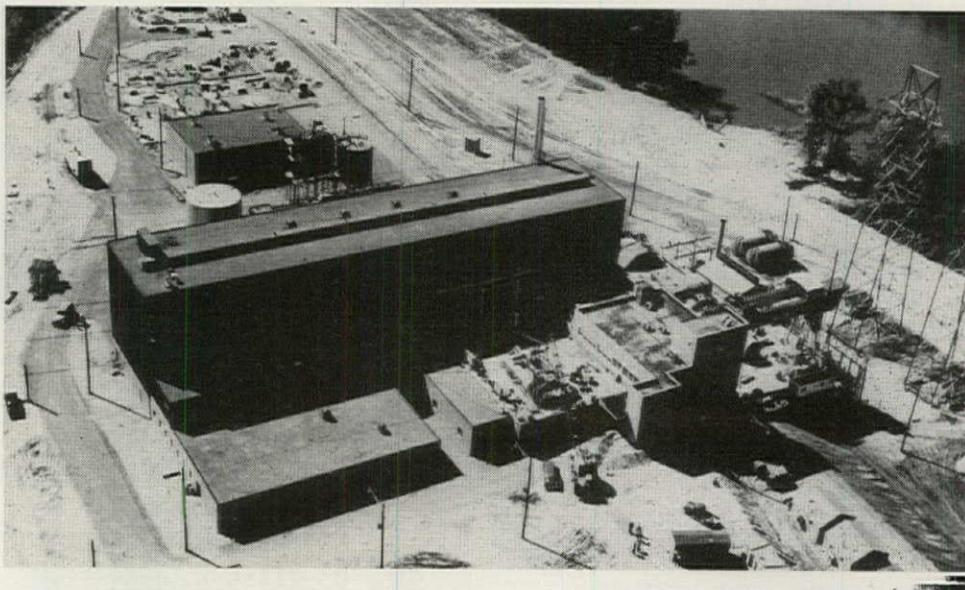


YANKEE ATOMIC ELECTRIC COMPANY
134,000-KILOWATT PLANT AT WYOMING, MASS.



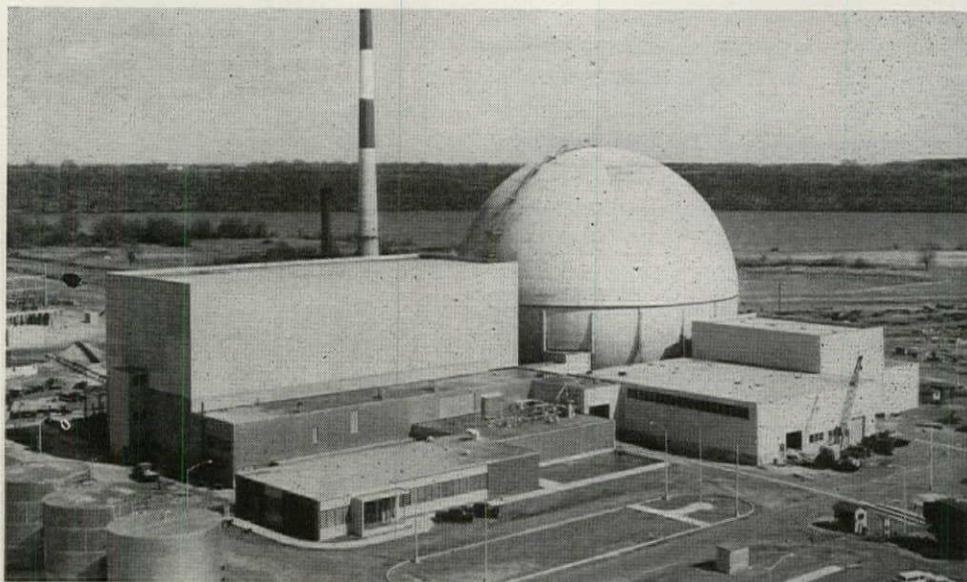
In New England, Yankee Atomic Electric Co. is building this 134,000-kilowatt atomic power plant (above) at a cost of about \$50 million. The reactor, designed by Westinghouse, is housed in a ball on stilts (see photo, right), so that railroad cars can move beneath it to carry off waste materials.

World's first full-scale civilian atomic power station near Pittsburgh (right), also by Westinghouse, has reactor buried underground. This facility looks much like a conventional power station. Operation began in 1958.

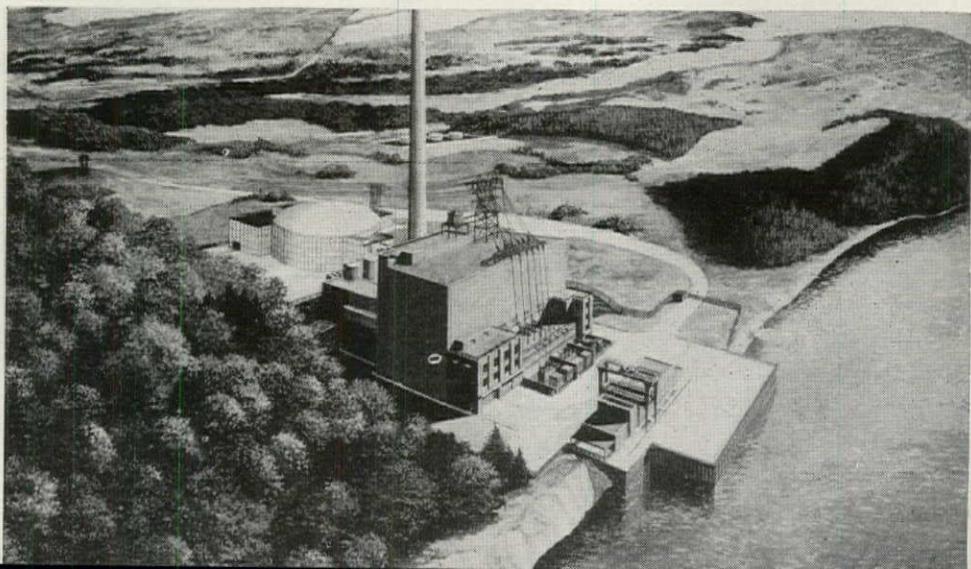


Power reactors

Chicago's nuclear power station (right), with a capacity of 180,000 kilowatts, will cost \$45 million, should be ready in 1960. Commonwealth Edison will own and operate it. Station is 50 miles southwest of Chicago.



Combination plant (right), for the Consolidated Edison Co. in Westchester, N.Y., will use oil and atom fuels for 275,000-kilowatt capacity. Cost will be about \$100 million; expected to be operational by 1961.



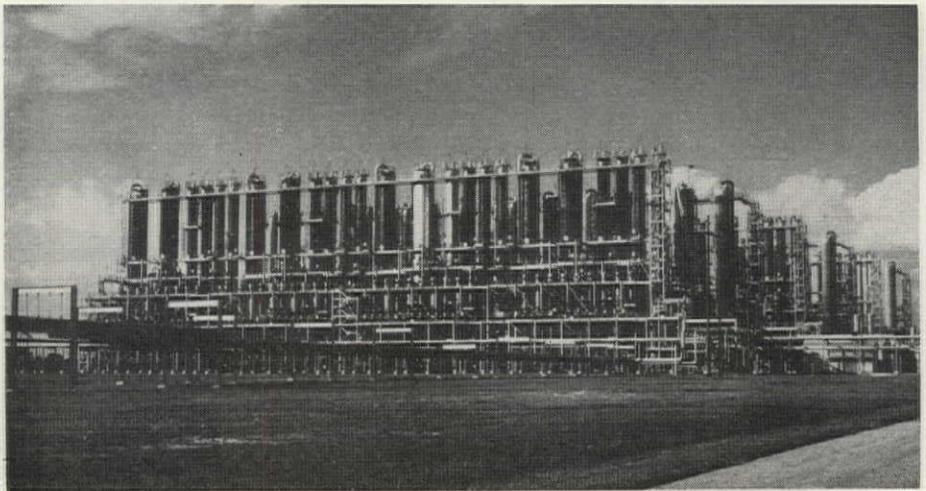
side America stems from the notion that architecture has nothing to do with these things at all. A few notable examples exist, such as the TVA development of the thirties, in which architects collaborated in vast engineering works that speak both poetically and successfully of their character and time. The European nuclear power reactors going up, particularly in England and France, generally show more awareness of the architect's role in these matters than those in the U.S. Success here cannot be attained merely by bringing in an architect to clean up details after the engineering is done. The architect must be in at the beginning.

The new opportunity

So far, the dominance of purely engineering firms has carried over from the building of conventional power stations to the nuclear variety. Of the five major atomic power plants so far built or under construction in the U.S., all have had such engineering organizations as Stone & Webster and the Bechtel Corp., prominently associated in design. Solid, conventional, and undistinguished, they do not match some of the smaller research reactor facilities (page 154) on which the few architects who have ventured into the atomic field so far have done most of their work. Research reactors, while novel and important, are a limited field, and do not represent the challenge and big business of power reactors, which most of these architects are now ready to take on.

They have confidence in the profession's ability to make a contribution. Says a spokesman for Giffels & Rossetti of Detroit, which has done AEC work on laboratories and processing facilities, and intends to go after atomic power plant design: "We believe it will be a profound advantage to have the architect integrated with the engineer." And Architect John S. Bolles of San Francisco says that his firm will bid on atomic power jobs. Bolles goes so far as to contend that most contemporary power plants, conventional or atomic, are poorly designed, wasting money on poor planning, poor organization of floor lines. Whether or not the architect is as successful as his confidence leads him to expect, the new age of atomics, electronics, and other great technical advances calls for a fresh start, a new viewpoint, on shaping the industrial scene to human ends.

U.S. AEC



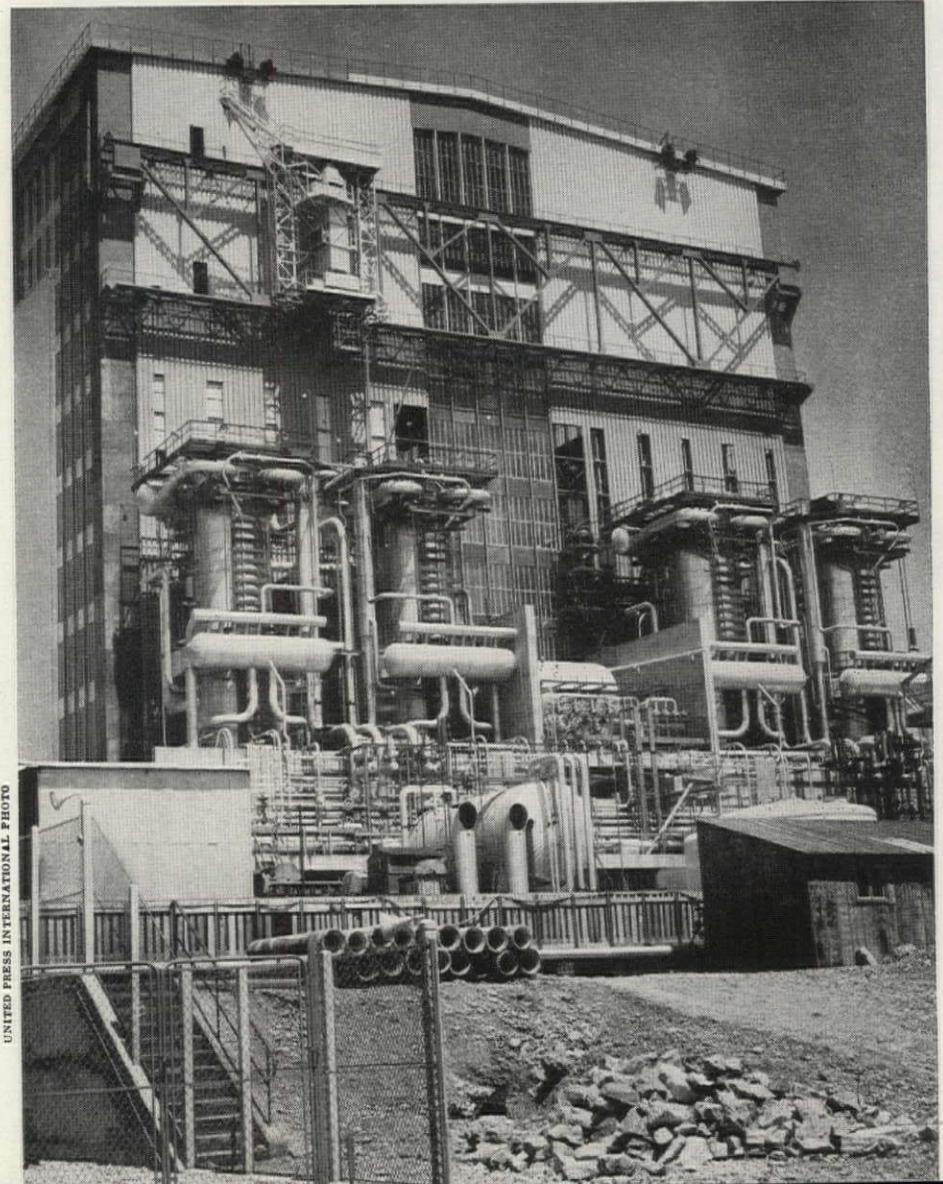
BRITISH OFFICIAL PHOTOGRAPH



Form follows function: Out of the atomic age is evolving a highly specialized architecture, completely functional. Theerie structure shown above is a plant which produces heavy water, in South Carolina. Filter-tip chimneys (left) prevent the escape of radioactive matter at a plutonium plant in England. The maze of equipment (below) is part of a French plutonium plant, which will eventually produce some 30,000 kilowatts of electricity as well.

By-product plants

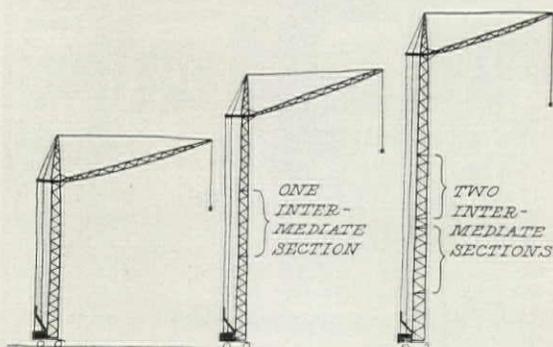
UNITED PRESS INTERNATIONAL PHOTO



The giant cranes



COURTESY WEXLER CONSTRUCTION CO., INC.



Tall German crane, with 153 ft. tower and 70 ft. jib, sets a form for a concrete end wall on this 12-story parking garage in Boston, being erected by Wexler Construction Co. As sketches (left) show, the height of some models can be extended to maximum of 300 ft. by the addition of intermediate sections. Reach of the jib is governed by crane height and weight of the load; maximum jib length is 127 ft.

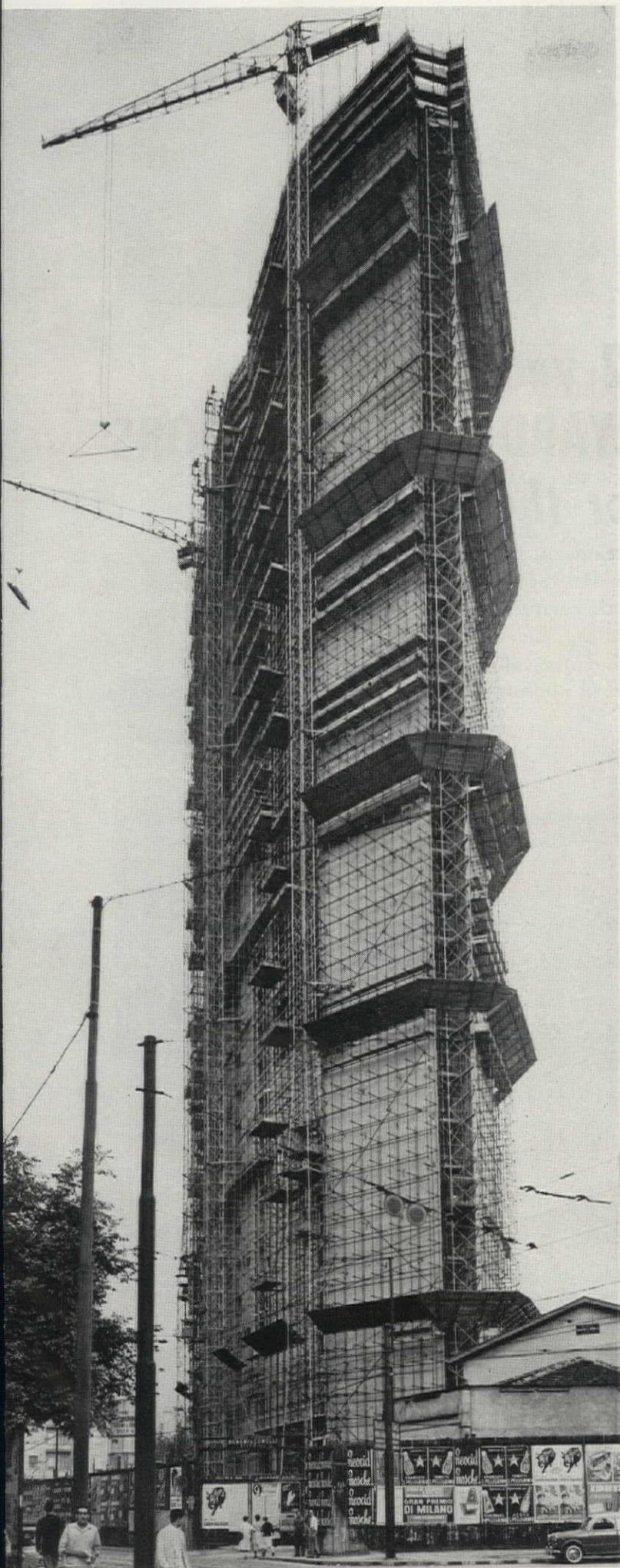
Most of U. S. construction has yet to see the giant lifting cranes that have risen to power in Europe within the last decade. To tell the truth, it is rather wary of them. These masts of steel, towering 300 ft. and more, are extraordinary, versatile machines, but they demand a high degree of skill in operation and, above all, a heavy schedule of work. Standing idle, a \$100,000 crane plus its \$188-per-week operator and \$143-per-week oiler (New York area wage rates) can soon erase a contractor's profit.

Such cranes are just beginning to find acceptance in this country, mostly in the large cities and on the biggest projects. The demand is growing swiftly; a few U.S. firms are now producing giant cranes. Use of large cranes has expanded more than 10 per cent every year since 1954 (discounting 1958, when construction volume dropped), and the trend seems to be toward broader use and toward even greater size.

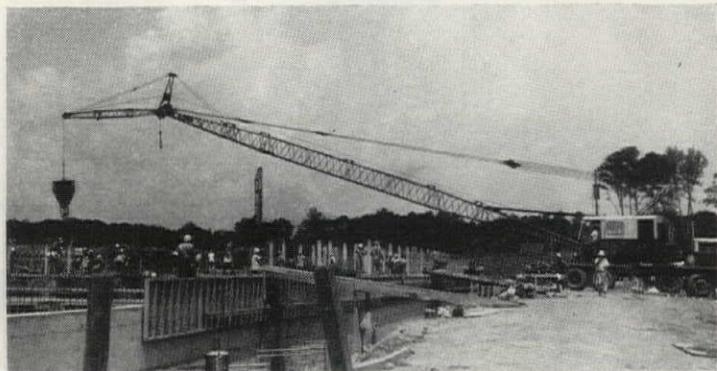
The crane's chief advantage over the derrick or elevator, its major competitors, is its ability to eliminate rehandling of materials. With derrick or elevator, materials often must be transferred by dolly or wheelbarrow to the working station, whereas the crane can hoist and position materials in a single step. For example, it can pour concrete directly into forms and later can be used to dismantle the forms and erect them elsewhere.

To be sure, the crane is not adaptable to every type of construction. If a building is so broad as to have some of its working stations out of reach of the crane, builders usually find that it is more economical to use a combination of alternate devices, such as elevator and dolly.

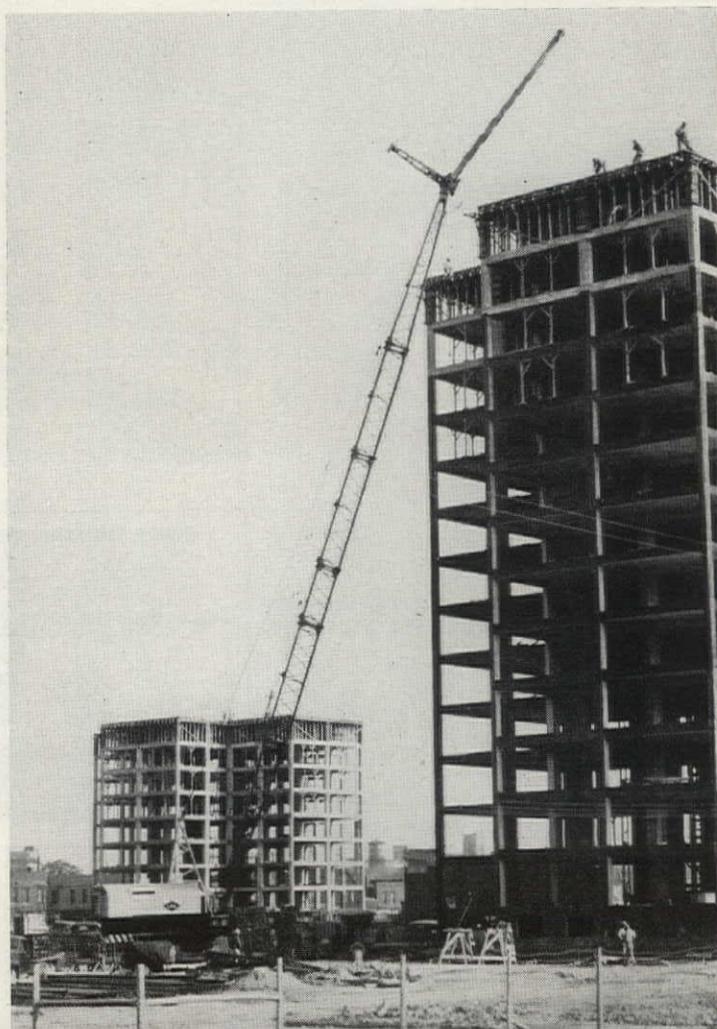
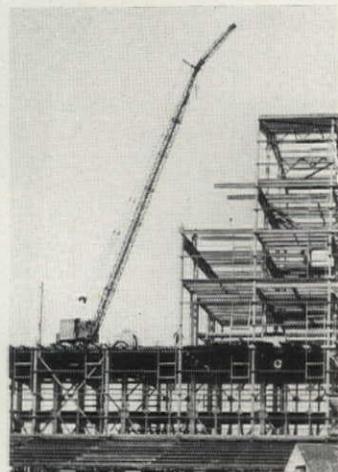
But where conditions are suited to it, the crane's efficiency is often sufficient to reduce the building time of a major structure by as much as a month or two. Indeed, the big cranes' advantages have sometimes proved so pronounced that some architecture has been modified to benefit from them. For example, the ability to pour concrete directly into forms, using the long-boom crane, has been partly responsible for the rise of the cross-shaped and star-shaped buildings, now seen in New York and Chicago. Only a few construction tools in history have worked such a modifying influence on architectural design.



Italian crane (left) stands so tall (424 ft.) that it must be attached for support to the side of the Pirelli Building in Milan (by Architect Gio Ponti). Its jib is 75 ft. long, with a lifting capacity of 3,300 pounds and lifting speed of 182 ft. per minute.



Long-reaching crane (above) pours concrete for a shopping center in Atlanta. Boom length is 100 ft.; the jib length, 30 ft. Hoisted crane (right), at work in Canada, stood at ground level during construction of first stories, then was lifted—by cranes—to third floor for completion of the job. Maneuverability of a crane gives the contractor added leeway (below) on a multiple housing development in Detroit. A crane, unlike a derrick or elevator, can be moved readily from one building to the next as construction progresses.



PHOTOS: COURTESY BALDWIN-LIMA-HAMILTON CORP.; TEEW SHOVEL CO.

ARCHIVIO FOTOGRAFICO

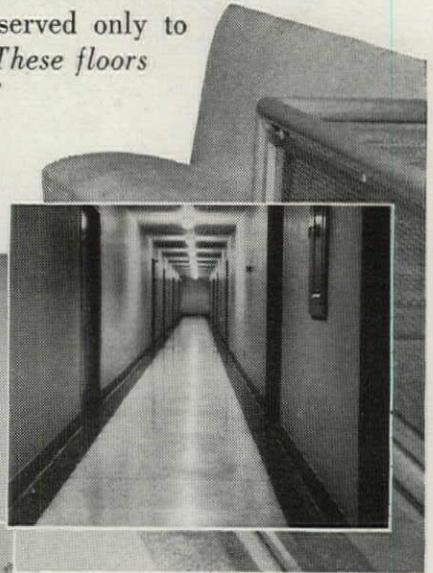
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Passaic, N. J. Dept. A-1

Branches and Warehouses in Principal Cities

Herbert Fritz Jr., includes a 400-seat sanctuary, vestibule, and lavatory on the first floor, a kitchen, furnace room, three lavatories, nursery, two offices, and eight Sunday School rooms in the basement—most of which can be opened up for group activities. The church is veneered with brick after the factory-made wood panels and windows are assembled. Deliveries

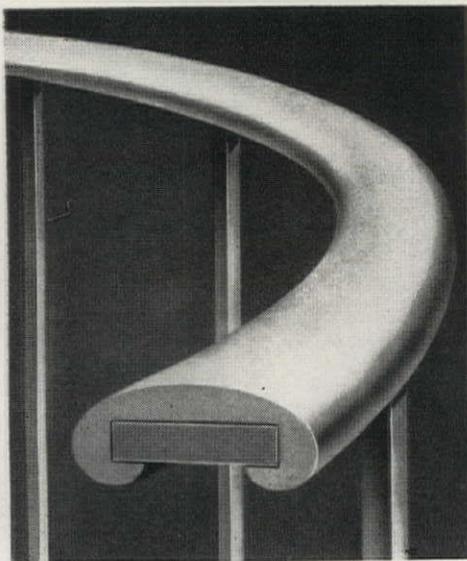


are limited to the northern Midwest but will soon be extended to cover the eastern seaboard states as well. Cost: \$80,000, complete, except for furnishings.

Manufacturer: Marshall Erdman & Associates, 5117 University Ave., Madison, Wis.

COLORED PLASTIC HANDRAILS are easy to apply and hard wearing

Tough, abrasion-resistant handrails made of colored plastic (polyvinyl chloride) are now being marketed by two U.S. firms. One handrail is a West German import



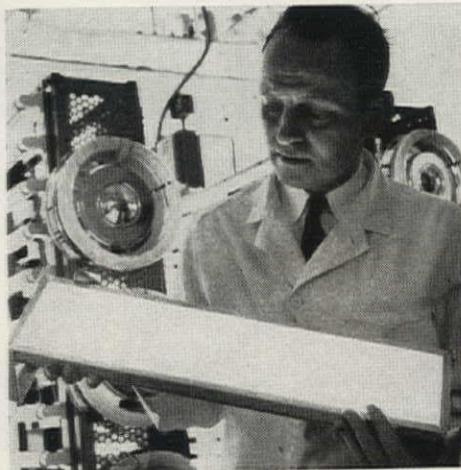
which has been used in Europe for about ten years, but is new to this country. The other is a new domestic product. They look almost identical and can be quickly and easily applied, without bolts or screws, over the top bar of new or old railings. Both are moderately priced—about 50 cents a lineal foot—and they are being marketed in a variety of extrusion sizes. Both are smooth to the touch, corrosion-resistant, and nonflammable. For major installations, both can be put on in a continuous, seamless strip. Splicing is done with a red-hot putty knife; cutting with a handsaw when the material is cold or with a knife when it has been heated. The German-made handrail, called *Guton*, is available in six colors; the U.S.-made *Colorail*, in four.

Manufacturer of Colorail: Julius Blum & Co., Carlstadt, N. J.

U.S. Distributor for Guton: Color Rail Co., 195-46 Jamaica Ave., Hollis 23, N. Y.

FLUORESCENT LIGHT PANEL will take up less ceiling space

Westinghouse Electric Corp. has developed for production in the near future a thin glass plate or panel which produces fluo-



rescent light. The new lamp is composed of a labyrinth or maze of passages sandwiched between glass sheets. Thus the arc or electrical discharge, instead of traveling in a straight line as in the conventional tube-type fluorescent lamp, travels through a winding path to produce an *area* (rather than a *line*) of light. The model shown above measures 8 by 12 in., and only 1 in. thick—a factor which will reduce the amount of ceiling space needed for overhead lighting installations.

Manufacturer: Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J.

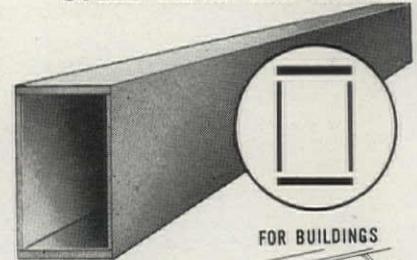
BIG CLAY ROOF TILES have bold, sculptured look

Close cooperation between a building products manufacturer and an architectural firm has resulted in a big, heavy, and handsome new roof tile called *Concordia*. Developed by Ludowici-Celadon Co.

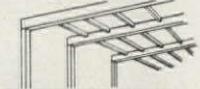
continued on page 174

NEW VERSATILE SHAPE LIMITED ONLY BY THE CREATIVE IMAGINATION OF THE ARCHITECT

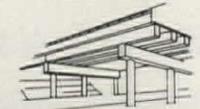
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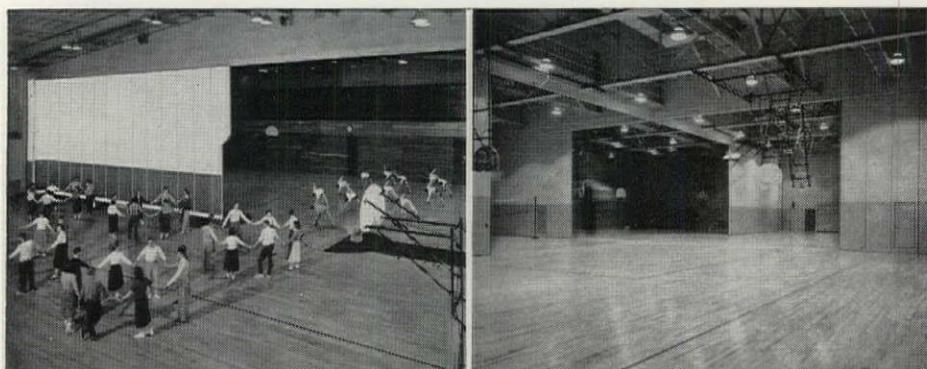
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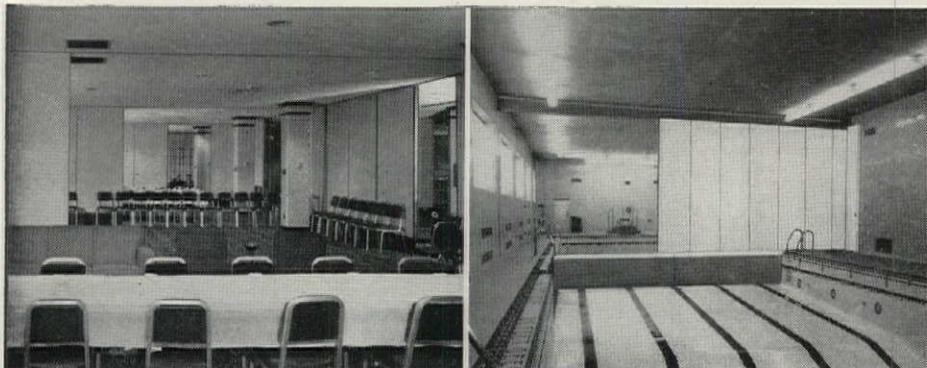
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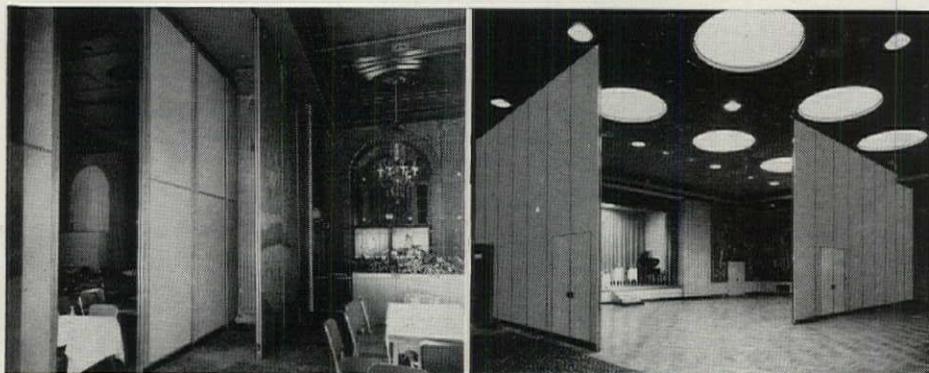
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and Eero Saarinen & Associates for the recently completed Concordia Seminary College at Fort Wayne, Ind., the deeply sculptured tiles are made of burnt shale clay. They measure 8½ by 11½ in., and



are 1½ in. thick. Weight: 12 pounds per sq. ft. The tiles used on the original project were black and gray, but those now on the market are available in almost any color. Cost: about 60 cents per sq. ft.

Manufacturer: Ludowici-Celadon Co., 75 E. Wacker Dr., Chicago 1, Ill.

RUBBISH-BURNING FURNACE cuts fuel bills and air pollution

A new furnace which operates on conventional fuels—oil, gas, coal, or wood—can be converted in about 30 seconds to burn all kinds of rubbish (even rubber tires) with little smoke or odor, thereby reducing heating bills and air pollution.

Designed primarily for use in small industrial plants, the *Shop Heater* is also applicable as a supplemental unit for schools, hospitals, office buildings, or any building which has a problem of destroying rapidly accumulating rubbish. The



unit weighs about 1,000 pounds and will heat areas up to 5,000 sq. ft. Cost: about \$2,400 including installation.

Manufacturer: Mastro-Hoskinson Mfg. Corp., Inc., 640 Hempstead Tpk., Franklin Sq., L. I., N. Y.

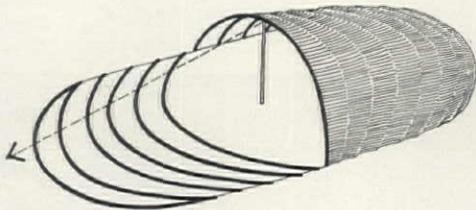
COLORED SKYLIGHTS
made of glass-fiber reinforced plastic

The first plastic skylights to be available in a variety of colors are made of a double thickness of glass-fiber reinforced plastic. They are said to be four times stronger than conventional acrylic plastic or glass skylights (i.e., they will support as much as 200 pounds per sq. ft.). Five colors are available—green, white, pink, yellow, and blue. Sizes range from 14 in. square to 38 in. by 14 in. Cost: \$22 and up.

Manufacturer: Consolidated General Products, Inc., P.O. Box 7425, Houston 8, Tex.

PORTABLE AUDITORIUM
goes up like a baby buggy top

The sketch below is of the plastic-covered *Portatorium*, a new type of portable structure which can be put up in a few hours to serve as a temporary auditorium, convention hall, or maintenance and storage building. Supported by arched aluminum ribs that are hinged at the base, it erects much like the top of an old-fashioned roadster or baby carriage: two canopies swing



up from opposite ends and lock in the middle to create a pole- and rope-free enclosure 180 ft. long, 50 ft. wide, and 20 ft. high (enough space to seat 1,000 people).

Designed by A. J. Bradford, a producer of industrial films and shows, the structure will be put on the market later this year at \$25,000. If the space is to be air conditioned or heated, a smaller but similar shell can be erected inside the *Portatorium* to provide an insulating dead air space and space for ductwork.

Manufacturer: Wilding Picture Productions Inc., 1345 Argyle St., Chicago, Ill.

FIRE RESISTANT DRAPERIES
made of new synthetic yarn

Curtains and draperies that will not support flame, and that are rot- and mildew-proof and unaffected by chemicals, are now being woven from a recently developed synthetic yarn called *Saranspun*. Made of 79 per cent saran and 21 per cent viscose, the new material is unlike glass-fiber fabrics in that it can be dry-cleaned and will wear longer. Cost is roughly the same. In 50 in. widths, prints available from Greeff Fabrics of New York sell for about \$7.50 per yard. In appearance *Saranspun* resembles linen. But a dead white is still unavailable, the closest shade being a very light beige.

Manufacturer: Saran Yarns Co., Odenton, Md. END



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when you
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Now, Bruning's unique Copyflex Model 300 brings the advantages of inside reproduction within the means of the smallest firm or department. Right in your own offices, you make sharp, black-on-white prints in seconds of a drawing or tracing up to 30 inches wide by any length. With intermediates, you make design changes without reworking originals; you make composite prints, color overlays, and sharp prints from weak originals. You add new dimensions in convenience, speed, and efficiency to your entire operation. All at the surprisingly low cost of the Model 300!

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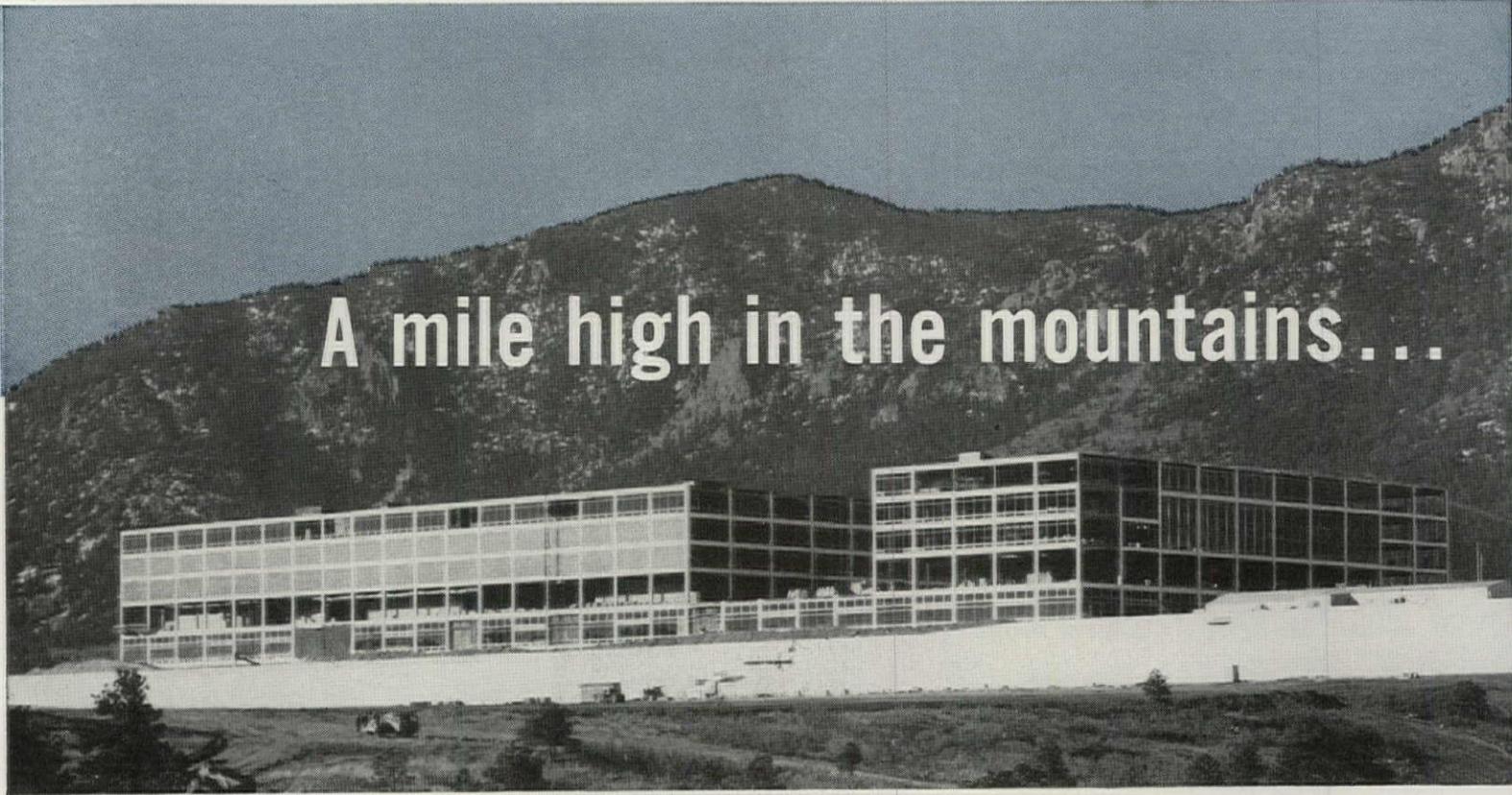
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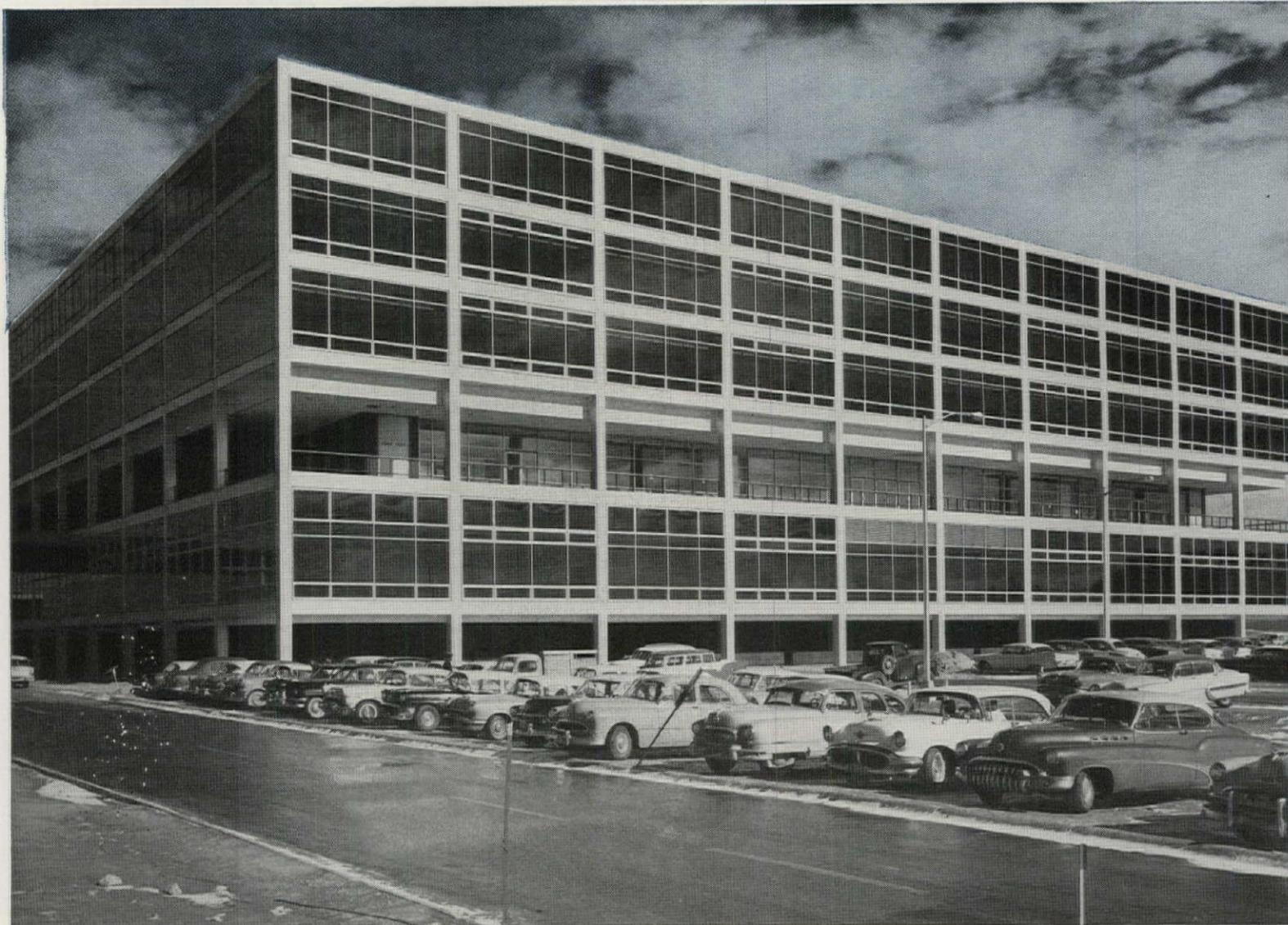
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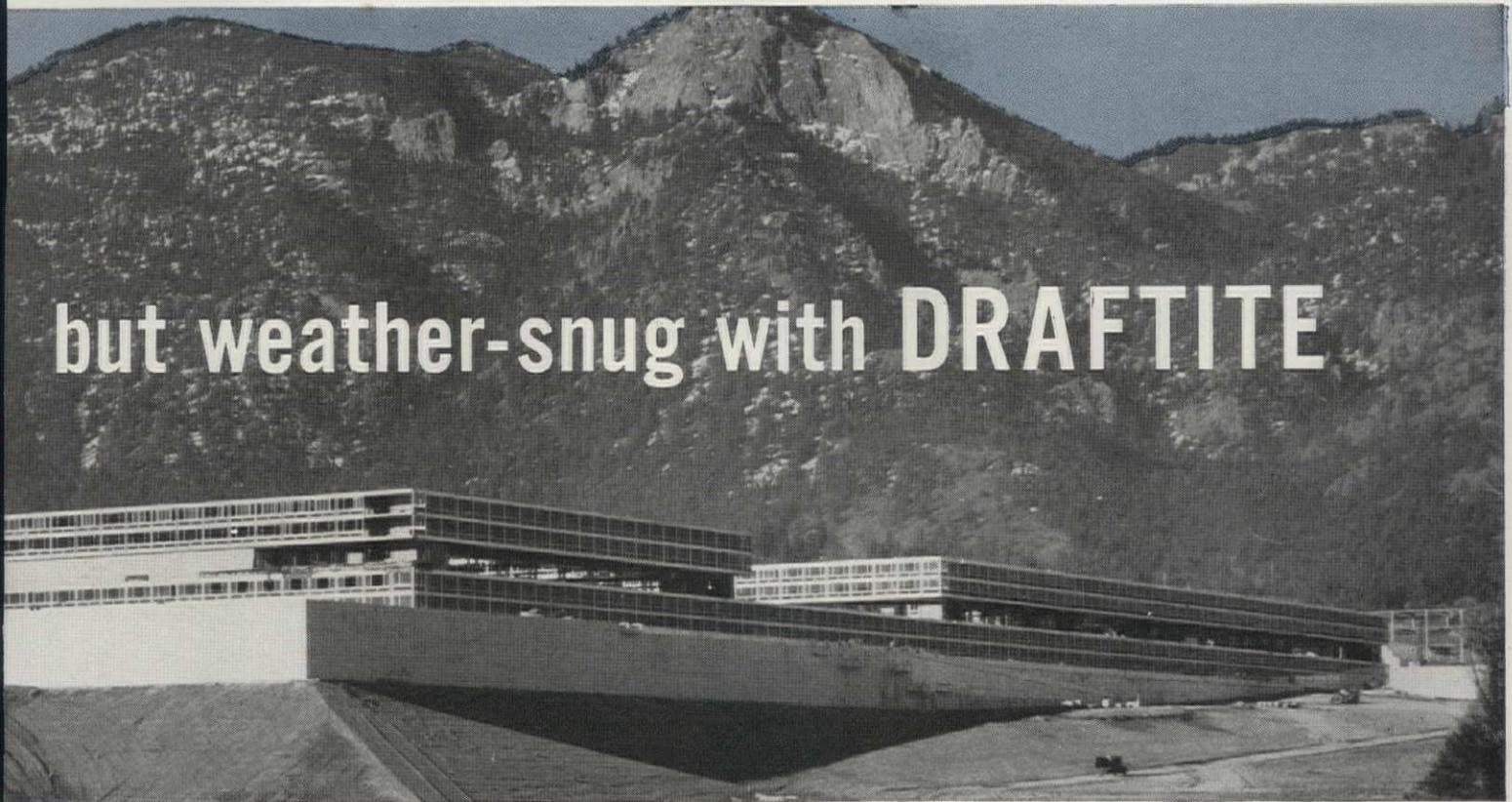
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Call or write today for free samples and complete details on Draftite Compression Seal and Draftite Wool Pile Weatherstrip.



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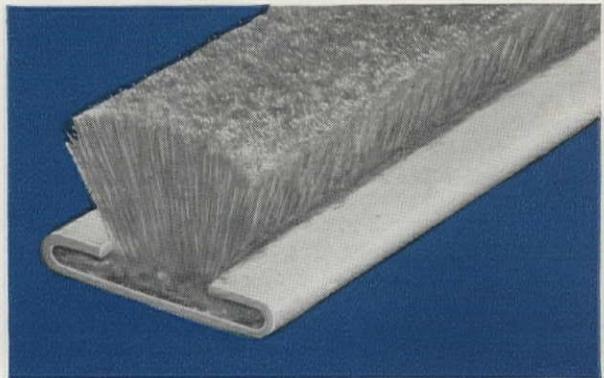
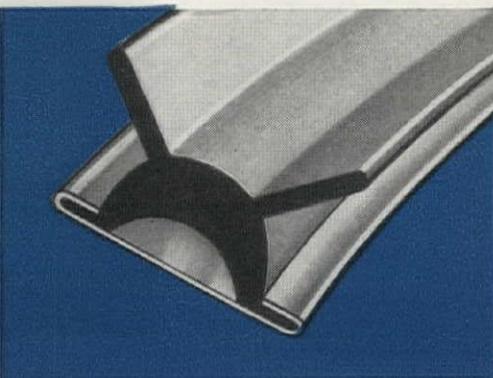
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DRAFTITE VINYL COMPRESSION SEAL— Nonmigrating vinyl. Aluminum gray in color. With 302 stainless-steel core. Can be lacquered with rest of window. Section drawing shows installation in hopper windows of Academic Complex.

DRAFTITE WOOL PILE WEATHERSTRIP— With 302 stainless steel cores, .281" overall width. Used on sliding windows where friction is a factor.

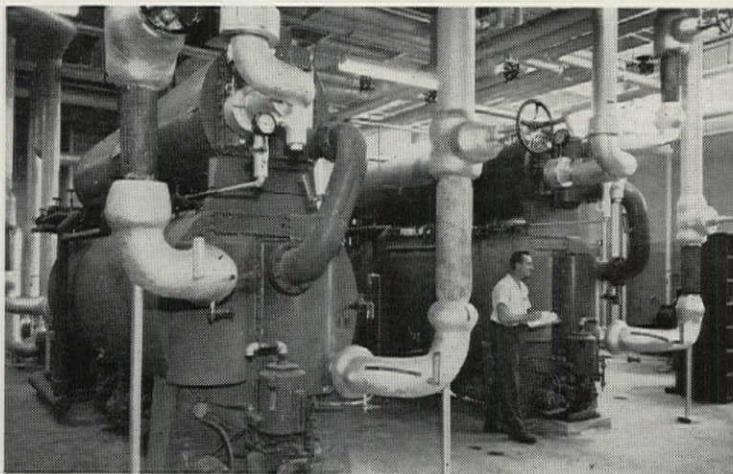




NO SUMMERTIME SLUMP With gas as the boiler fuel and York machines, the switch to summer cooling was no problem. Operating costs are low, too, thanks to Gas.

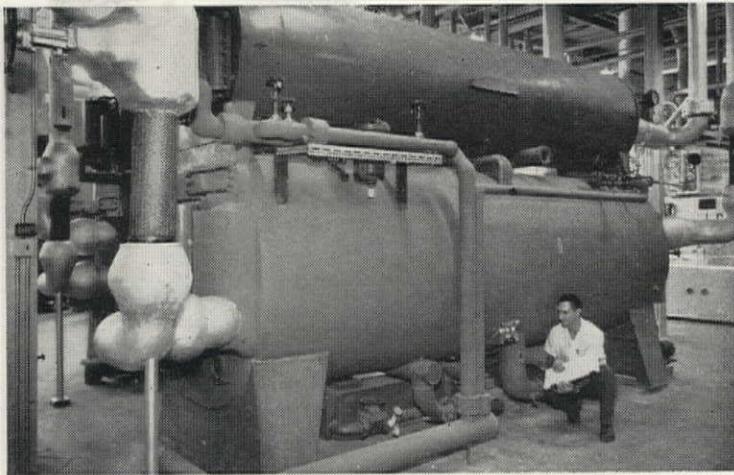
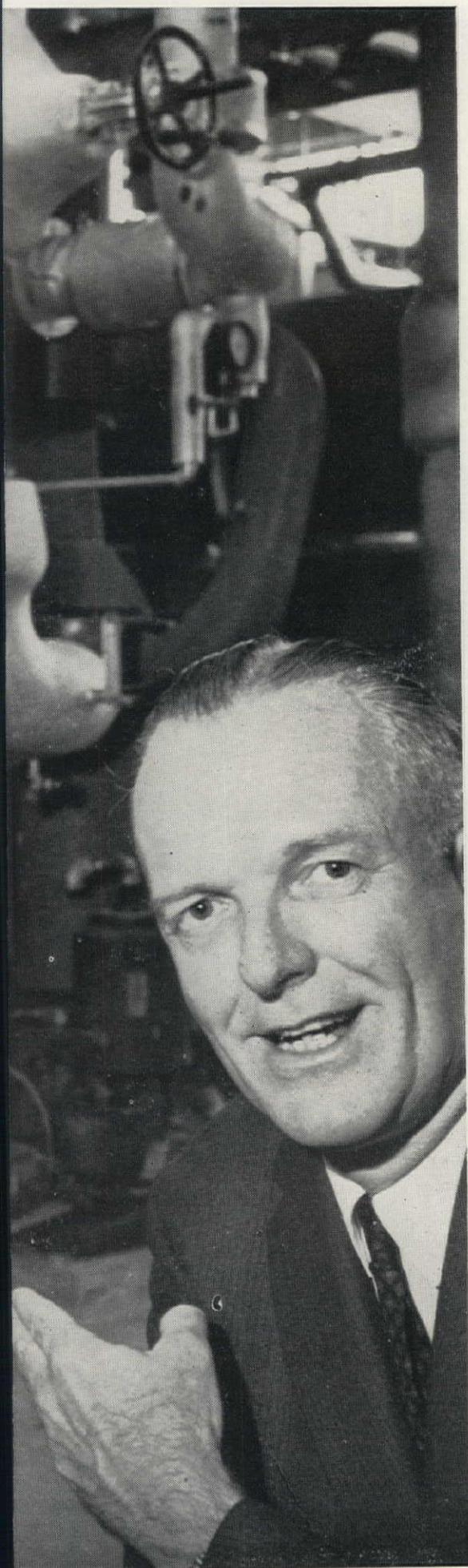


LATEST IN COOLING Gas operated York machines feature the use of tap water as refrigerant and lithium bromide as absorbent, one of the most efficient, practical refrigeration cycles developed so far. Machines start and stop automatically.



THE UTMOST IN FLEXIBILITY The units are cross-connected so that each operates independently if necessary.





MAINTENANCE COSTS TO DATE — ZERO! The Allen Company uses two York machines—a 230-ton unit serving 45,000 sq. ft. of office and cafeteria space, a 170-ton unit for process water cooling. Three small pumps and motors are the only moving parts in the entire system.

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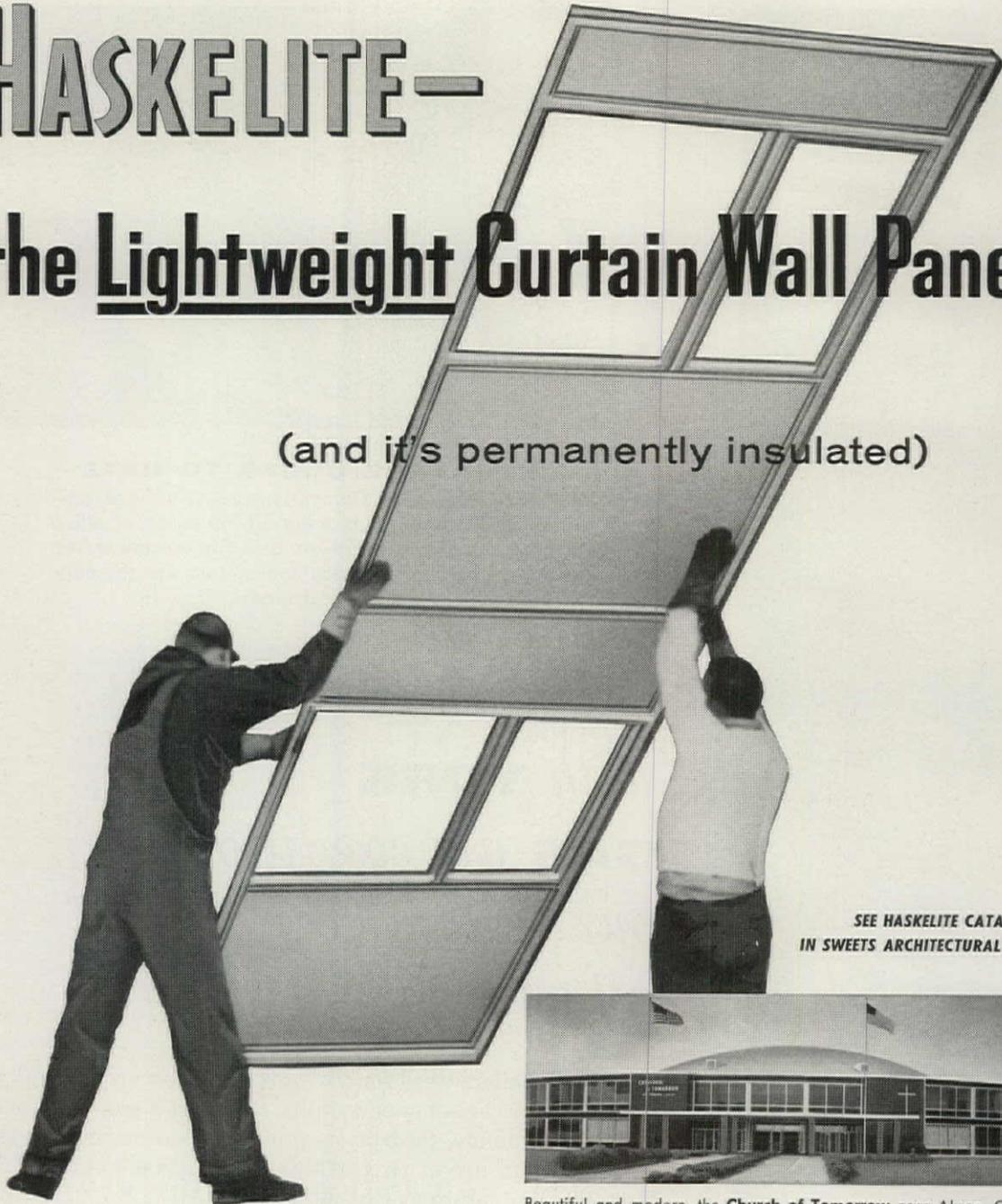
“With our boilers sized for a winter load, we were naturally oversized for the summer months. But York’s gas-operated Lithium Bromide absorption water chillers permit us to make efficient use of part of this steam capacity to cool,” says Mr. M. J. Mather, President of the Allen Manufacturing Company, makers of hex-socket screws.

The York Lithium Bromide system eliminates the need for huge compressors found in other types of cooling equipment . . . which brings down the original cost considerably. And with gas the boiler fuel, you make year-round use of an otherwise wasted source of power *at rock bottom costs*. In addition, York machines are noiseless, lightweight, compact—easy to install and readily adaptable to almost any plant layout.

Find out how your present heating system can pay off for you all year ’round with gas-operated York automatic water chilling units. Call your local gas company or write to the York Corporation, Subsidiary of Borg-Warner Corporation, York, Pennsylvania. *American Gas Association.*

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(and it's permanently insulated)



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- Flat, wave-free surface will not buckle—unaffected by temperature changes!
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- Permanent insulation—does not absorb moisture!

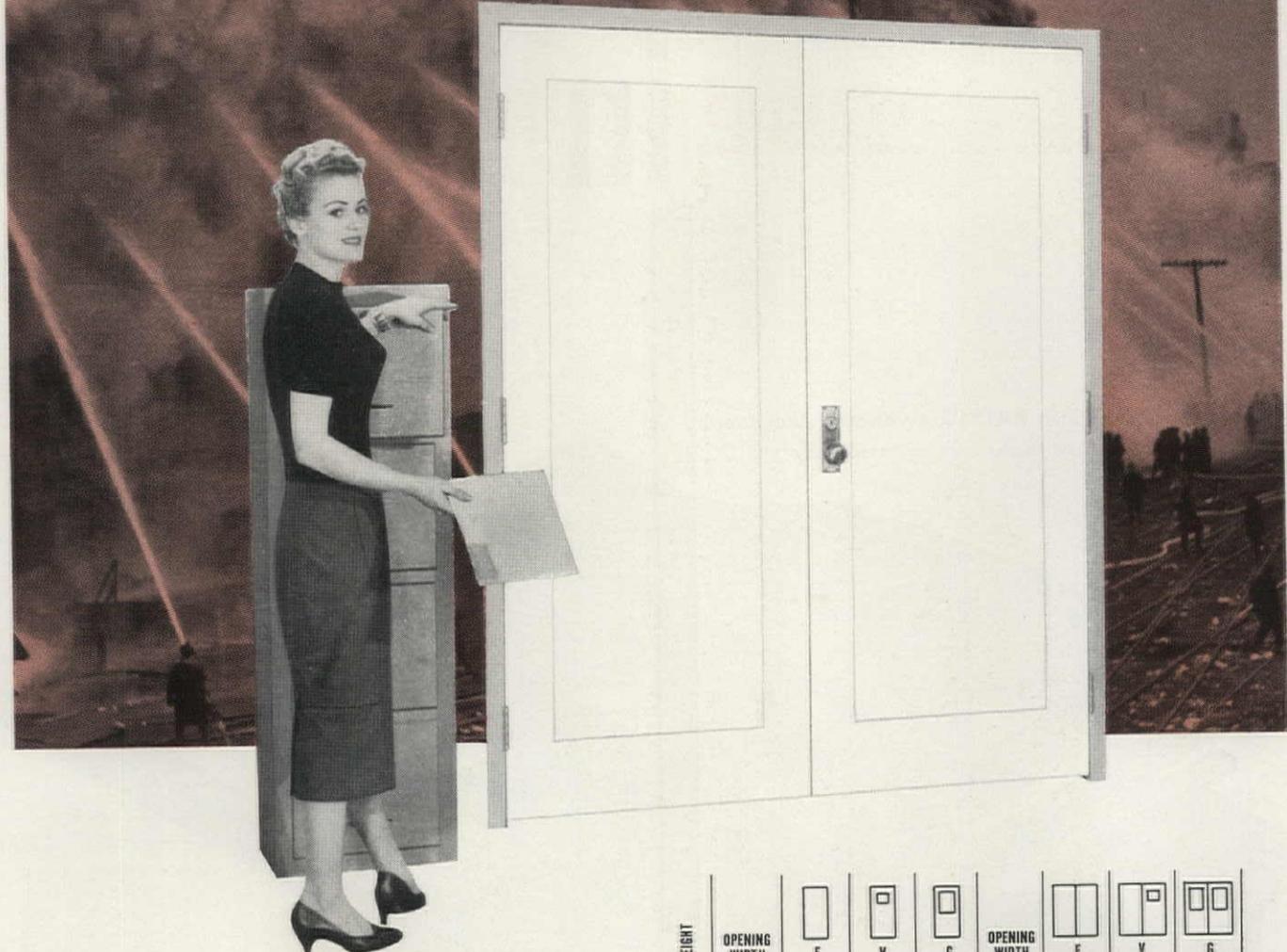
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Grand Rapids 2, Michigan
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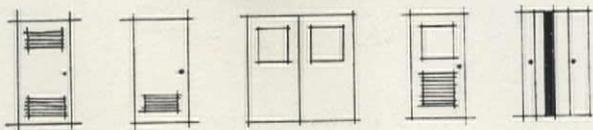
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For detailed information on Amweld's complete line of doors, frames, and closet units, send for free catalog today.



HEIGHT	OPENING WIDTH	SINGLE			OPENING WIDTH	DOUBLE		
		F SINGLE	V SINGLE*	G SINGLE		F DOUBLE	V DOUBLE*	G DOUBLE
6' 8"	2' 4"	A or B	B	C	—	—	—	—
	2' 6"	A or B	B	C	5' 0"	A or B	B	C
	2' 8"	A or B	B	C	5' 4"	A or B	B	C
	3' 0"	A or B	B	C	6' 0"	A or B	B	C
	3' 4"	A or B	B	C	6' 8"	A or B	B	C
	3' 6"	A or B	B	C	7' 0"	A or B	B	C
7' 0"	2' 4"	A or B	B	C	—	—	—	—
	2' 6"	A or B	B	C	5' 0"	A or B	B	C
	2' 8"	A or B	B	C	5' 4"	A or B	B	C
	3' 0"	A or B	B	C	6' 0"	A or B	B	C
	3' 4"	A or B	B	C	6' 8"	A or B	B	C
	3' 6"	A or B	B	C	7' 0"	A or B	B	C
	3' 8"	A or B	B	C	7' 4"	A or B	B	C
	4' 0"	A or B	B	C	8' 0"	A or B	B	C

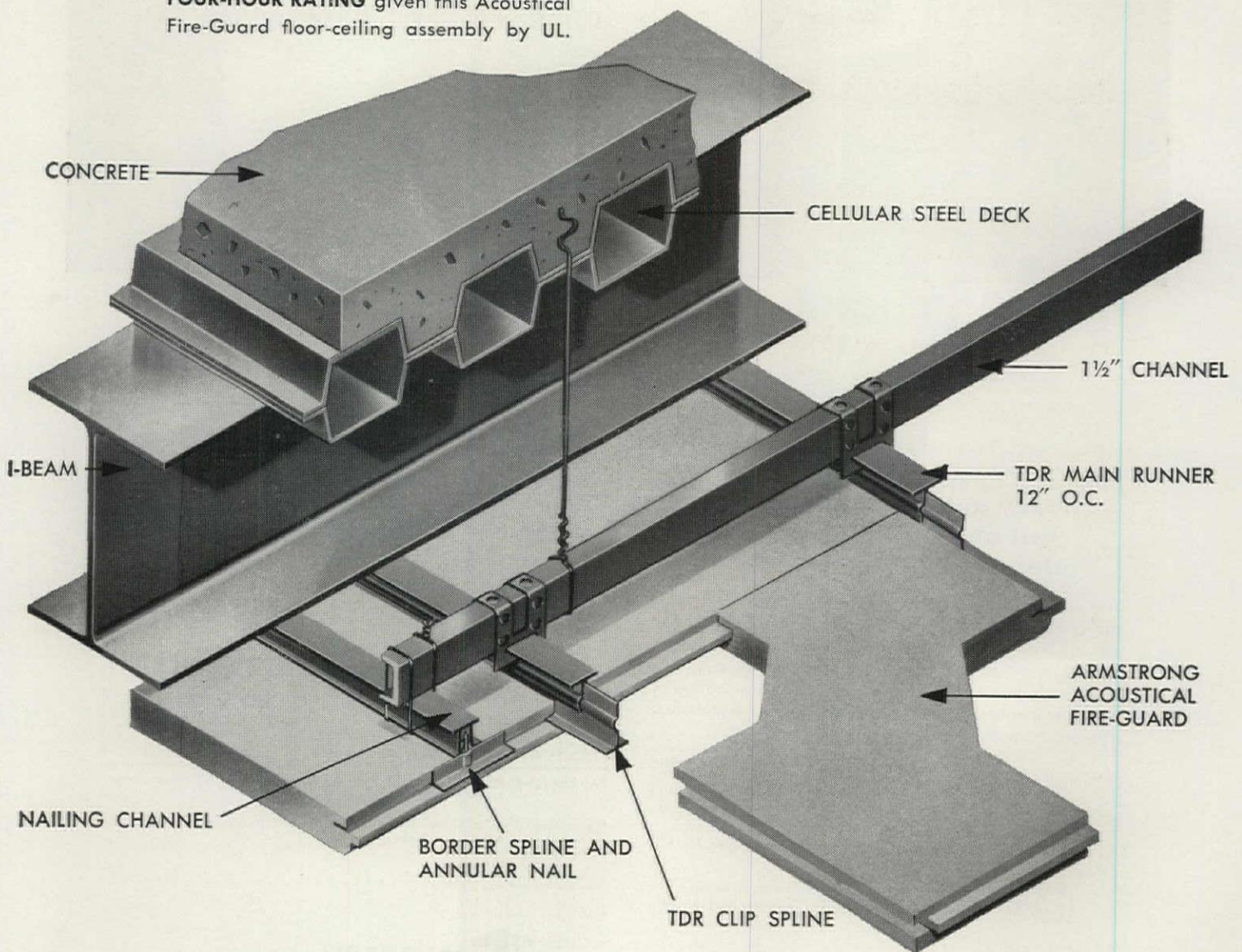
"A" 3 hr. label (650° F Rise) "B" 1 1/2 hr. label (650° F Rise) "C" 3/4 hr. label

*Dimension of vision lights: single doors 10" x 10". Double doors — 10" x 10" in active leaf, other leaf flush.

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Underwriters' Laboratories Report No. 4177-2

Underwriters' Laboratories, Inc., stated that this new ceiling assembly, utilizing Armstrong Acoustical Fire-Guard ceiling tile, "*will afford four-hour protection against the passage of flame or dangerous transmission of heat.*" It also reported that this system, when tested, protected the steel structural members for the full duration of the test, over five hours.

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Armstrong Acoustical Fire-Guard saves the expense of costly intermediate fire-stops. Previously it was necessary to (1) use reinforced concrete construction, (2) spray steel structural members with an insulating material, or (3) suspend a lath and plaster fire-stop ceiling to which the acoustical tile could be applied.

Saves construction time

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Armstrong Acoustical Fire-Guard can be specified in any of three attractive designs: Fissured, Classic, or Full Random.

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Armstrong ACOUSTICAL CEILINGS

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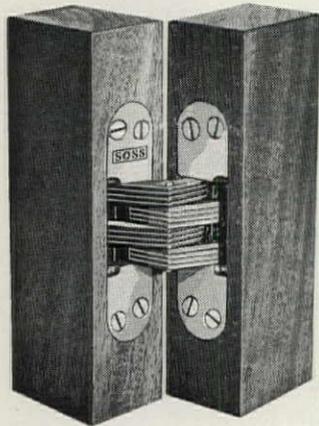
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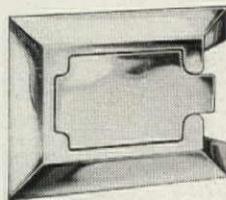
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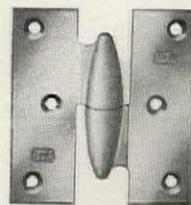
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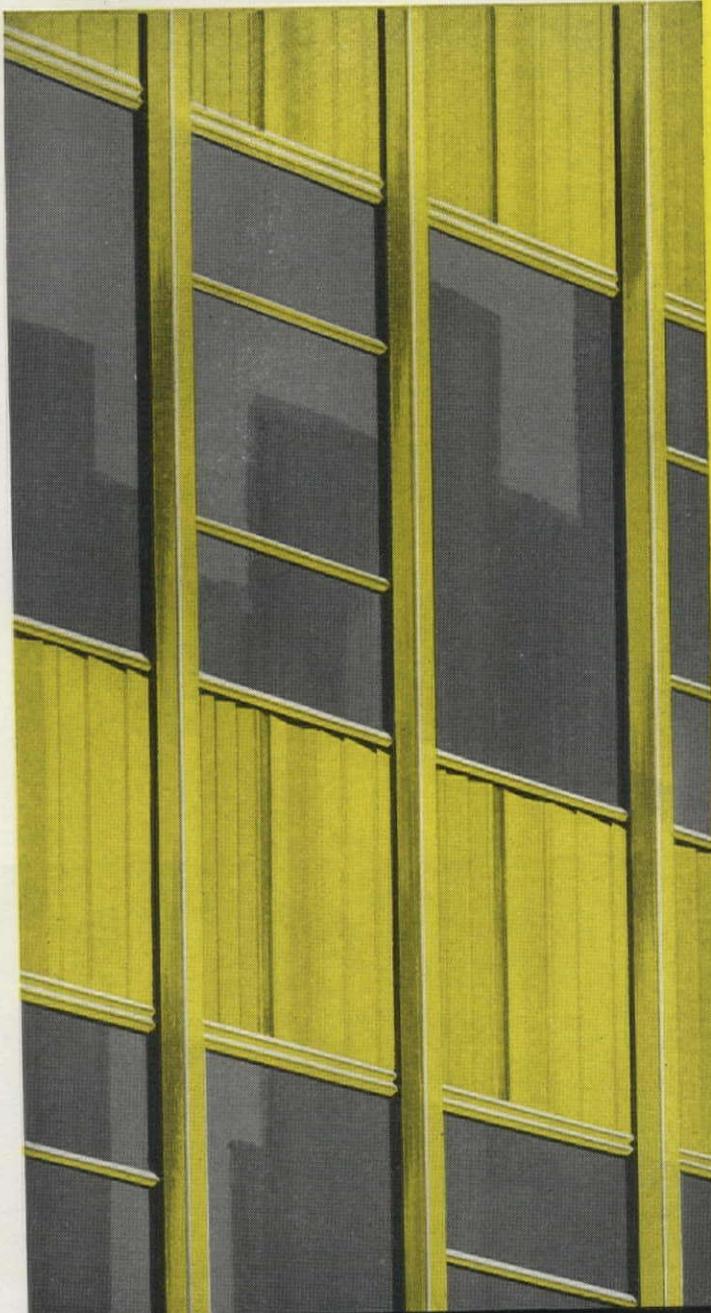
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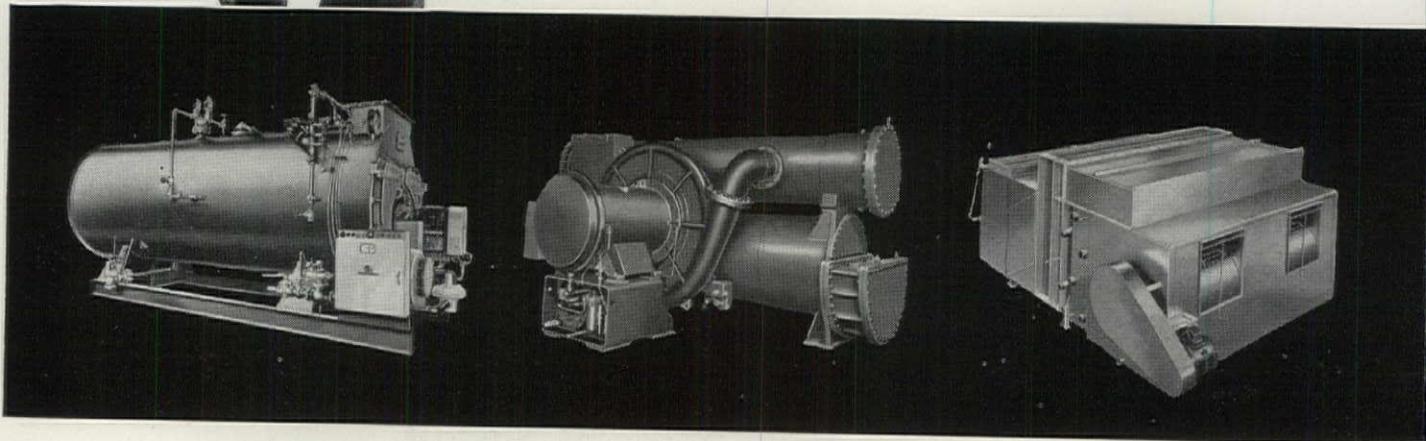
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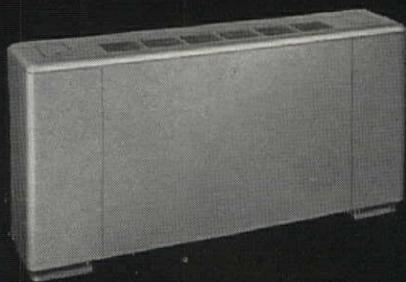


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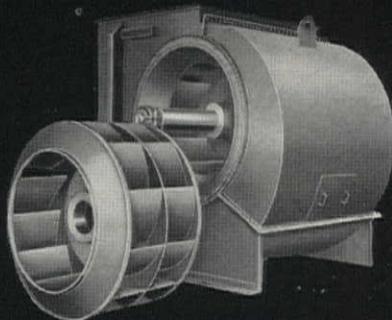
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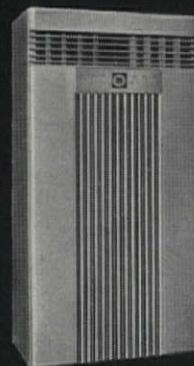
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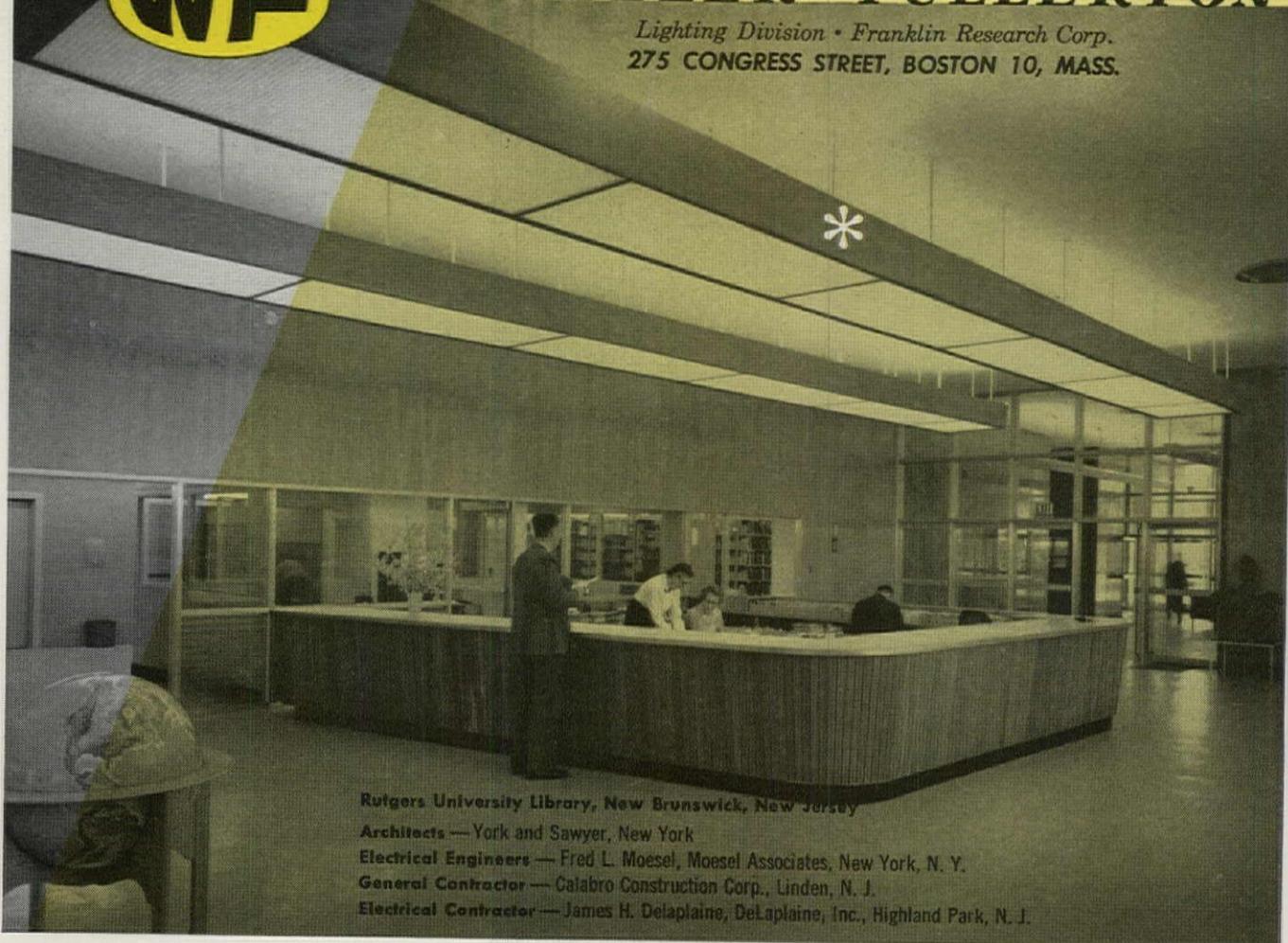
Two 45 ft. suspended units provide soft, diffused shadowless light of 60 footcandles over the main book desk. A similar 45 sq. ft. unit is used over main reading room. Tapered birch wood sides, mounted on extruded aluminum channel, blend with library panelling.

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Rutgers University Library, New Brunswick, New Jersey

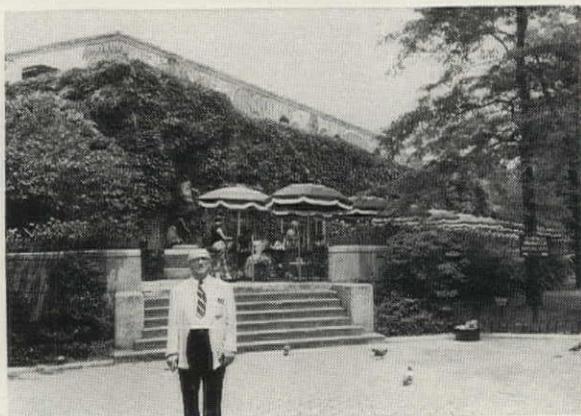
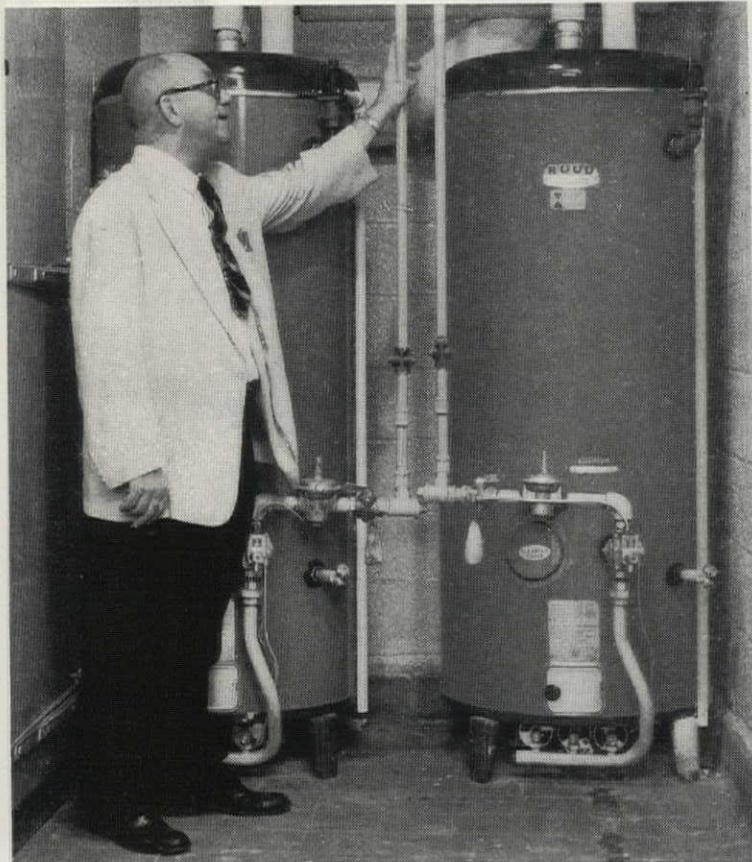
Architects — York and Sawyer, New York

Electrical Engineers — Fred L. Moesel, Moesel Associates, New York, N. Y.

General Contractor — Calabro Construction Corp., Linden, N. J.

Electrical Contractor — James H. DeLaplaine, DeLaplaine, Inc., Highland Park, N. J.

WATER HEATERS WITH ALCOA ALUMINUM MEET HEAVY DEMANDS AT CENTRAL PARK ZOO RESTAURANT



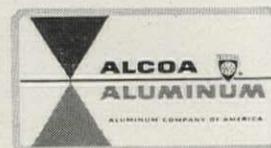
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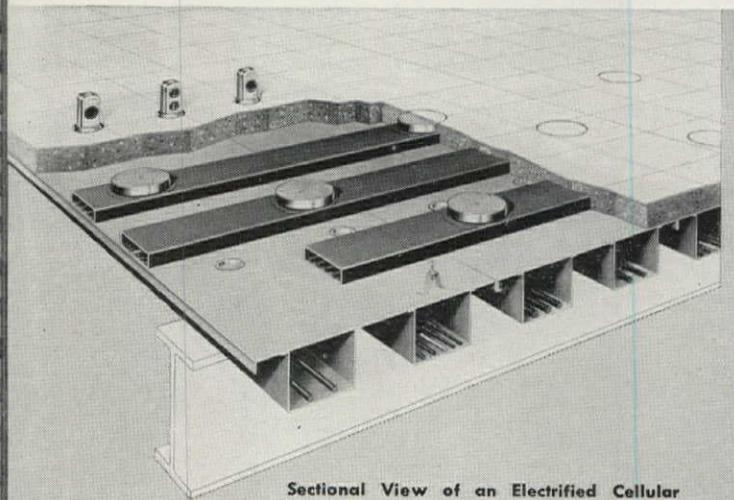
Holabird & Root & Burgee, Chicago, Illinois

Associate Architects:

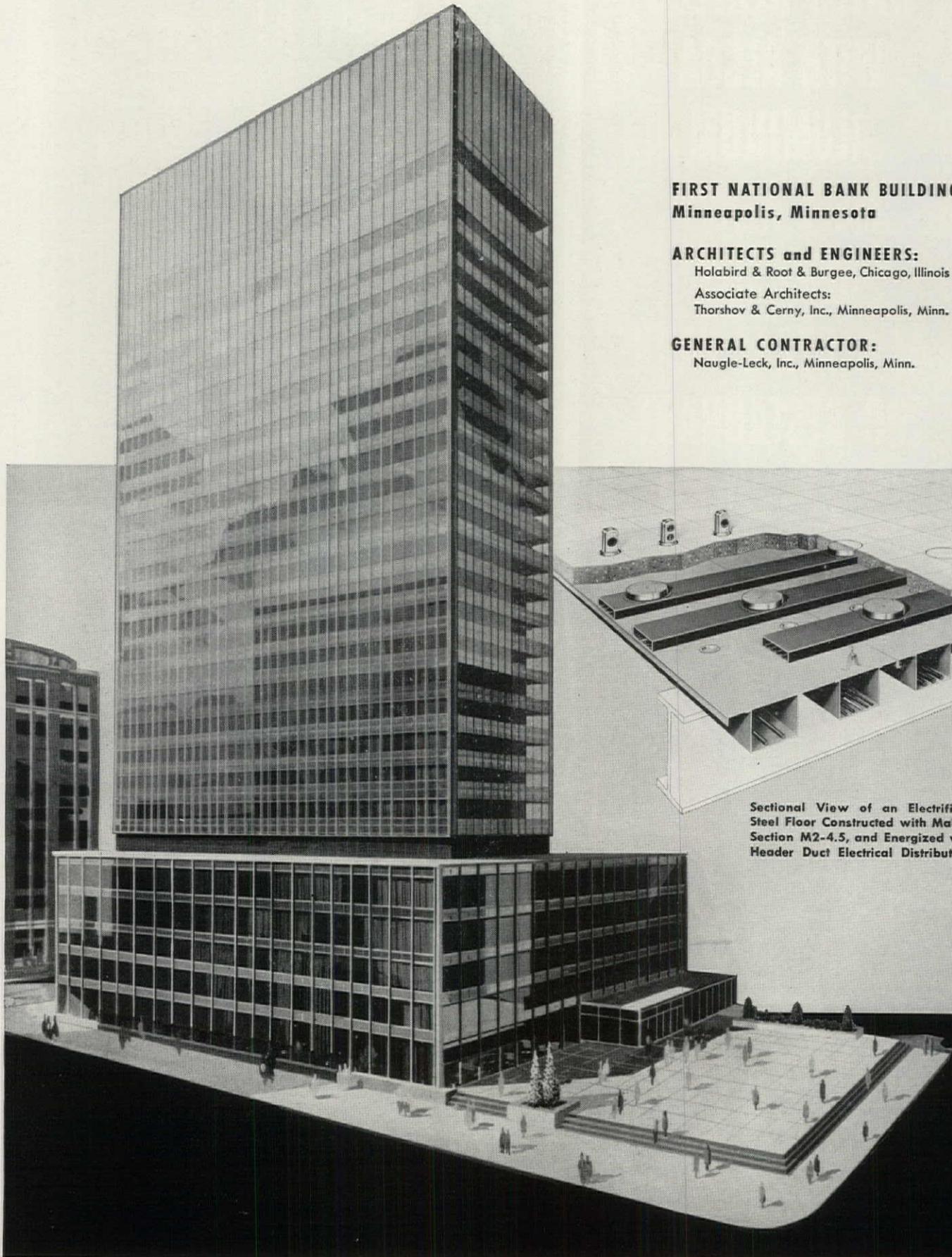
Thorshov & Cerny, Inc., Minneapolis, Minn.

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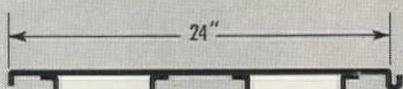
Sectional View of an Electrified Cellular Steel Floor Constructed with Mahon M-Floor Section M2-4.5, and Energized with a Three Header Duct Electrical Distribution System.



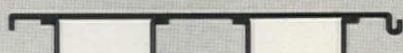
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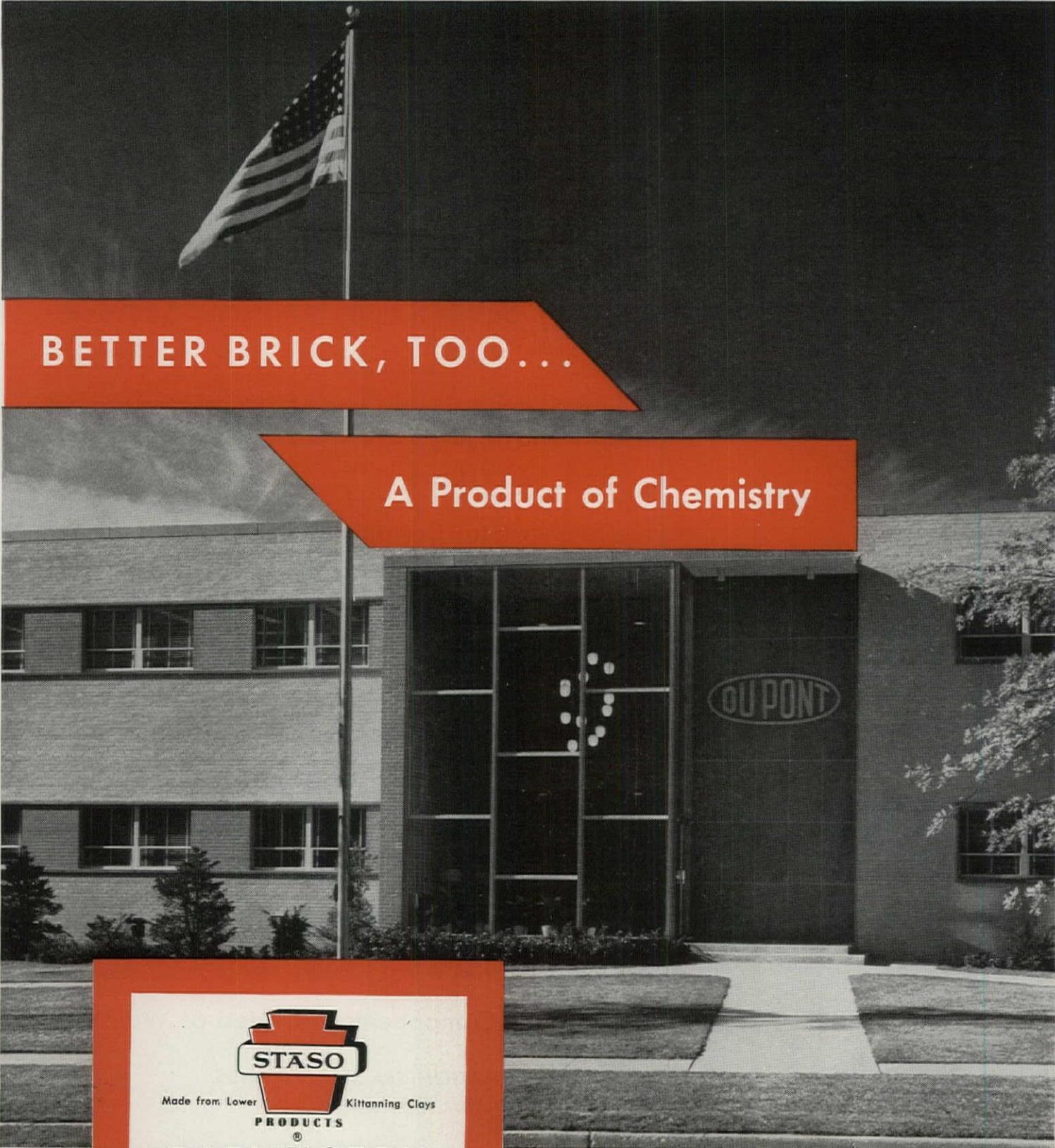
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Cities . . . churches . . . shadows

THE GOLDEN CITY. By Henry Hope Reed Jr. Published by Doubleday & Co., Garden City, N.Y. 160 pp. 7¼" x 10½". Illus. \$5.75.

Henry Hope Reed's attitude toward modern architecture has not changed—he still does not like it, any bit of it. His attitude recalls that of Hilaire Belloc's Henry King ("The chief defect of Henry King/Was chewing little bits of string . . ."); so much so, that review-in-verse was perhaps unavoidable.

The chief delight of Henry Reed
Is architecture gone to seed.
Ornate tradition, rich décor,
Not barrenness or "less is more."
In fact he wrote some prose which tried
To shove all modernists aside,
And substitute in their vile stead
Castles and temples to the dead.
Designers of the utmost fame
He damned alike and put to shame.
Corbu and Wright and Gropius, too,
Were nihilists and, hence, taboo.
"Gargoyles," cried Henry, "egg and dart,
Those are the elements of art!
Hooray for New York's City Hall,
A pox upon the curtain wall!"
Romanticists of every stripe
Joined him to curse the modern type
Of architecture—never caring
If what they damned was dull or daring.
The moderns, used to Henry's plaint,
Had thought his ire was growing faint,
When, suddenly, the more's the pity,
He starts afresh in *Golden City!*
And, far from literary death,
He summons up his potent breath
And cries: "My friends, be warned by me
That Athens, Florence and Páree
Are all the building frame requires . . ."
With that the simple book expires.



CITIES IN THE MOTOR AGE. By Wilfred Owen. Published by The Viking Press, 625 Madison Ave., New York 22, N.Y. 176 pp. 6½" x 9½". Illus. \$3.95.

The point of this book (based on last year's Hartford conference sponsored by Connecticut General Insurance Co.) is that our national dependence on the automobile has gotten the nation into a fairly desperate urban jam. The book's only real lack is any original contribution to the intellectual process of finding the way out of the jam.

A GUIDE TO CHURCH BUILDING AND FUND RAISING. By Martin Anderson. Published by Augsburg Publishing House, 425 S. 4th St., Minneapolis 15, Minn. 118 pp. 8½" x 11". Illus. \$5.

Although most of Dr. Anderson's well-defined suggestions will be very helpful to church boards, it seems regrettable that the "model churches" he selects offer the future builders such an ill-defined variety of choices—everything from pressed stone Gothic to SOM modern.



SHADOWS FROM INDIA, an Architectural Album. By Roderick Cameron. Published by British Book Centre, 122 E. 55th St., New York 22, N.Y. 213 pp. 8½" x 11". Illus. \$12.50.

One of the most remarkable structures pictured in this excellent collection of Indian architectural photography is the Yantra Samrat, a sixteenth-century observatory. The text is somewhat obscure in defining the uses of the observatory's sculptural shapes but the photos (above and left) are full of sun and shadow.

continued on page 194



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THE HUMAN SIDE OF URBAN RENEWAL. By Martin Millspaugh and Gurney Breckenfeld. Published by Fight-Blight, Inc., 32 South St., Baltimore 2, Md. 233 pp. 9" x 6". Illus. \$3.50.

This handsome paperback, written by two pros in the housing field, is a well-illustrated, carefully documented study of rehabilitation efforts at the neighborhood level in Baltimore, Miami, New Orleans, and Chicago. Although the study was financed by Fight-Blight, Inc., a Baltimore citizens group that has sparked that city's rehabilitation efforts, it is not a one-sided pitch for rehabilitation alone. In fact, it carefully outlines most of the reasons why rehabilitation has not proved wholly successful anywhere in the U.S. The basic reason is that rehabilitation cannot, by itself, hit at the chief causes of blight—particularly, it cannot diminish the attractive profit potentials of slums.

But rehabilitation has some sparkling credits, and the authors make the most of them by emphasizing the "human side." What makes this volume so remarkably readable is that it is couched in terms of human experience rather than in terms of how many shovelfuls of earth were pushed where or what theories of area planning were employed. It is a compendium of human foibles and frailties—prejudice, distrust of city officials and politicians, the avarice of slumlords, the helplessness of illiterate slum-dwellers. It also shows how neighbors are perhaps the most powerful code-enforcing rehabilitationists of all in areas where neighborhoods have been scraped clean of back-yard outhouses, pestilence, and crime. Particularly provocative is the experience of Baltimore, where citizen self-help has long been a landmark in the area of urban transformation.

While the authors acknowledge that creating and maintaining neighborhood groups to fight blight "takes a discouragingly long time" and the results so far are not conclusive, they present convincing evidence that "neighborhood solidarity—small-town unity inside a great metropolis—may prove to be the key to the rebirth of cities."

PSYCHIATRIC ARCHITECTURE. Edited by Charles E. Goshen, M.D.; editorial assistant, Elizabeth A. Keenan. Published by the American Psychiatric Assn., 1700 18th St., N.W., Washington, D.C. 156 pp. 8½" x 11". Illus.

Essentially a series of papers by doctors and architects about the problems of designing efficient, sympathetic facilities for the mentally ill, this slim book will be useful as background both in theory and practice. Included—with several pages of color pictures—is the report of a tour of inspection by Architect Alston G. Gutteresen of mental health facilities in Europe and Asia.

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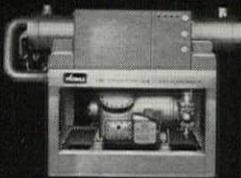
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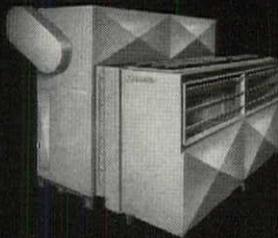
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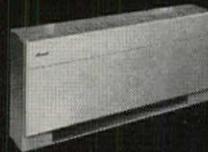
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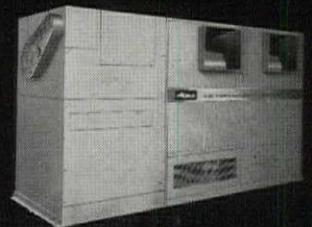
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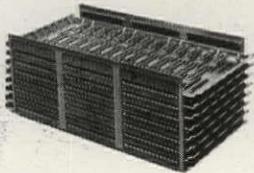
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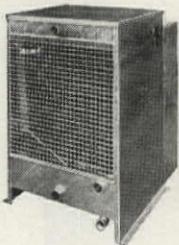


THE SECRET OF *Acme* TOWER EFFICIENCY



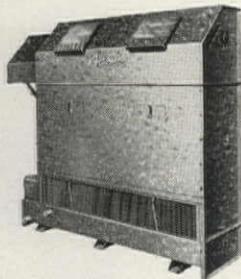
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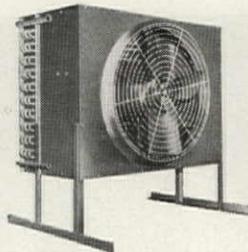
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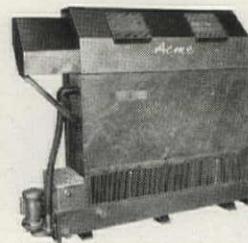
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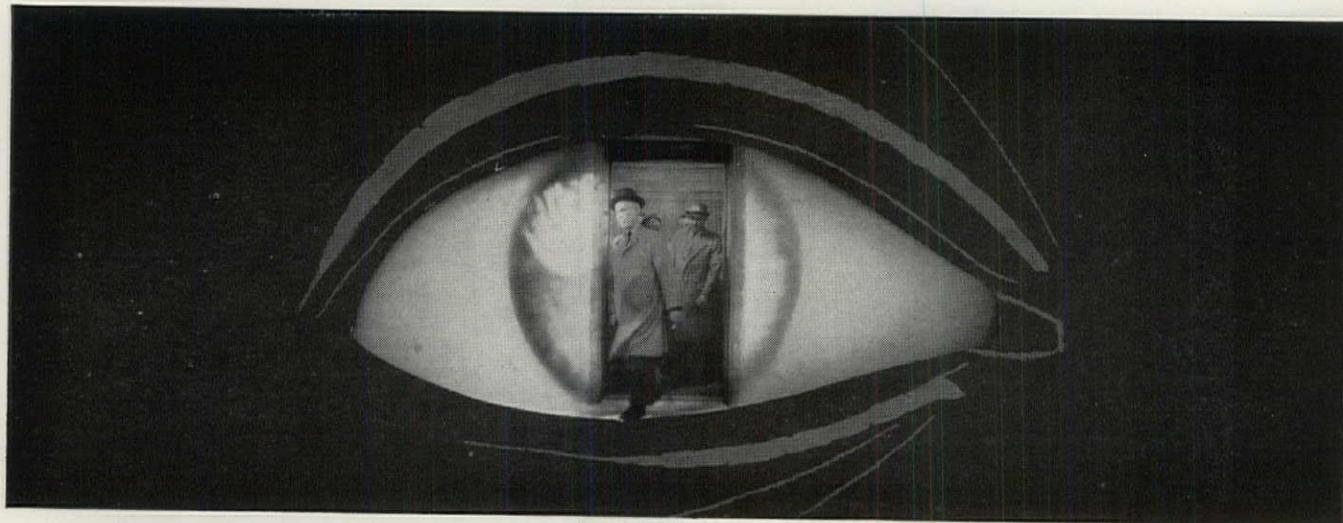
Make arrangements now to see the “30-Minute Pre-Investment Eye-Opener” by writing on your letterhead to: R. H. Wagner, General Manager, Westinghouse Elevator Division, 150 Pacific Avenue, Jersey City 5, New Jersey—or call the Westinghouse Elevator Division Sales Office in your city.

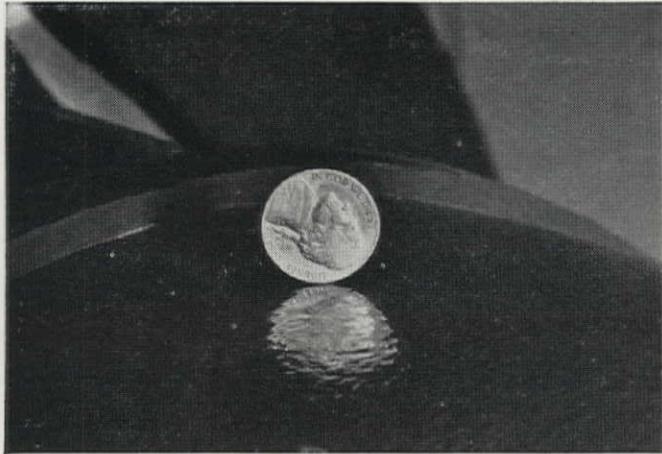
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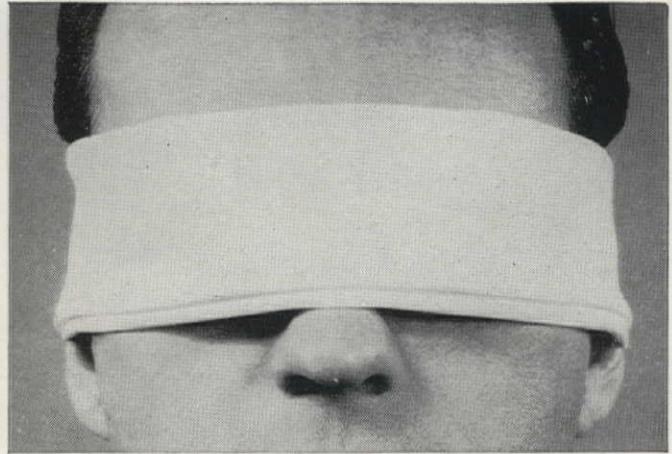
DOORS THAT SEE. You don't watch these Traffic Sentinel controlled doors—they watch *you*. Door movement is governed entirely by passenger traffic

and *not* by fixed time intervals. You'll learn *how* in the “Eye-Opener” demonstration on Operatorless Elevators.

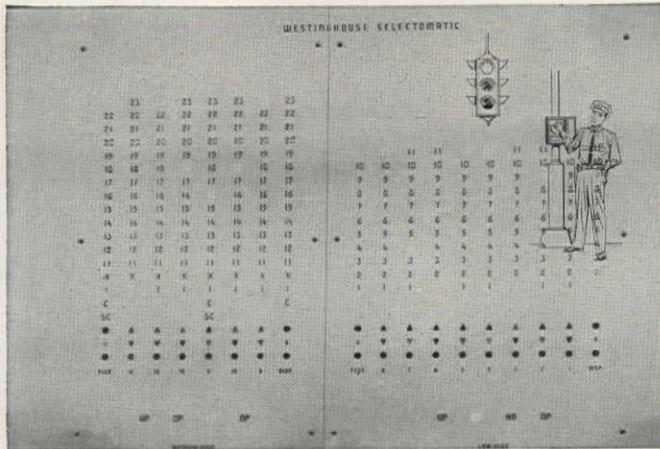




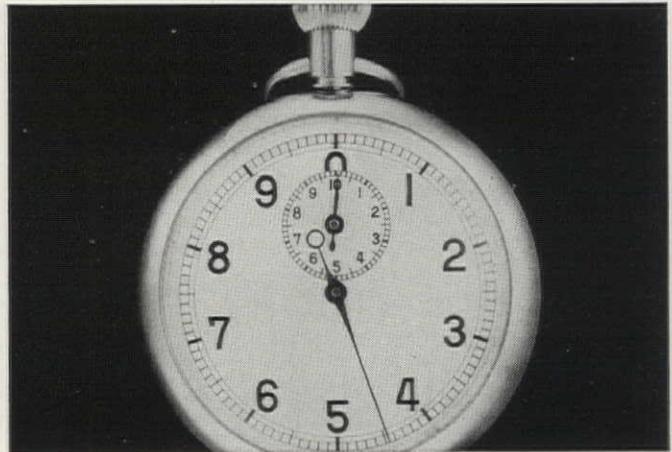
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**Norman Tishman, President
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The heavily corroded panel was not Bonderized; the virtually undamaged panel was. The panels were scratched and then subjected to the A.S.T.M. standard salt-spray test. In the finish over Bonderite, rust stopped at the scratch-mark — but it spread extensively over the other panel.

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Milcor steel roof deck



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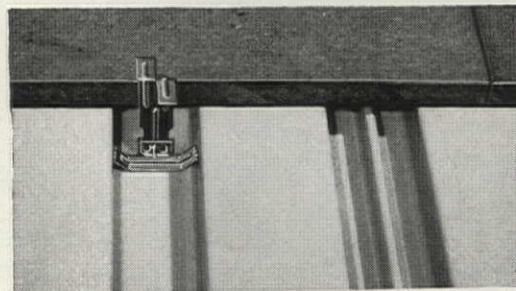
One field coat of paint on Milcor deck usually does the job of two coats on ordinary decks. As you know, a finished paint job can be no better than the prime coat.

See Sweet's, section 2f/INL — or write for catalog 240.

MILCOR® Steel Roof Deck

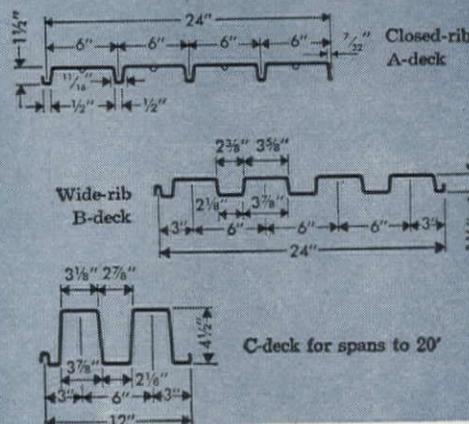
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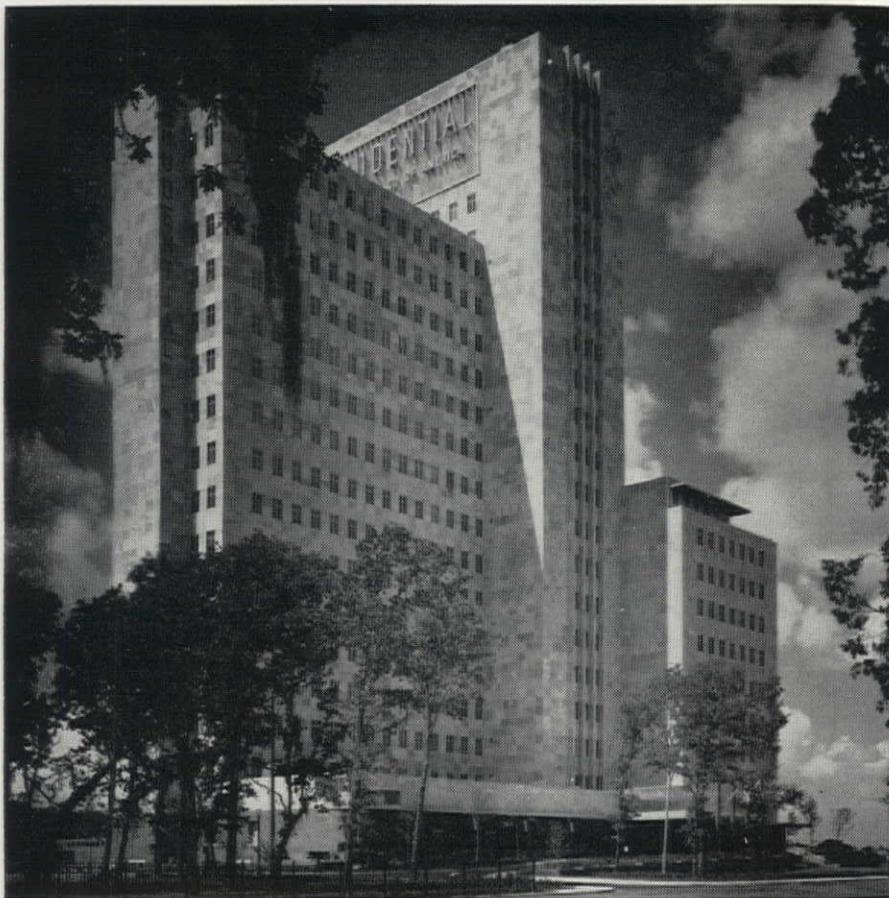
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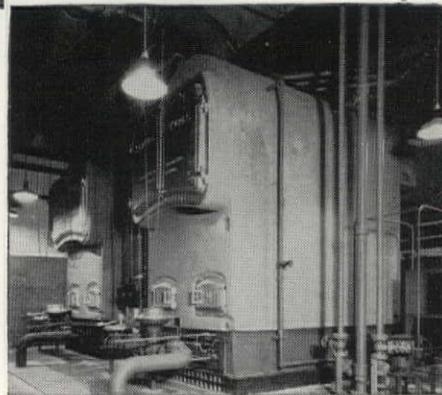
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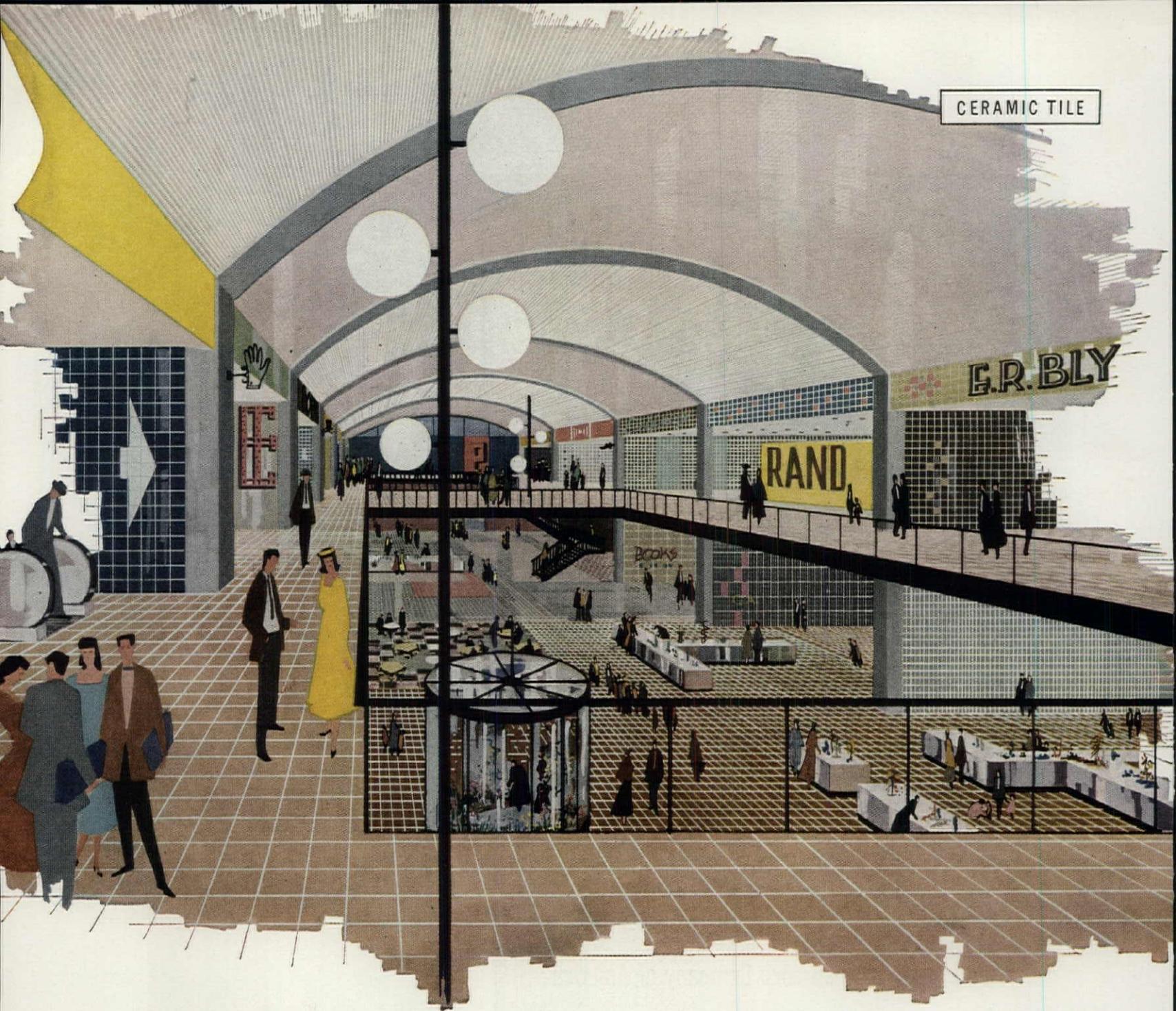
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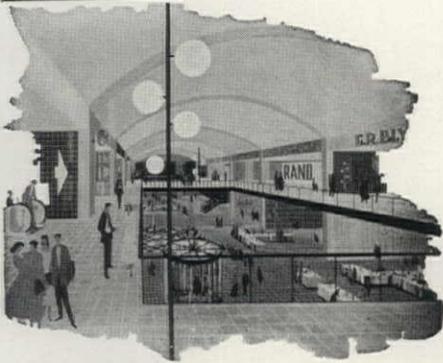
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What other people are saying

ARCHITECTURE OR IMITATION?

In commenting on the Museum of Modern Art's recent show, "Architecture and Imagery," Thomas B. Hess, executive editor of Art News, thought architecture was imitating modern art.

The point of the Museum of Modern Art's "Four Buildings" is that these new projects all resemble something other than the Modern Style. Wallace Harrison's church in Stamford, Conn., for example, from a distance resembles a bleached whale. Inside it resembles a Sainte-Chapelle built by and for Quasimodo (as interpreted by Charles Laughton). The Stamford church is cramped, warped, servile in feeling; and the only reason I can guess for its exhibition at the Museum of Modern Art is that Mr. Harrison is the favorite architect of the Rockefellers.

The other three exhibits here were judged from photographs and drawings and models. Guillaume Gillet's church at Royan (an old whaling station badly damaged during the war, at the estuary of the Gironde), has just been dedicated; Eero Saarinen's T.W.A. Terminal for Idlewild Airport, New York, and Jorn Utzon's Opera House for Sydney, Australia, are still in the model stage. In all three cases, the architect's intentions seem to have been to make the buildings resemble something other than modern architecture, resemble, in fact, modern art.

The results are awesomely cute. Saarinen's Terminal, by far the best work here, is split-domed and arc-ramped with folds and bays and little sculptural details that seem related to Futurism, but probably are based on less conceptual free-form sculptures. His models and photographs of models emphasize "abstract" appearances to suggest a "pure" art.

The church at Royan and the Sydney Opera House are presented with a heavier

emphasis on details, photographed to resemble modern sculpture—a pseudo-Zadkine here, a pseudo-Pevsner there—all very twenties. And there is the art-ploy of blowing up a tiny sketch—five or six soft lead-pencil lines—which is supposed to suggest the freedom of inspiration behind all the tons of concrete and steel that follow.

The Sydney project is roofed with white parabolic cusps. A member of the Museum of Modern Art's staff hopefully thinks that they resemble sails (the site is on the water), but they are more like a huddle of Danish porcelain penguin salt shakers. The Royan church tries for a bit of late-Romanesque pier-soaring; the ceiling is like the masonry equivalent of the tarp that bellies under a ceiling when it is being replastered.

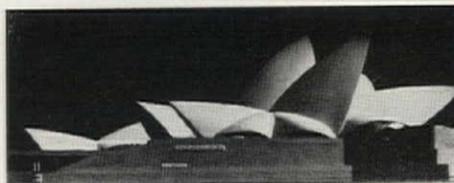
This kind of architecture attempts to resemble art, but in its misunderstanding of the pressures under which art is formed, it becomes the newest addition to the oldest kind of mannerism. One supposes that the Museum of Modern Art considers these to be examples of a "fresh" approach to building that might stimulate young architects. But, except for the Saarinen Terminal, these buildings represent a mode of artyness against which youth can only react by turning again to the old T-square.

CAN THE U.S. GET ART?

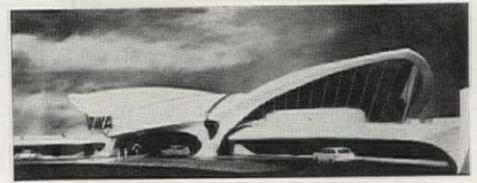
Architect Walter Gropius gave his views on the problems of art education in this country in a recent issue of the Saturday Evening Post.

How can a renaissance of the visual arts be achieved in a society almost exclusively devoted to commercial exploits and the

continued on page 210



UTZON'S OPERA HOUSE



SAARINEN'S TERMINAL



HARRISON'S CHURCH



GILLET'S CHURCH

PHOTOS: COURTESY MUSEUM OF MODERN ART, "ARCHITECTURE AND IMAGERY"; JOSEPH W. MOLITOR

accumulation of factual data? This may seem a strange question to ask in a country that fosters so many institutions designed to preserve art treasures and to encourage artistic activities. It is true that these institutions—the museums, art associations and foundations—perform a valuable service, but they can do no more than impart “art appreciation” to those who feel they can afford what they consider a luxury. They exert little influence on schools, where art is of secondary im-

portance to the study of English, history, and mathematics.

To accomplish a more creative learning, our educational system, with its over-emphasis on fact-finding, must cultivate attitudes which will integrate emotional experience with scientific and technical knowledge. The strong puritan bias in our national origin, mistrustful of emotional responses, has so influenced education that natural impulses have been inhibited and the artistic imagination cannot take wing.

We must overcome such prejudices, and broaden our educational approach to include the recognition of emotional impulses, controlling rather than suppressing them. The development of our imaginative faculties would then generate an atmosphere in which the artist could flourish, not as an isolated phenomenon, ignored or rejected by the crowd, but as an integral part of our public life.

We already let our children in kindergarten recreate their surroundings in imaginative play. This interest, in one form or another, should be intensified and perpetuated all the way through school and college. Practical design problems in form, color, and space relations should be studied and actual materials used for their representation. In such an educational concept I do not view book learning as an end in itself, but rather as a means to illuminate practical experience. It should become second nature for the student to adopt a constructive attitude toward the appearance of his own habitat so that in later life he may creatively participate in its development.

To reach this goal of sensitivity to environment, we must restore the influence of the artist. We must establish him in our industrial framework as a full-fledged member of the production team along with the engineer, the scientist, and the businessman. Only together can they combine low cost, good technique, and beautiful form in our products. Initiative in business must be balanced by initiative in cultural fields. To become fully mature a democracy must bestow the highest prestige upon the artist.

As long as our “cultural” elite insist that indiscriminating popular taste is beyond repair, that salvation lies in imposing upon an uncomprehending public an authoritative esthetic formula, they will sidestep the particular obligation of a democratic society—to work from the ground up instead of from the top down.

The dicta of the illuminati derive from an epoch when cultural matters were the concern of an elite who could enforce standards of taste, as well as of production. This cannot suffice in our present democratic system. A social organization that has conferred equal privileges on everybody must finally acknowledge its duty to prevent such privileges from being wasted through ignorance and unresponsiveness. This can be accomplished only by gradually raising the general level of perceptiveness and discrimination, not by handing our formulas from above. Esthetic creativeness cannot survive either as the privilege and occupation of an esoteric few or as an embellishing cloak thrown over the unlovely features of the contemporary scene. It should be a primary function of all, with a solid foundation in popular custom. Unity in diversity—the symbol of culture and its sublime manifestation.

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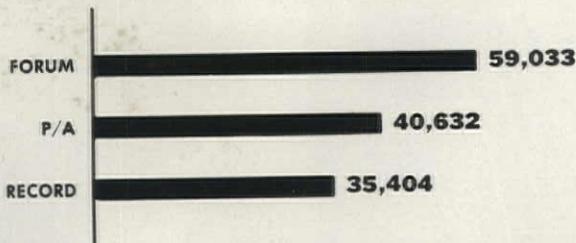
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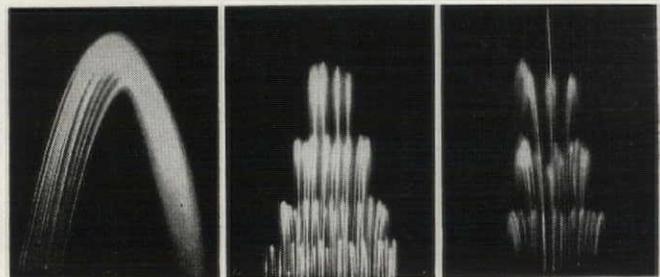
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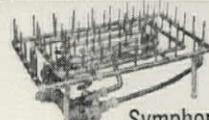
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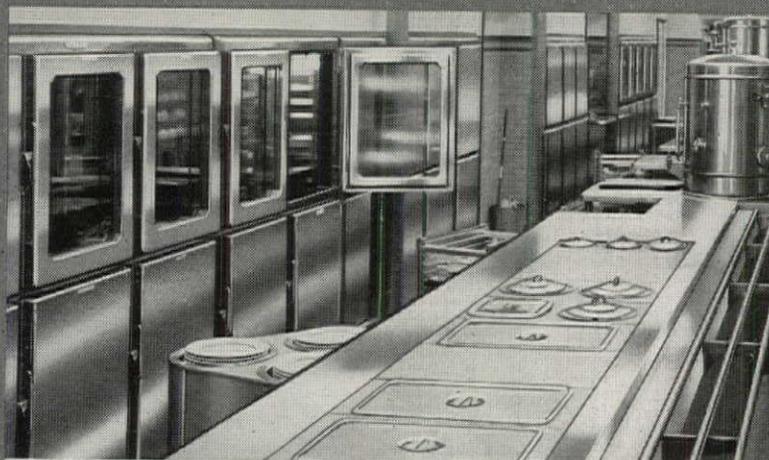
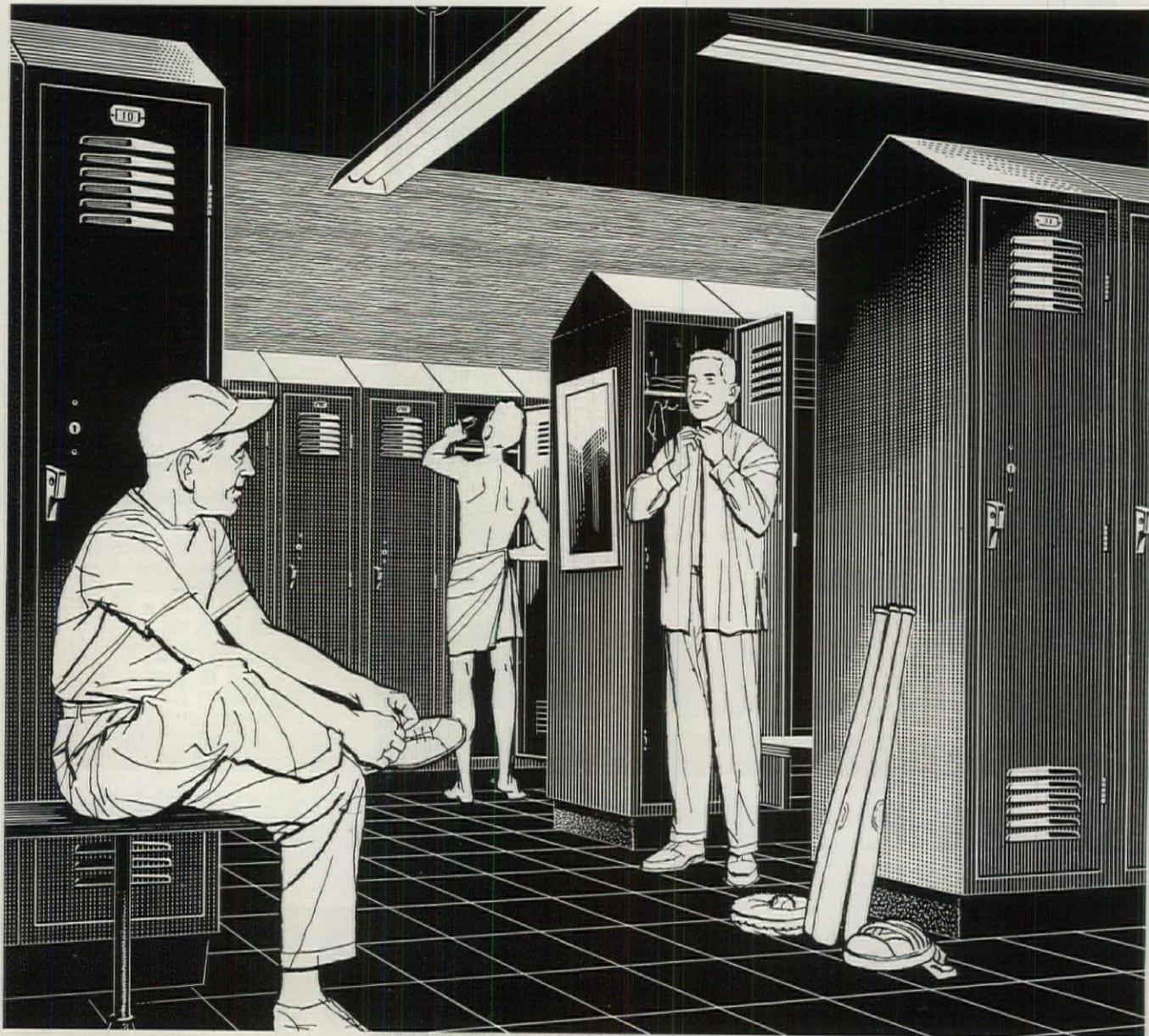
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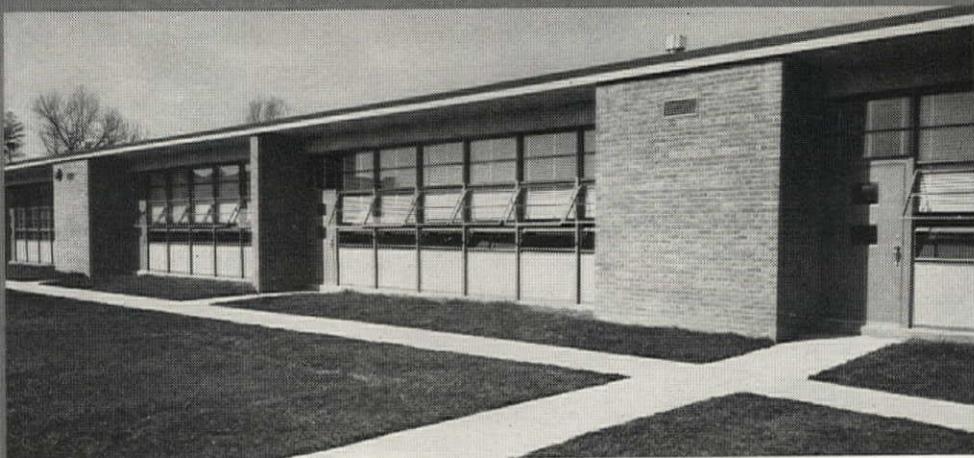
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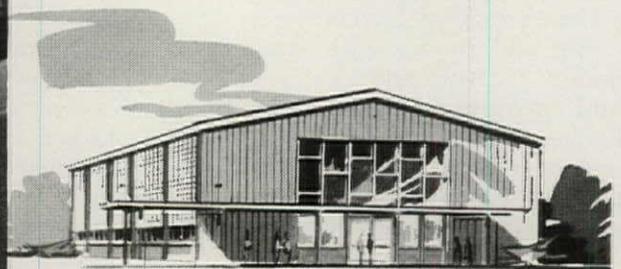
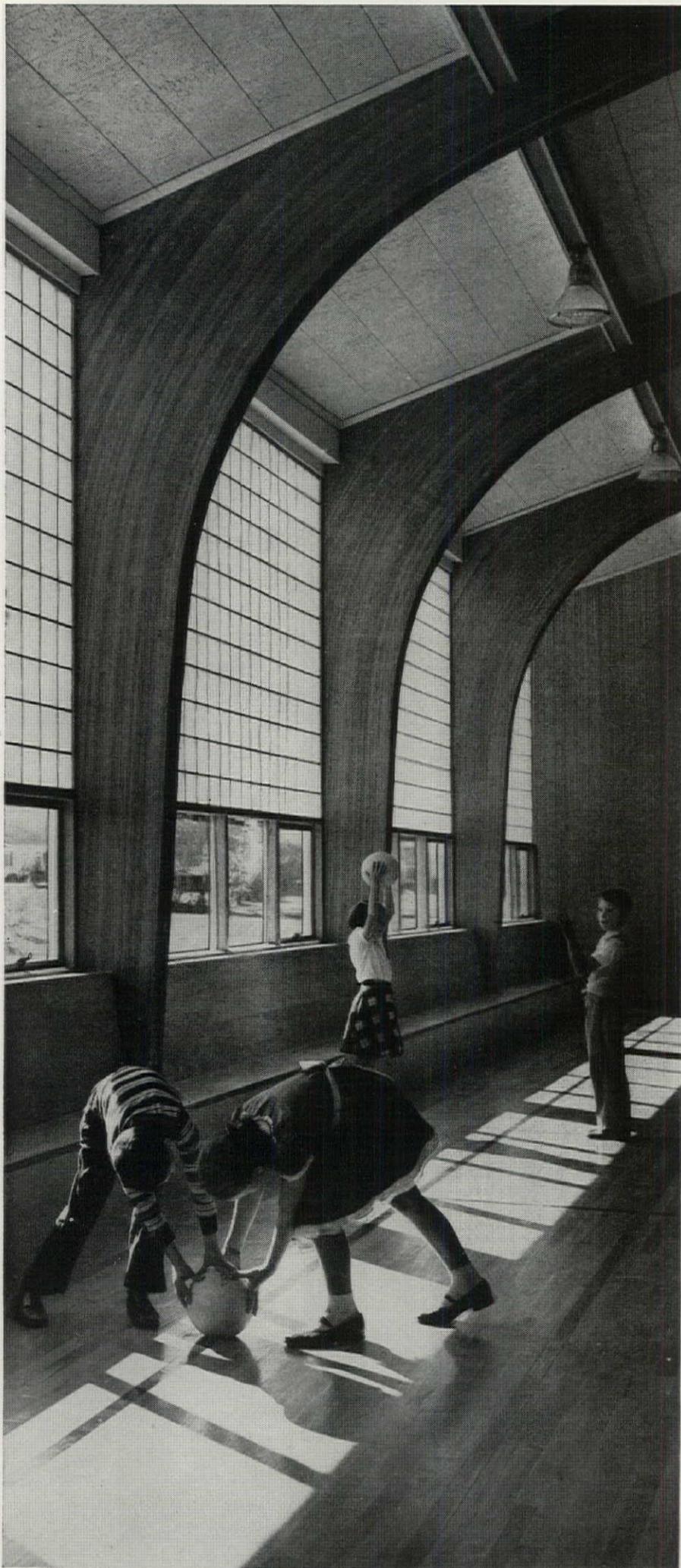
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World's Widest Range of Standard Steels and Steel Products





For freedom of design
the versatility
of WOOD

Rare is the architectural problem that cannot be solved by wood. By far the most versatile building material, wood responds to design requirements in almost *any* part of *any* structure . . . beams and built-ins, walls and windows, floors and doors.

Wherever you put wood to work, you rediscover its natural advantages . . . in strength and durability, in acoustical and insulating value, in beauty and variety of species and finishes.

For more data on designing with wood, write:
Wood Information Center

NATIONAL LUMBER MANUFACTURERS ASSOCIATION
1319 18th St., N.W., Washington 6, D. C.

nlma

Live, Work, Build Better with **wood**

Carrier announces new Fan-coil Room Weathermakers

for commercial, industrial and residential buildings

These new Carrier 36T Fan-coil Room Weathermakers* have been added to a line that was already the finest in the air conditioning field. Designed to work with a boiler-chiller source of heating and cooling, they operate independently to provide the exact indoor weather desired for each room year around—regardless of requirements in other rooms or outdoor climate.

Engineered for use both in new and old buildings, these new Carrier units may be readily adapted to a wide variety of installation conditions. Available in three styles for free standing or recessed applications. Each style in four basic sizes—200 cfm, 300 cfm, 400 cfm and 560 cfm. Left or right hand piping arrangements, with electrical connections always provided at the opposite end.

A new, illustrated 16-page catalog, 36T-73, gives capacity tables, cooling curves, heating curves and other essential data about these new Fan-coil Room Weathermakers. For your copy, call your nearest Carrier dealer. He's listed in the Yellow Pages of your Classified Telephone Directory. Remember, you can air condition any building the best way with Carrier. Carrier Corporation, Syracuse, New York.

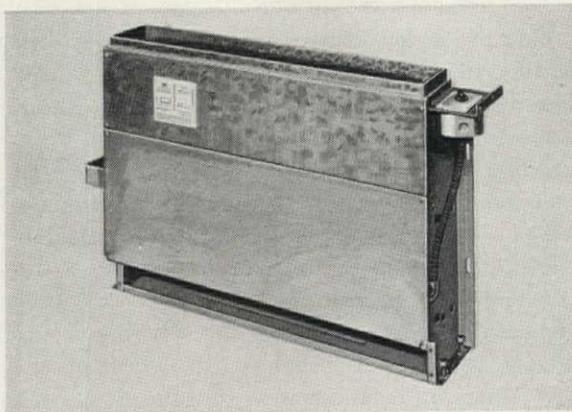
*Reg. U. S. Pat. Off.

MORE PROOF OF
BETTER AIR CONDITIONING FOR EVERYBODY



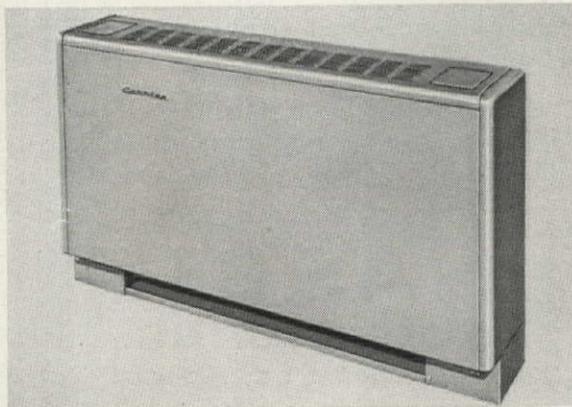
EVERYWHERE

Carrier



36T-204: Designed for flexible built-in applications, this style comes with the same variety of air damper options as cabinet style units. Can be supplied complete with standard control package options. Another model, 36T-304, is engineered for recirculating air operation only.

36T-104: Slim, attractive free-standing Weathermakers fit any room setting. Available for completely recirculating, 25% or 100% outside air operation, they feature a top discharge grille as standard equipment. An optional cabinet with front discharge grille may also be ordered.





*a new
point
of view*

WASCOLITE SHOWERWALL

This is more than a tub enclosure. It's the way to achieve a spacious look, add beauty, and reduce maintenance problems. Only Wascolite Showerwall does all this.

Showerwall panels are solid, cast acrylic—with embedded foliage and fine fabrics—truly luxurious. They are shatter-proof, draft-free, and easy to clean. Also available in Shower Doors. Write for full-color brochure showing the variety of patterns.



WASCO
PRODUCTS, INC.
5 BAY STATE ROAD
CAMBRIDGE 38, MASS.

In Canada: Wasco Products (Canada) Ltd., Toronto 15

people what you're talking about. Furthermore, I think the 'vision' will actually turn out to be, in hard dollars, a more practical thing than the obsolete city we are trying to shore up and squeeze our people into today.

"Consider the huge savings to local government if needs are properly projected and sites for schools, public buildings, parks, and highways are plotted and acquired well in advance of need, before land becomes highly developed and prices become prohibitive.

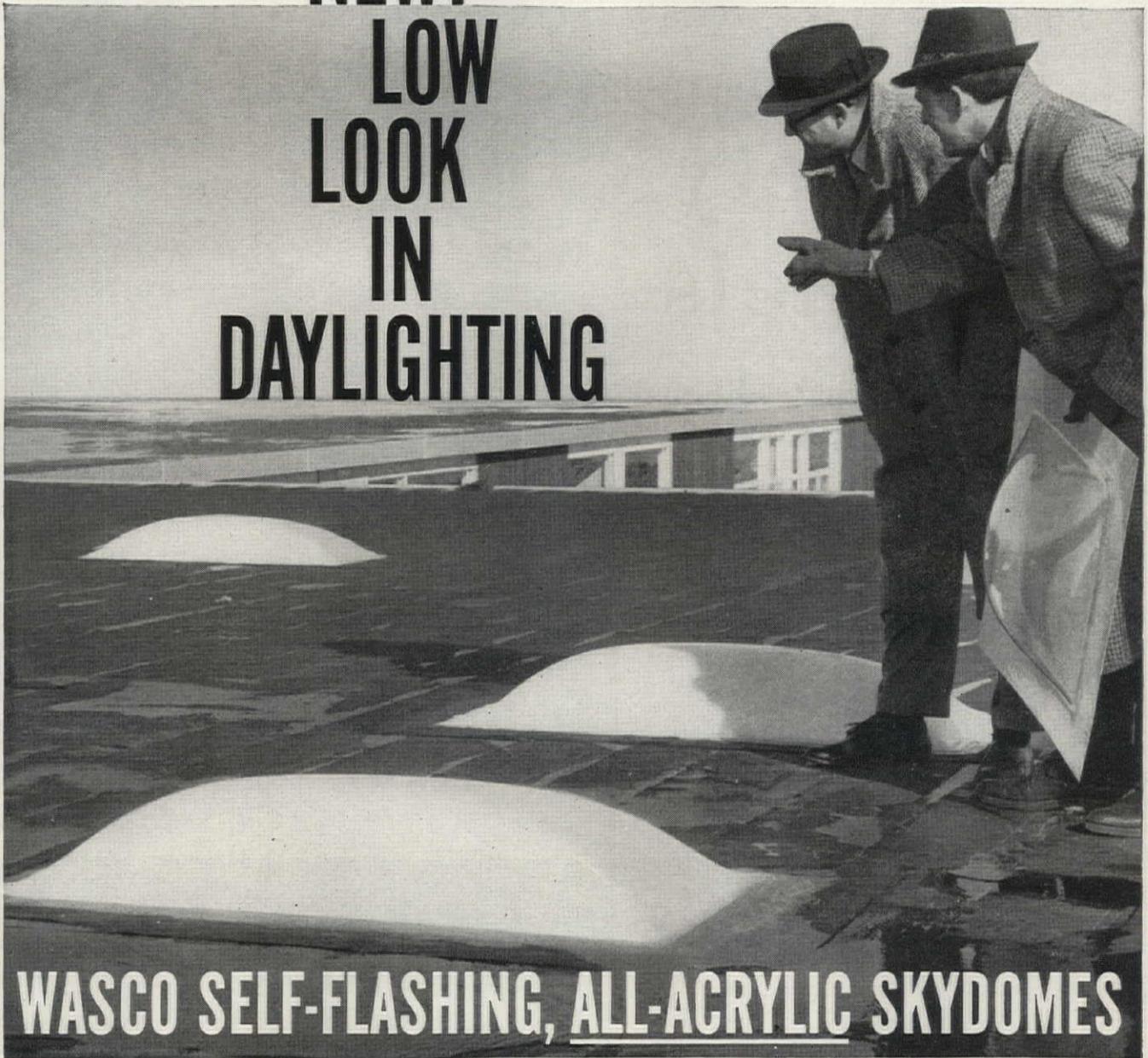
"Consider also the rise in revenues possible from improved areas. In Pittsburgh, for instance, city and private enterprise cleared a vast commercial slum downtown for their parklike Golden Triangle, did it without any government subsidy and, for every dollar lost in taxable property, gained more than three dollars in new assessments. In our 22-acre, \$127-million Charles Center project in downtown Baltimore [FORUM, June 1958] the city's investment of \$24 million will come back to it in increased tax revenues in less than 20 years. In Washington, we calculated that 11 blighted areas could be renewed for a public investment of \$200 million, with the Federal government paying two-thirds under Title I, and the city using its \$67 million share toward needed public improvements such as schools and parks. We found the total program would result in an increase of \$300 million in valuations, or \$7 million more a year in taxes. At this rate, Washington's share of the program could be amortized—and slums wiped out—in ten years!

"If cities would approach urban renewal in such total terms, lay out comprehensive programs and make full use of the powers available to them, I am sure that when they came to the end of the balance sheet they would find the arithmetic—not to mention the social gains—irresistible. This knowledge in itself would tremendously accelerate the demand for renewal.

"We have a few images of what parts of cities could look like, in the Golden Triangle and Charles Center and other projects and plans. But to overcome the depth of skepticism that exists about overall urban renewal, we need an over-all image of a city—two or three particular American cities of varying sizes and situations, with the problems studied and solved by teams of talented professionals, and the arithmetic thoroughly worked out. Then, with imagination, the total images of these renewed cities could be presented to the whole nation. Such a demonstration would probably cost \$3 million or so, but I know American business and government, not to mention the cities selected, would think it a cheap price to share. Furthermore, once they saw it, citizens would demand it in their own towns. They would see that it is extravagant and irresponsible to perpetuate disorder and decay. Once we knew of the Salk vaccine, we would no longer tolerate polio at any cost. If a cure for cancer came tomorrow, we would support it in a minute. What nobler cause could there be than to make our cities healthy, efficient, and beautiful places in which to live?"

END

NEW! LOW LOOK IN DAYLIGHTING



WASCO SELF-FLASHING, ALL-ACRYLIC SKYDOMES

New! Low silhouette

Wasco Self-Flashing Skydomes are shown installed on the partially completed roof of Natick, Mass. Jr. High School — designed by Boston architects Smith and Sellew. See how these units hug the roof, allow you to keep horizontal lines clean.

New! All-acrylic double dome

Acrylic lasts longer, weathers better, and is self-cleaning. Wasco Self-Flashing Skydomes are made by chemically welding the acrylic dome to a fiber-glass reinforced acrylic sheet.

New! Condensation eliminated

The factory-sealed double dome provides dead air insulation against heat losses and condensation. Tests show no condensation at temperatures as low as -20°F .

New! Low-cost installation

Wasco Self-Flashing Skydomes eliminate curbs. Reinforced flange can be nailed directly to roof. Then, roofing goes over flange, right up to the dome . . . positively sealing out wind and water.

Send for details, or see Sweet's Architectural File 20a/Wa.



WASCO
PRODUCTS, INC.

5 BAY STATE ROAD
CAMBRIDGE 38, MASS.

In Canada: Wasco Products (Canada) Ltd., Toronto 15

Build Life Safety into Motels

Cascade Inn Motel with traditional colonial motif of the old South depends on Automatic Sprinklers to protect Guest and Property.

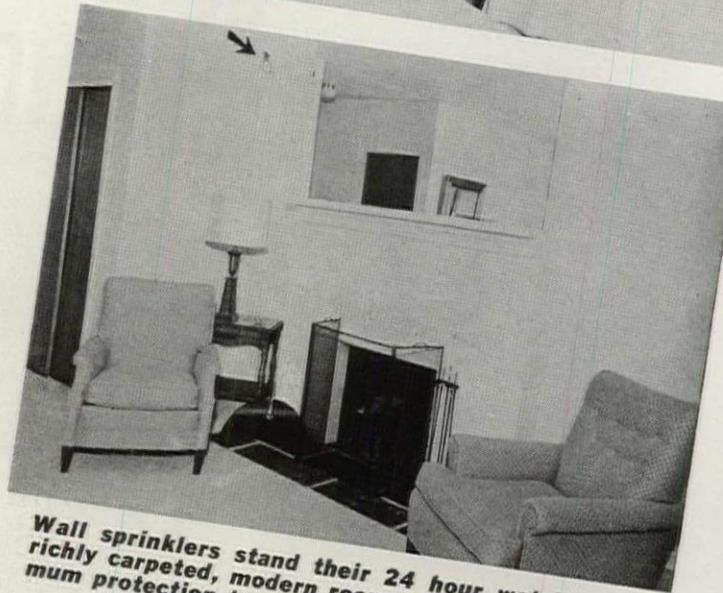
From covered wagons to convertibles, Americans have been a people in motion. The degree of motion can be estimated by the fabulous growth of the motel industry. Comfort, service and convenience characterize their salient design features.

Ultimate fire safety depends on immediate detection and automatic extinguishment of fire precisely *where* and *when* it occurs. Only automatic sprinklers meet this exacting demand, assure life safety, provide for uninterrupted business and actually result in reduced operational cost.

Dan Ingalls, President of the Virginia Hot Springs Company, Healing Springs, Va., a motel chain, tells how:

"My plans for sprinklering the Cascade Inn were not originally based on a consideration of what the savings might be. For over twenty years, we have had sprinkler protection throughout our hotel, our inn and our dormitories. . . I suppose I have come to think of an efficient sprinkler system as an absolute necessity regardless of the expense or saving that it may occasion. . . When I went to the figures, I was very happy to find that the saving was sufficient to justify the installation of the sprinklers without any other consideration. . . The sprinkler system will pay for itself in five years."

Fire safety, too, should be a first consideration in the planning of a new motel or in the renovation of an existing one. Architects are looking beyond the mere inclusion of fire-resistive material in their building specifications. These materials delay the effects of the fire. But experience teaches that they do not properly safeguard against severe damage or loss of life.



Wall sprinklers stand their 24 hour watch over richly carpeted, modern rooms and provide maximum protection to guests.



The Cascade Inn, Healing Springs, Virginia.

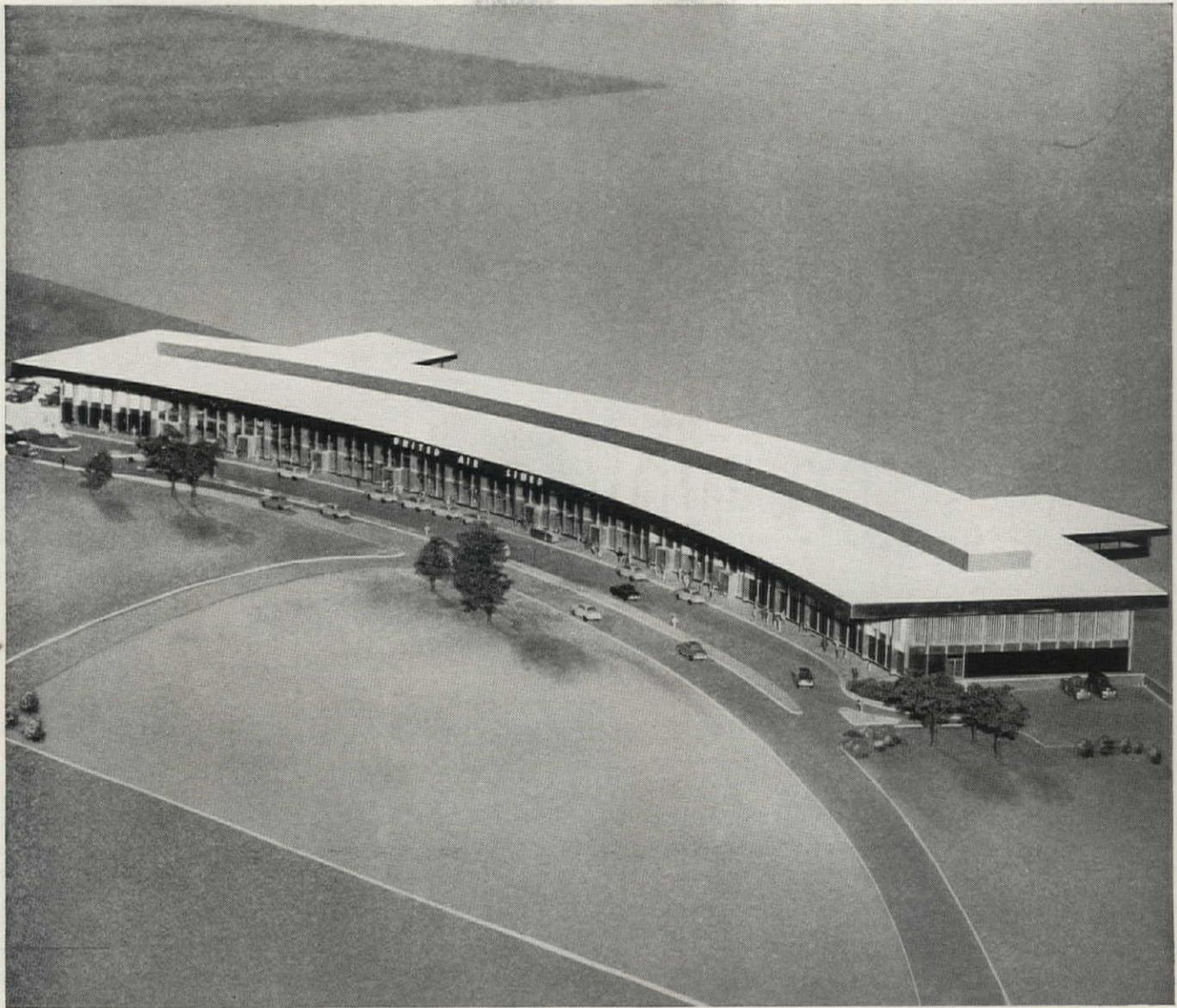
ANNUAL SAVINGS IN FIRE INSURANCE PREMIUMS \$1,346.96	COST OF SPRINKLER SYSTEM \$6,728.60	ANNUAL SAVINGS AFTER 5 YEARS \$1,346.96
---------------------------------------------------------	----------------------------------------	--------------------------------------------

For further particulars write to:

National Automatic Sprinkler and Fire Control Association, Inc.
60 EAST 42nd STREET

NEW YORK 17, NEW YORK

Murray Hill 2-8691



Owner: United Air Lines - General Contractors: Humphreys & Harding, Inc. - Architect: Skidmore, Owings & Merrill - Aluminum Materials: Kaiser Aluminum and Chemical Sales, Inc.

United Air Lines' \$10-million passenger terminal features Architectural Metals by North American

Architectural metals made by North American Aviation are a distinctive feature of the new United Air Lines Passenger Terminal at New York International Airport—modern as jet-age travel—which will be put into use in September of this year.

North American curtain wall encloses the two-level structure, which stretches 691 feet and covers 4½ acres of floor space. Concourses lead to 16 gate positions. A 25-foot overhang running the length of the building enhances the beauty of this terminal.

North American fabricated and erected the panels, mullions, fascias, and doors which enclose the exterior. The twenty-eight-foot column covers—manufactured in one piece from aluminum sheets 28 feet long and 77 inches

wide—represent a unique manufacturing accomplishment. North American also is making and will install the interior ornamental metal work, including decorative metal used on balcony railings, escalator enclosures, and columns.

North American Architectural Metals are custom-designed—yet they are economical, easy to erect, enduring. They are equally adaptable to simple one-story structures and towering landmarks.

When an architect specifies North American Architectural Metals, he is free to design a building that is functional, esthetically pleasing... and exciting. That's because North American's design and engineering department knows how to help him find practical solutions for any structural metal problems.

ARCHITECTURAL METALS

THE COLUMBUS DIVISION OF NORTH AMERICAN AVIATION, INC.
Columbus, Ohio



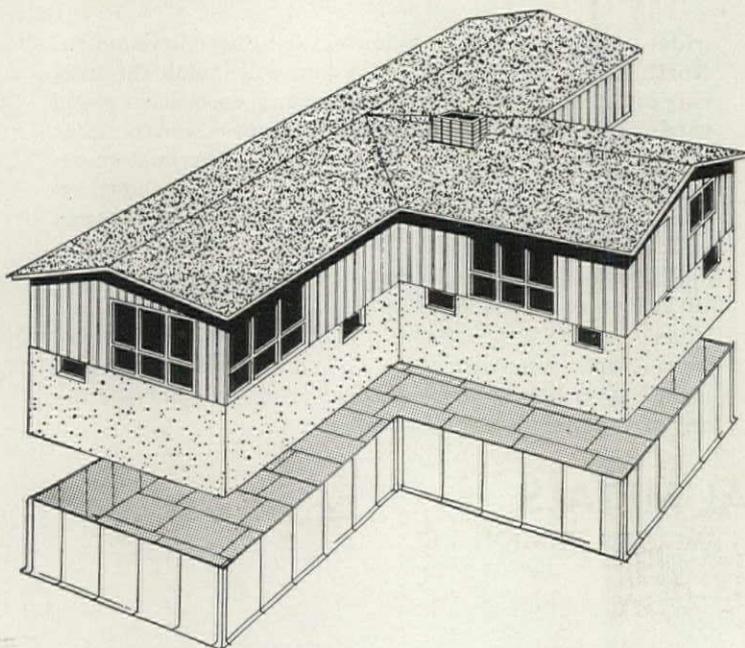
you wouldn't substitute this ... so why substitute it for

• COMPARE *PM* WITH ANY OTHER TYPE OF VAPOR SEAL ON THE MARKET!

COMPARE the permeance ratings . . . for on this point alone, "PREMOULDED MEMBRANE" stands head and shoulders above all other, so called, vapor barriers on the market. In fact, as you will see by the chart below "PREMOULDED MEMBRANE" is over 16 times more impermeable than the next ranking material.

MATERIAL	WATER VAPOR TRANSMISSION (in *Perms)	
	LOW	HIGH
Sealtight "PREMOULDED MEMBRANE"	.0066	.0066
Polyethylene Film (.004 in. thick)	.097	.108
55-pounds roll roofing	.030	.081
Duplex paper (coated both sides—reflectors material, reinforced)	.304	.347

*Perms—grains per square foot per hour per inch of mercury difference in vapor pressure at standard test condition.



COMPARE the strength . . . "PREMOULDED MEMBRANE" is strong enough to maintain its permeance rating after it has been subjected to the pouring of aggregate, trundling of wheelbarrows and installation foot traffic. Resists rupturing and tearing. How many other materials will perform like this under the above circumstances?

COMPARE the ease and speed of providing a permanent installation . . . "PM" may be laid directly over the tamped grade or fill . . . joints are then efficiently sealed with Sealtight Catalytic (non-setting) Asphalt, thereby providing a monolithic vapor seal with mechanically sealed joints, that will expand and contract with the concrete slab above without breaking the bond.

PM PROVIDES A WATERPROOF SHIELD THAT PERMANENTLY PROTECTS YOUR STRUCTURE FROM MOISTURE MIGRATION

Sealtight "Premoulded Membrane" provides a positive, permanent protection against the ravages of destructive moisture in all residential, commercial and institutional buildings. Ideal for all types of construction . . . for slab-on grade construction the installation of "PM" completely isolates slab from any moisture originating in the site . . . the installation of "PM" in Crawl-space construction removes all danger of moisture migration, condensation and oxidation of metal installations in the crawl-space area . . . eliminates need for ventilation . . . "PM" properly applied to the exterior of basement walls and beneath the floor slab insures a warm, dry, livable basement. Prevents any migration of vapor or capillary movement of free water.



for this

a TRUE vapor seal?



It is fortunate that within the last decade the building industry has recognized the need to install a vapor barrier between the site and structure . . . unfortunately, the building industry has been guilty of the promiscuous use of permeable materials under the guise of vapor barriers. It is a known fact that asphalt saturated felts and building papers, duplex papers and plastic films are all highly permeable and should not be considered as effective vapor barriers.

You do not use a polyethylene film to replace glass for many reasons . . . most important is the fact that it would not completely eliminate weather penetration and is easily ruptured. It is basically these very same reasons that make plastic films and other permeable materials unsuitable as a vapor barrier . . . and, even more important, unlike a win-

dow, a vapor seal is installed *permanently* . . . it cannot be replaced at a later date. A vapor seal must be impermeable, monolithic, without voids, open or lapped seams and strong enough to provide a permanent installation without rupturing under installation handling and foot traffic, the trundling of wheelbarrows and pouring of aggregate.

We sincerely advise and invite your comparison of "PM" against all other "so called" vapor barrier products on the market. "PM," the industry's only true, impermeable vapor seal, is actually the most economical available when you consider the reduced maintenance and redecorating costs realized through the complete elimination of moisture migration into the structure.

Premoulded Membrane . . . the industry's only TRUE vapor seal!
TRADEMARK

Write today for complete information . . . request your free copy of "Design Techniques"—a technical manual that provides in the architects and engineers own language factual proof of the effectiveness of using impermeable materials in eliminating moisture migration. For a complete set of structural recommendations on the applications and installation of "Premoulded Membrane," request a set of our "PM" Tech-Tips.

OTHER **SEALTIGHT** BUILDING PRODUCTS

- "CORKTITE" Impermeable Perimeter Insulation
- "SEALTIGHT" PVC Waterstops
- "HYDROMAT" Asphalt Liners
- JOINT SEALING COMPOUNDS
- EXPANSION JOINTS of all types including asphalt, fibre, cork, and sponge rubber
- ROOF COATINGS & CEMENT
- PLASTER BOND
- SILICONE WATERPROOFING

W. R. MEADOWS, INC.

6 KIMBALL STREET • ELGIN, ILLINOIS

Why the new Corning Glass building is weather-sealed with neoprene gaskets



Neoprene gasket with molded corners and U-shaped cross section is quickly installed on the site.



Glass light being lifted into place. Neoprene gasketed edges make lights easier, safer to handle.

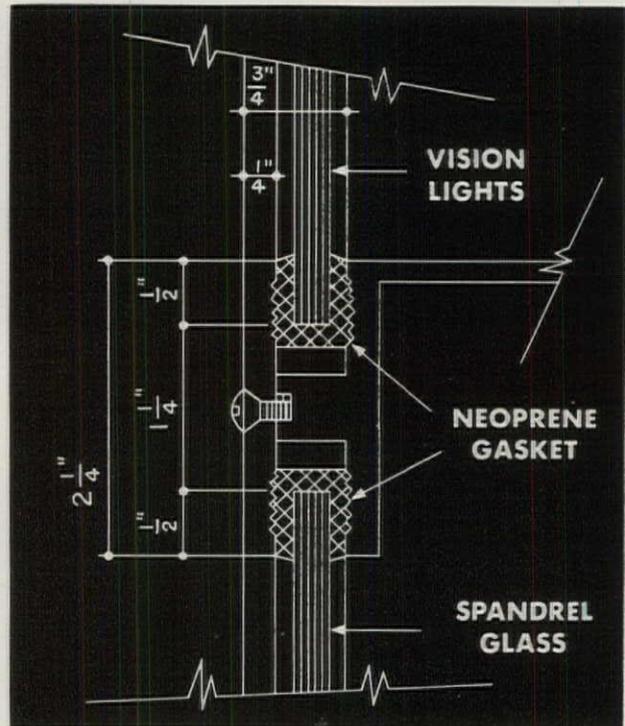
Three major reasons prompted the architects to specify neoprene for Corning Glass Works' New York City office:

First: Because neoprene maintains a lasting seal . . . keeps its elasticity . . . doesn't soften in hot weather or stiffen in cold weather. Too, neoprene remains an effective seal under wind load or movement from expansion or contraction. It resists compression set and weather cracking.

Second: Because neoprene, for over 20 years, has proved maintenance-free in other industries. Predictions are that properly designed and manufactured neoprene gaskets will last 50 or more years.

Third: Because neoprene pre-formed gaskets permit on-site economies . . . requiring no special cleaning . . . no specialized skills. Simple, quick to install.

For our new booklet, "Neoprene Gaskets for Curtain Walls," and/or names of suppliers, write: E. I. du Pont de Nemours & Co. (Inc.), Elastomer Chemicals Department AF-5, Wilmington 98, Delaware.



Better Things for Better Living . . . through Chemistry

SYNTHETIC

RUBBER

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VITON™
ADIPRENE®



"You mean you get both air and light from the same unit?"

"That's right. It's the new **MULTI-VENT TROFFER**. The air diffuser is completely concealed in the flush light fixture!"

There's more to the new **MULTI-VENT TROFFER** than meets the eye!

It combines a great advance in gently diffused, draft-free air conditioning, with modern, highly efficient lighting at a substantial savings in cost!

Complete concealment of the air diffuser within the handsome light fixture means freedom for the architect to design clean, uncluttered ceilings, greatly simplified mechanical planning for the engineer and . . . for the contractor . . . faster, easier field installation.

Write for detailed literature and the name of the representative in your area.

multi-vent

DIVISION OF
THE PYLE-NATIONAL COMPANY

1376 N. Kostner Avenue, Chicago 51, Illinois

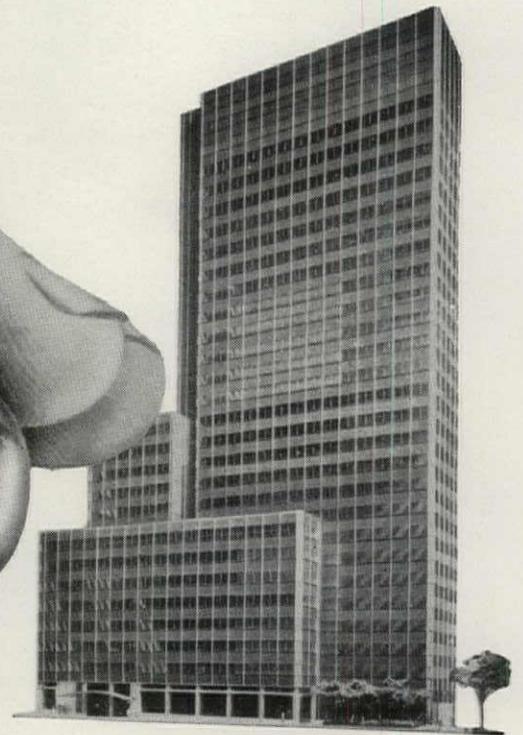
WHERE QUALITY IS TRADITIONAL

SALES AND ENGINEERING REPRESENTATIVES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

FIFTH AVENUE'S FIRST SKYSCRAPER OF GLASS IS



97-mile-long filament drawn from glass marble like this is basic source from which many Fiberglas products are made.

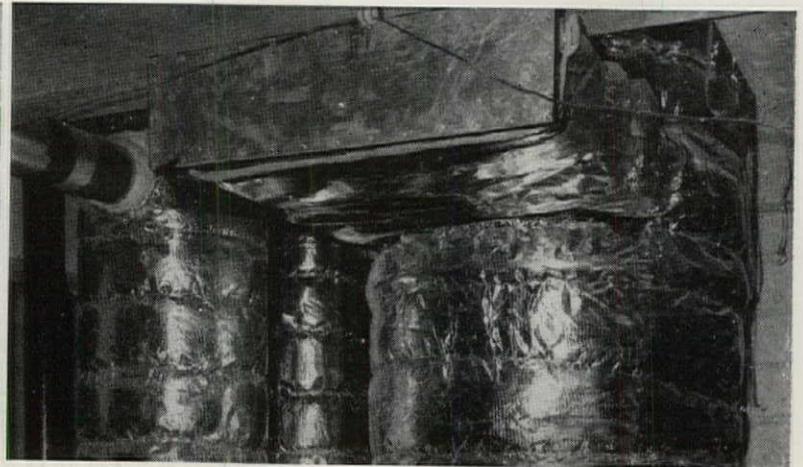


ARCHITECTS: HARRISON & ABRAMOVITZ & ABBE

New York's newest office building at the corner of Fifth Avenue and 56th Street will be a pleasant, efficient place in which to work and shop. It has been "comfort-conditioned" with scores of Fiberglas products—all from one amazing basic material. Here are some of those "comfort-conditioned" features.



The discomfort of direct and reflected glare is reduced with Fiberglas Polarizing Light Panels, which also conform to the established ceiling module. The Fiberglas Polarizing Light Panel combines the two most sought-after properties in lighting control—cutting off direct glare like a lens or louver . . . and reducing reflected glare like a diffuser. The textured appearance of Fiberglas Polarizing Light Panels provides interesting, decorative effects which are architecturally neutral.



Tenants are supplied clean cool air at economical cost through the use of Fiberglas flexible insulation blanket on cooling ducts and pipes (photo taken during construction). The reinforced foil facing is factory-applied as a vapor barrier to avoid the problem of condensation which can occur with uninsulated ducts. Another type of flexible duct liner used in the building to keep air cool in transit and quiet the noise of air passing through the ducts is neoprene-coated and applied to the duct at the factory.

"COMFORT-CONDITIONED" WITH FIBERGLAS* PRODUCTS

Noise and clatter is reduced and working comfort assured at 717 Fifth Avenue by sound conditioning with Fiberglas Acoustical Tile. The standard tile used was Sonofaced*, whose nominal dimensions fit a 12" x 24" module throughout. This module accommodates lighting fixtures and the Sonofaced tile can be lifted to provide easy access to services above the ceiling. For variety of color and textures, Fiberglas Frescor* and Stria* tiles were used in other areas. Here Sonofaced (left) and Stria (right) are being installed. Above the Stria tile is foil-enclosed Fiberglas blanket insulation, used as a barrier to the sound of air movement in the heating/cooling plenum above. This use was recommended by acoustical consultants Bolt, Beranek and Newman.

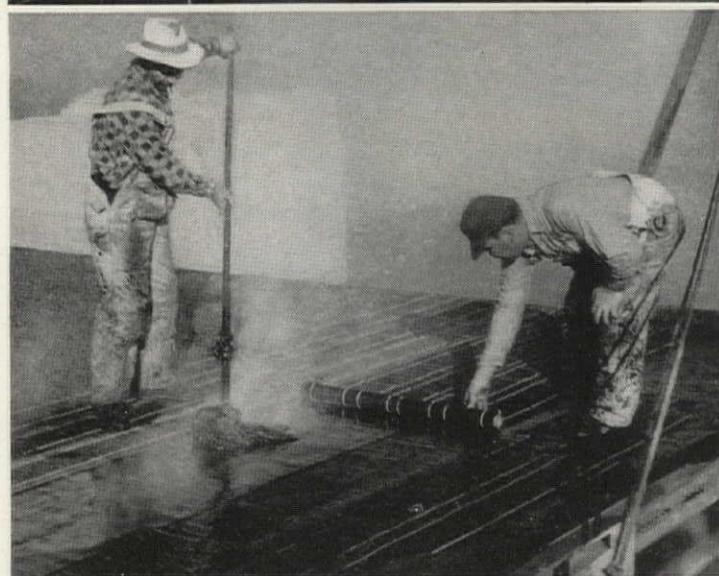


Within the walls of the skyscraper of glass are more than six miles of curtains and draperies of Fiberglas Fenestration Fabric. The treatment of windows with an off-white bouclé fabric represents the first use in a major New York office building of fabric as an architectural concept as well as for decorative effect. Fiberglas Fenestration Fabric was selected by the building's architects to give a continuity of appearance to the exterior skin and to eliminate the disorderly effect often produced by Venetian blinds arranged in many varying heights. The Fiberglas fabric also serves as a comfort device to help reduce glare and, when drawn, to shield against sun or cold! Its famous translucence prevents any shut-in feeling. In addition to these fabrics, washable, wrinkle-free, no-iron Fiberglas draperies are used in windows purely for colorful, decorative effect.



The New Fiberglas Fabric Center on the ground floor displays some 5,000 samples of fabulous new Fiberglas drapery fabrics.

The skyscraper of glass is "comfort-conditioned" against the weather with a Reinforced Monolithic Built-Up Roof of Fiberglas Perma Ply*. With porous Fiberglas Perma Ply, successive applications of hot asphalt penetrate the Fiberglas mat and are bonded together into monolithic reinforced, long-lasting roofs. Reinforcement helps prevent surface cracks and alligating. A porous Fiberglas mat does not rot, char, or wick and does not trap air or moisture to cause blisters. And a 3-ply Fiberglas roof gives the same protection as an ordinary 4-ply felt roof.



OTHER FIBERGLAS PRODUCTS USED TO "COMFORT-CONDITION" 717 FIFTH AVE.: SPANDREL INSULATION • STANDARD INSULATION BOARD • MOLDED DUCT AND PIPE INSULATIONS • REINFORCED FURNITURE AND DECORATIVE PANELS • REINFORCED WALL COVERINGS • WIRE AND CABLE INSULATIONS • KITCHEN APPLIANCE INSULATION • KAYLO* DOORS.

OWENS-CORNING FIBERGLAS CORPORATION, DEPARTMENT 65-E, TOLEDO 1, OHIO



*T.M. (Reg. U.S. Pat. Off.) O-C-F. Corp.

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Latest A. C. I. Building Code

Bring your reference library up to date. Replace your earlier (1952) edition of the CRSI Design Handbook. Completely revised in 1957, this valuable tool will provide you more Reinforced Concrete Designs, all worked out to the latest A.C.I. Building Code. Here is a technical publication of immeasurable value, which the Concrete Reinforcing Steel Institute is making available to architects and engineers for only \$6.00 a copy. Send check or money order for your copy, today.

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economy

BTU for BTU, Reznor gas unit heaters cost much less than most other types of heating equipment. Installation offers additional savings . . . it requires only suspension, gas and electrical connections, and simple venting. And Reznor suspended units help you hold down total cost per usable square foot . . . because they occupy absolutely no valuable floor space.

ECONOMY makes these completely-automatic packaged units the ideal way to heat a wide variety of commercial and industrial buildings. Ask your Reznor distributor for the complete story or write for your free copy of "Modern Heating"



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Architectural Forum/the magazine of building/Published by TIME INC.

an exciting new use for magnificent marble

VERMARCO MARBLE PANEL-WALLS

VERMARCO PANEL-WALL units are low cost, preassembled, encased in extruded aluminum frames. The wall is composed of a layer of half-inch thick marble, bonded to a core of insulation, with interior face of asbestos-cement board.

The marble (exterior face) has improved exterior finish to enhance color and withstand weathering. The asbestos-cement board (interior face) may be painted or covered with a variety of other materials to produce attractive interiors.

Panels, when joined, are automatically weather and moisture sealed by means of a tongue and groove system with built-in vinyl weatherstop and expansion seal that *eliminates the need for additional framing or caulking.*

VERMARCO PANEL-WALLS are adaptable to a variety of curtain wall systems. They are available in three types: *Series 100—Flush-Mount Panel; Series 200—Grid-Wall Panel; Series 300—Window-Wall Panel.*



Flush-Mount Panel Detail

Complete information with specification details and costs available now. Write:

VERMONT
P R O C T O R



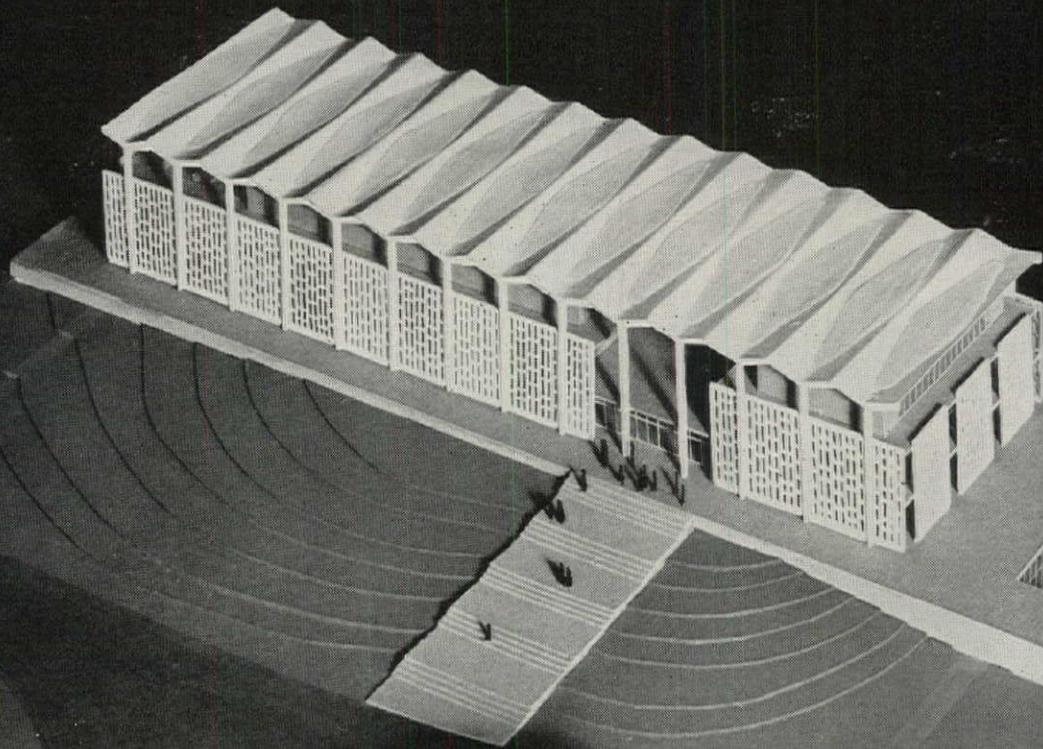
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PAVILION OF BEAUTY...

The first unit of the new Memphis Academy of Arts rises majestically in the city's Overton Park. This impressive structure will be the pride of Memphis residents for generations.

KEYWALL masonry reinforcement is protecting the beauty of this Fine Arts Center. It's adding greater crack resistance and increased strength to outside and partition



BUILT TO LAST WITH

KEYWALL

Galvanized Masonry Joint Reinforcement



walls, as well as the retaining wall at the base.

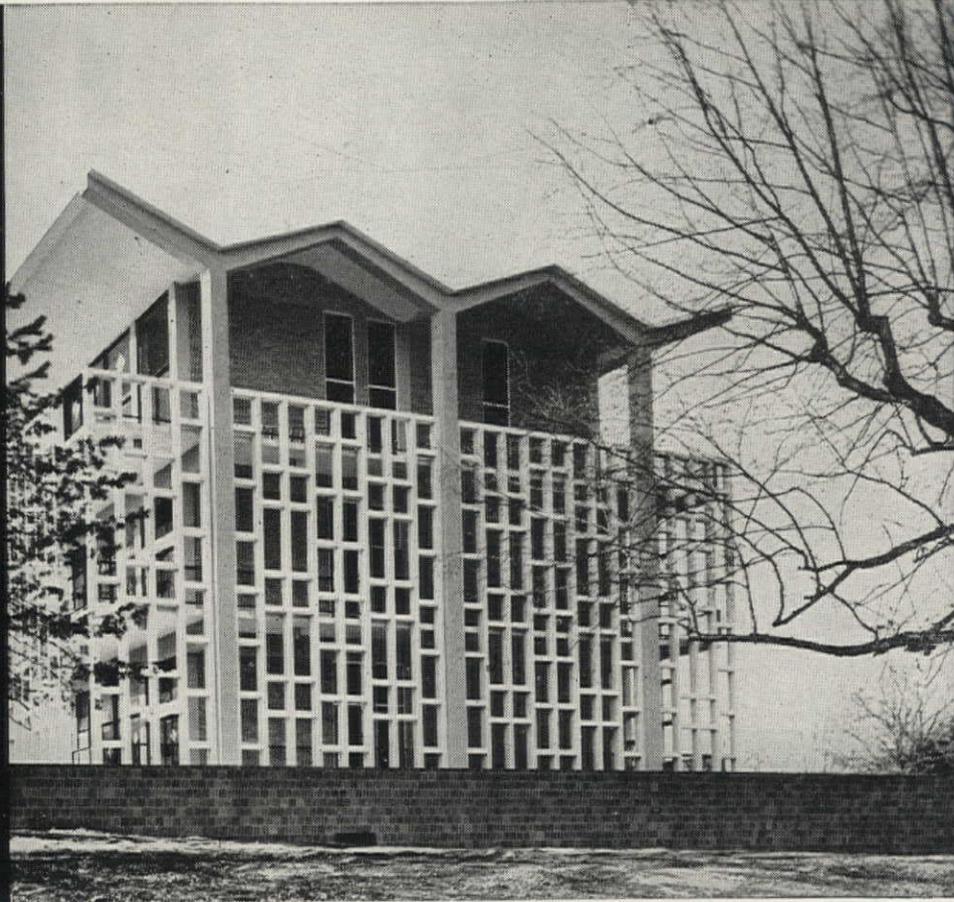
Architects have specified KEYWALL because they know it does an exceptional job in reducing shrinkage cracks and increasing lateral strength. And, as on all KEYWALL jobs, they can be sure this masonry reinforcement is used as specified.

Masons find KEYWALL easy to handle

and store. It unrolls in place on the wall, it cuts easily, and it's easy to lap without adding thickness to mortar joints. Full embedment and a strong bond are always assured.

Why not use KEYWALL masonry joint reinforcement on your next job? You'll find it gives the low-cost, effective reinforcement you've been looking for.

The winning design in the Million Dollar Fine Arts Center architectural competition, Memphis, Tennessee. When completed, this building will have facilities for an art academy, a theatre and a concert hall. Mann and Harrover, Architects; Allen and Hoshall, Mechanical Engineers; John C. Brough, Structural Engineer; Whitsitt Construction Co., Inc., General Contractor; Memphis.



KEYWALL masonry joint reinforcement is made for the following wall thicknesses: 4", 6", 8", 10" and 12".

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Peoria 7, Illinois

Keywall • Keycorner • Keystrip • Keymesh® • Welded Wire Fabric • Nails

Keystone Steel & Wire Company

Dept. AF-59

Peoria 7, Illinois

Please send me complete information on Keywall.

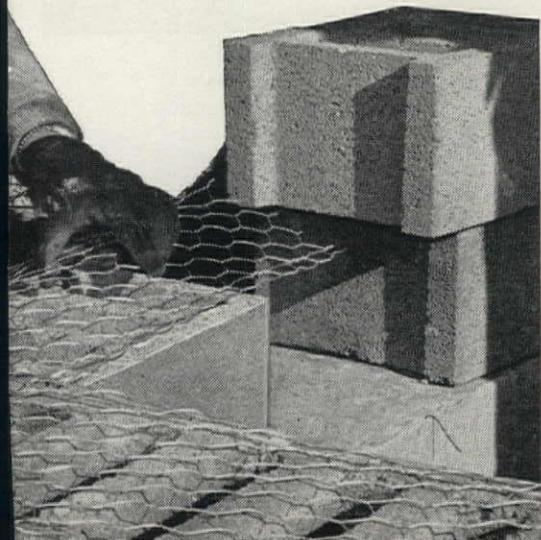
Name _____

Title _____

Company _____

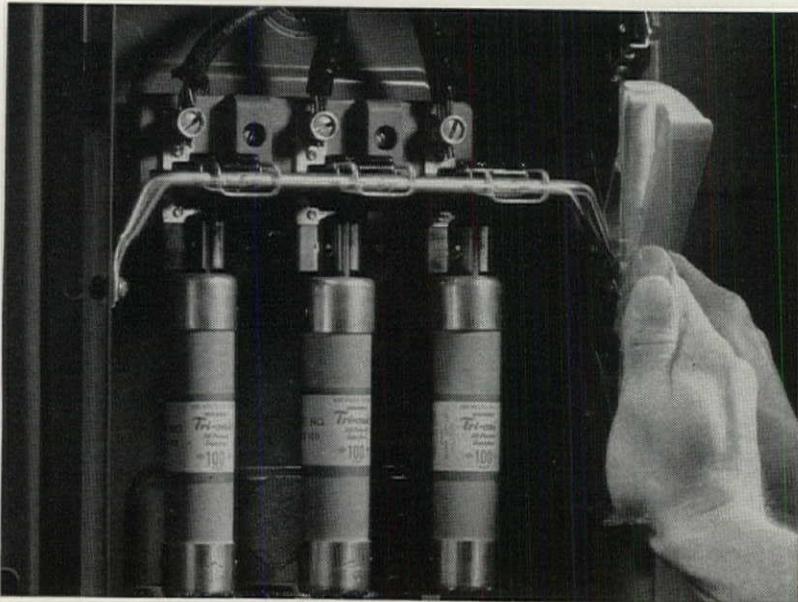
Address _____

City _____ State _____



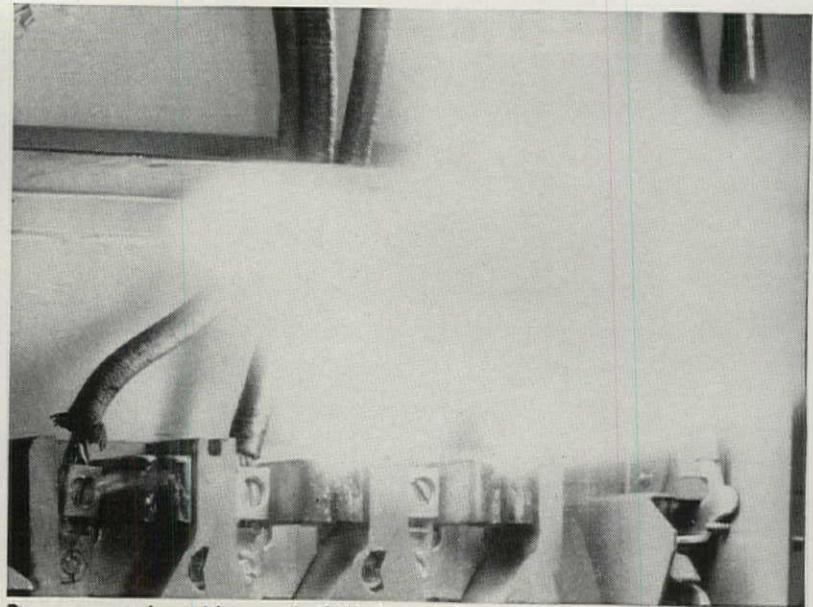
FOR SAFETY'S SAKE, BUY VACU-BREAK

*With Bulldog's exclusive
clamped-pressure switching contacts*



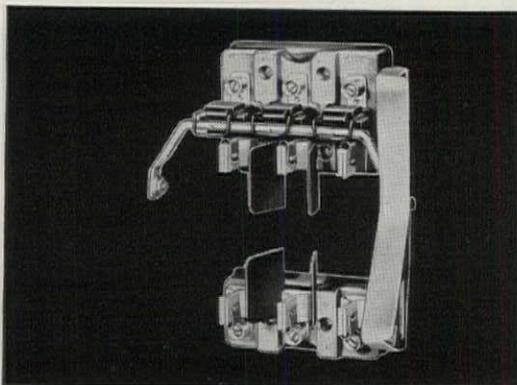
Maximum safety with Bulldog Safety Switches

Arcs are smothered before they can cause fire hazard or damage to the switch because contacts are housed inside compact Vacu-Break* chambers. Pitting and burning of contacts are reduced to an absolute minimum—maintenance is virtually eliminated.



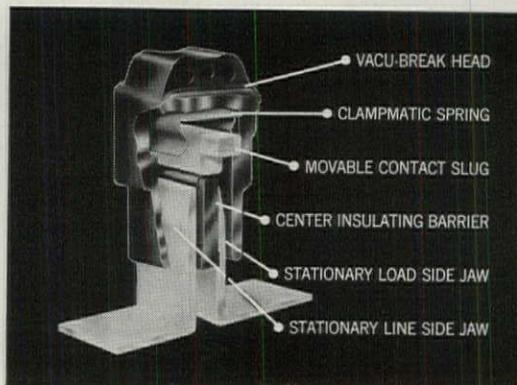
Dangerous arcing with open knifeblade switches

Unconfined flash explosion occurs, burning and pitting blades. Fire hazard and frequent maintenance are the result. These are unretouched photographs of 100 amp, 600 volt switches, operating under 90 ampere, 440 volt load with 40% to 50% power factor.



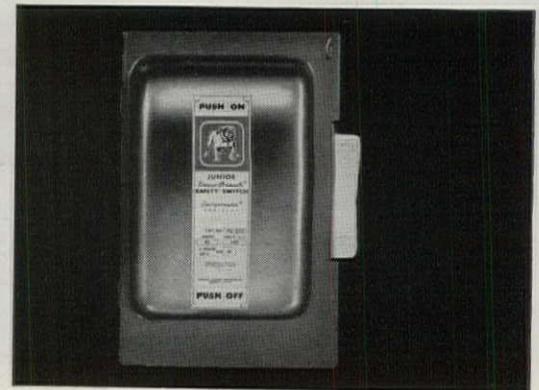
Simple, foolproof switching

Vacu-Break heads are *directly* connected to the switch handle. No toggles, triggers or springs to fail. No danger of switching failure. Positive, safe switching *every time* for a lifetime.



Clamped-pressure contacts

This close-up shows movable contact slug and Clampmatic* spring assembly inside Vacu-Break chamber. The Clampmatic assembly assures clamped-pressure contacts, speeds "break", increases switch life.



Withstand 100,000 amp fault current

BullDog Vacu-Break Switches—Master and Junior—will withstand 100,000 amp short circuit current when equipped with current-limiting Amp-Traps**. Play it safe—recommend and buy BullDog Vacu-Break!

© BEPCO

*Vacu-Break and Clampmatic are registered trademarks of the Bulldog Electric Products Division.

**Amp-Trap is a registered trademark of the Chase-Shawmut Company.



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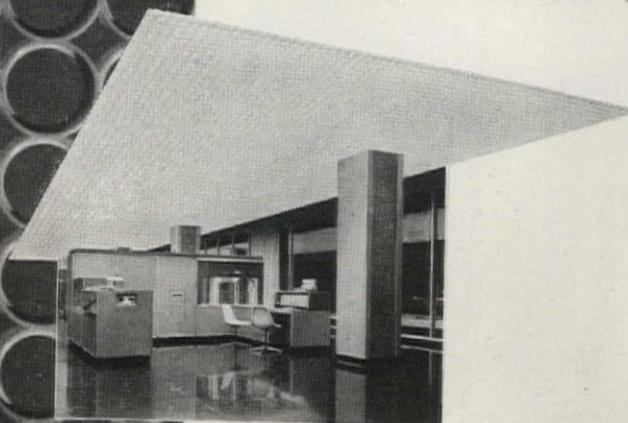
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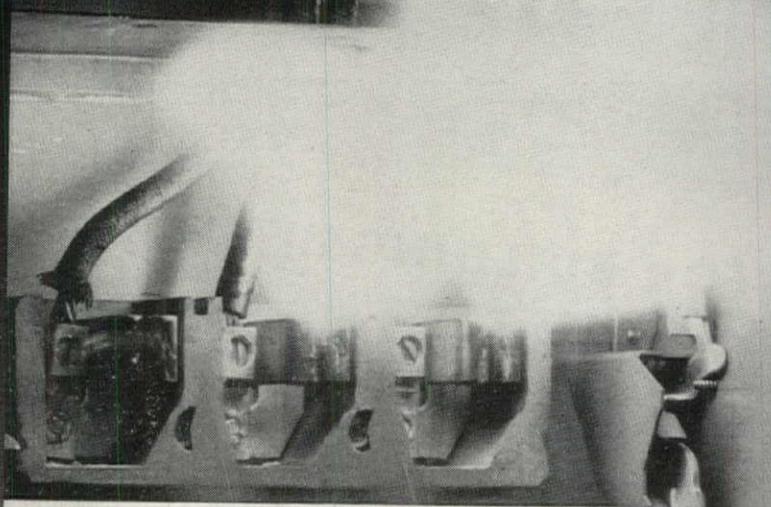
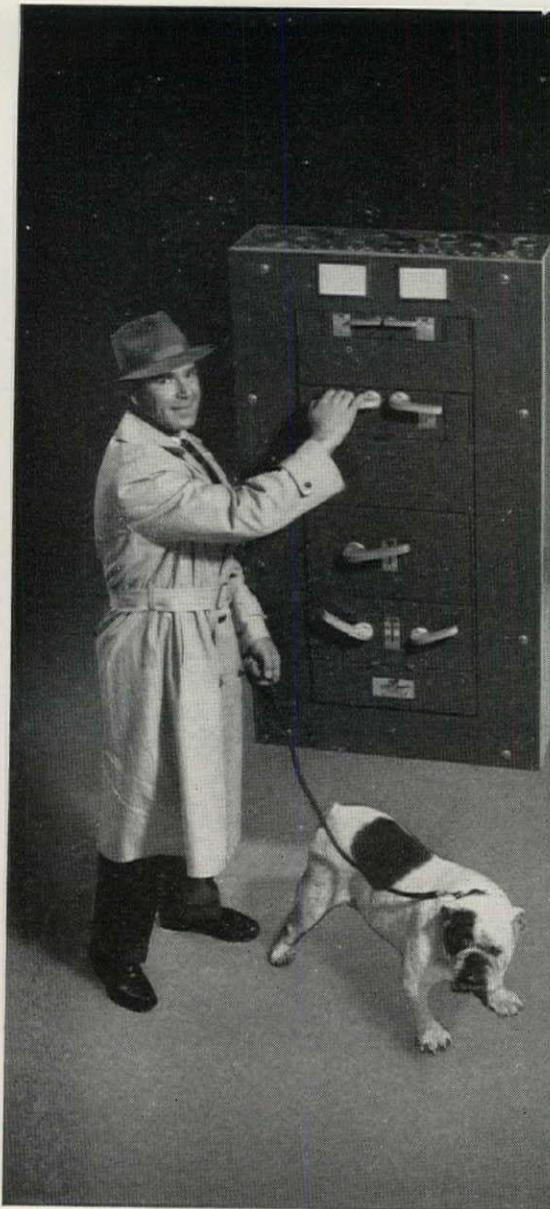
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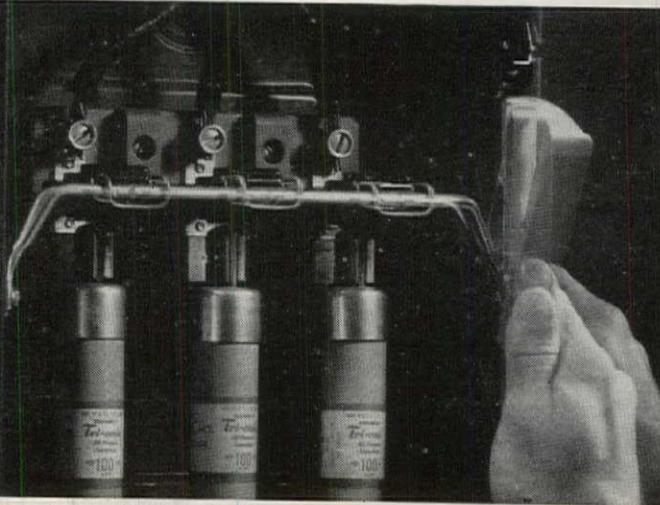
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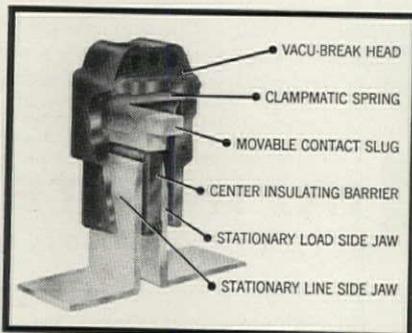
Name _____
Firm _____
Street _____
City _____ Zone _____



Dangerous flash explosion occurs at instant of "break" in open knifeblade switch. Bulldog Vacu-Break chamber smothers arcs before they can burn and pit contacts. Both are 100-amp, 600-volt switches operating under 90-ampere, 440-volt load with 40% to 50% power factor. (These photographs were taken at instant of "break" and are unretouched.)



FOR SAFETY'S SAKE SPECIFY VACU-BREAK POWER PANELS



Close-up of Vacu-Break head shows movable contact slug inside the compact arc chamber. The Clampmatic spring assembly assures a bolt-tight contact, helps speed "break". This combination guarantees positive and safe operation, long switch life.

You switch with safety when you choose Bulldog Power Panels with Vacu-Break* switch units! Exclusive Vacu-Break design houses contacts in compact arc chambers that limit the oxygen supply . . . actually starve the arc before it can explode and pit or burn contacts. Maintenance is practically eliminated.

Contacts in the Vacu-Break unit are attached directly to the operating handle for positive, safe switching every time. When the handle is in the OFF position—you know the switch is *off!* For extra safety the

units have interlocking doors. The Vacu-Break unit also provides clamped-pressure switching contacts to prevent overheating. Clampmatic* design simulates a *bolted connection* when in the ON position . . . accelerates the break, too!

In recent tests, Standard Bulldog switches with Amp-Traps** were subjected to 100,000-amp short circuit current. They were undamaged! You can get this extra safety and long-lasting performance by specifying Bulldog Vacu-Break Power Panels.



BULLDOG ELECTRIC PRODUCTS DIVISION
I-T-E CIRCUIT BREAKER COMPANY
BOX 177 • DETROIT 32, MICHIGAN

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Radiant Ceiling News

With Burgess-Manning Ceilings — Your Building Is Better — Your Building Budget No Bigger

Fuel Cost Lowered, Sickness Absenteeism Reduced... with Radiant Acoustical Ceiling

In 1955, when architects Beatty and Berlenbach recommended a Burgess-Manning Radiant Acoustical Ceiling for the proposed West Middle Island Elementary School of Middle Island, N. Y., the Board of Education of the Union Free School District was frankly sceptical. Only after making an inspection tour of a number of installations and hearing the enthusiastic reports of owners and occupants, were they convinced that such a ceiling could be feasible and practical.

In due time the West Middle Island Elementary School was completed, with its Burgess-Manning Radiant Acoustical Ceiling installed.

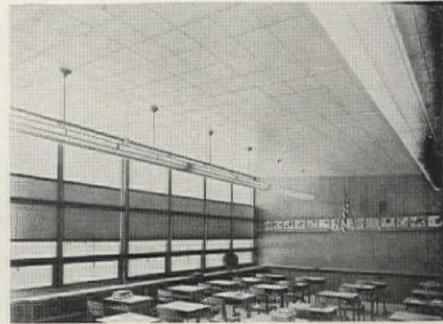
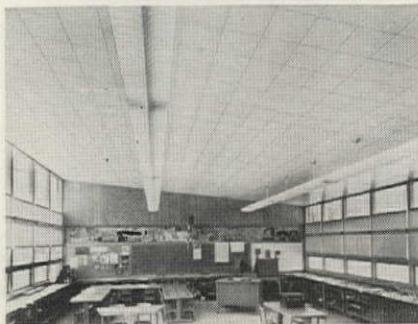


The results—the following excerpts from a letter by Donald H. Fingar, School Board President, written after a year of operation, will tell the story:

"The system has been efficient, fast, and flexible of control with no uncomfortable areas. Our fuel consumption has been substantially less per cubic volume than neighboring schools with "modern" radiant convectors. — Our kindergarten conducts games and rest periods on the floor, a concrete slab, with no apparent discomfort. Our incidence of lost time due to colds and other respiratory troubles has been considerably less since moving from a building with radiant convectors to our present Burgess-Manning installation.

We believe this to be the ultimate in heating and acoustical comfort —"

Our thanks to Mr. Fingar, — any additional comment would be superfluous.



Radiant Acoustical Ceiling Basically Simple In Design

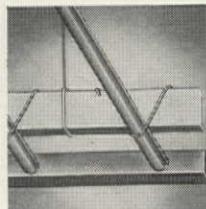
Considering the triple function performed by the Burgess-Manning Radiant Acoustical Ceiling, its construction is amazingly simple and compact, and is easily erected. It consists of only 4 major parts.

1. Suspension Grid

The suspension grid of 1½" channels on 4 ft. centers is not unusual.

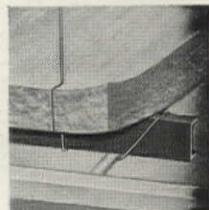
2. Water Circulating Coil

The grid type coil is made from pre-fabricated headers to which ½" laterals are welded. A sinusoidal type coil can be used where conditions make it desirable. It hangs from the suspension grid.



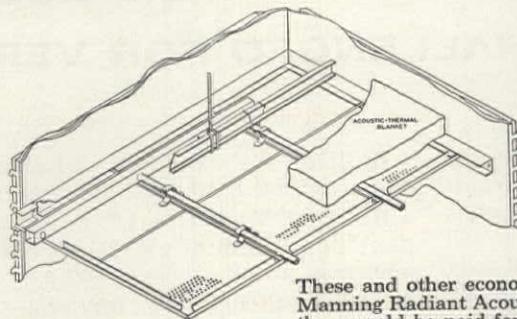
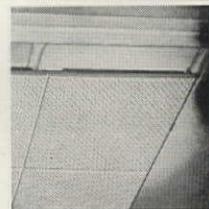
3. Acoustic-Thermal Insulation Blanket

The non-combustible sound-absorbing blanket, with the required noise reduction coefficient, is laid on top of the suspension grid.



4. Snap-On Panels

Heavy gauge perforated aluminum panels of the proper thermal conductivity are attached directly to the water circulating coil.



This isometric drawing shows all 4 parts assembled — a relatively simple construction that replaces the conventional radiators, or hot air ducts used for convection type heating, and that permits reduction in size of air handling equipment such as blowers, fans, coils, filters, etc.

These and other economies permit installation of Burgess-Manning Radiant Acoustical Ceiling at a cost equal or lower than would be paid for various combinations of convection heating and air cooling, plus a suspended acoustical ceiling.

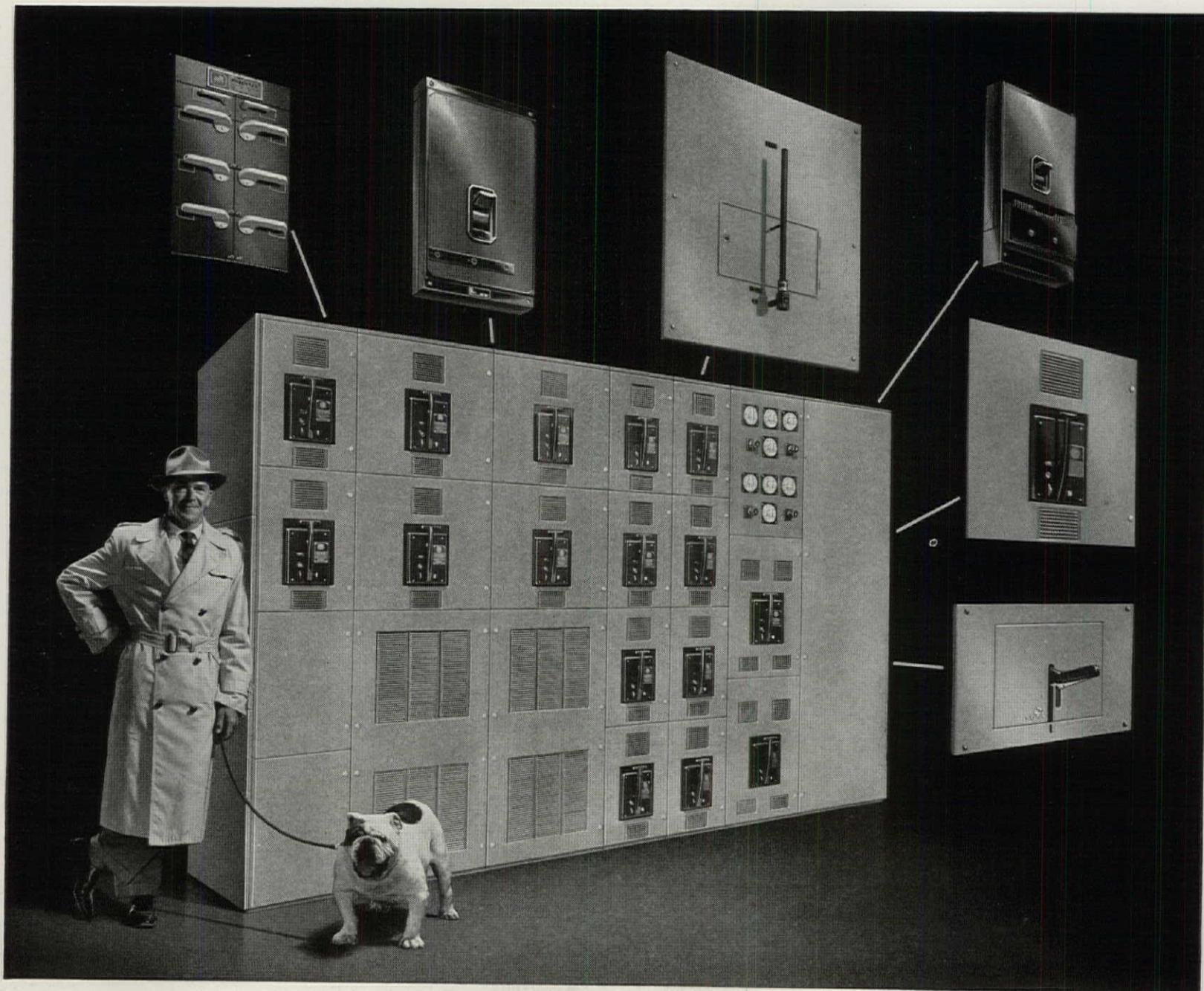
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ANNOUNCING: THE NEW BULLDOG DF-60 UNCHALLENGED FOR VERSATILITY

BullDog's new DF-60 lets you put everything from large air circuit breakers to small Vacu-Break® units in one space-saving enclosure. It will handle any of the following light-duty or heavy-duty switch units . . . in any combination:

- New I-T-E K-line back-connected air circuit breakers, 225 to 4000 amperes
- I-T-E Molded Case Circuit Breakers, back-connected or panelboard-mounted, 15 to 800 amperes
- I-T-E Cordon* Circuit Breakers, back-connected, 15 to 600 amperes
- Fused Pressure Switches, back-connected, up to 4000 amperes

- BullDog DF-30 fused switches back-connected, 30 to 1200 amperes
- BullDog Vacu-Break® units in panelboard mounting, 30 to 600 amperes

In addition there is room for current-transformer equipment and metering systems. But duct systems up to 4000 amperes can be connected directly to the board.

A call will bring your local BullDog field engineer to assist you in selecting the type, combination and arrangement of units needed to handle your clients' power load . . . help supervise installation. You'll find the new DF-60 will ease your plant layout problems, too. For complete details send for Switchboard Bulletin SB-555.

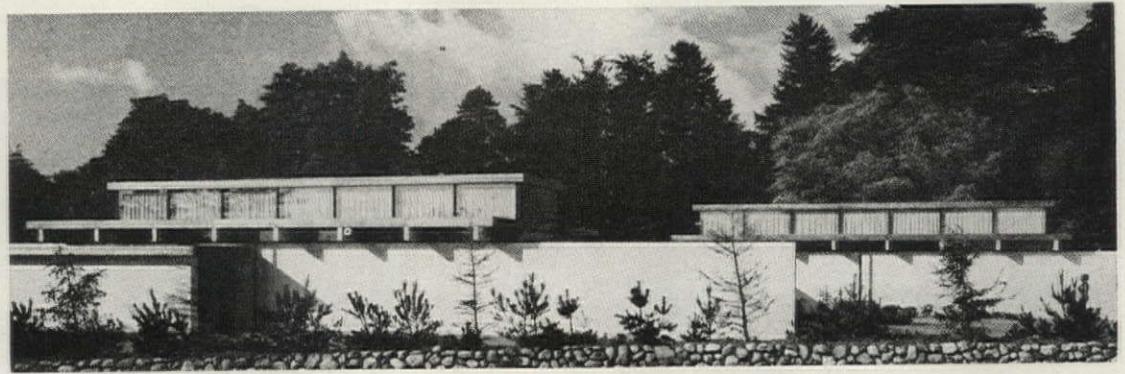
*Trademark registered by I-T-E Circuit Breaker Company



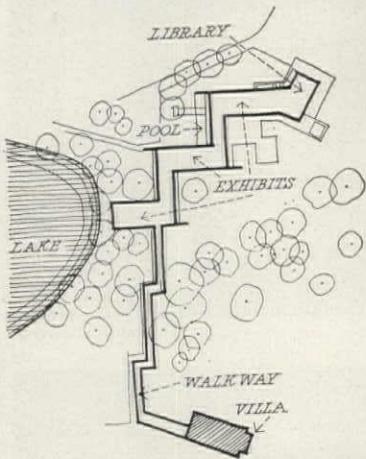
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A continuing review of international building



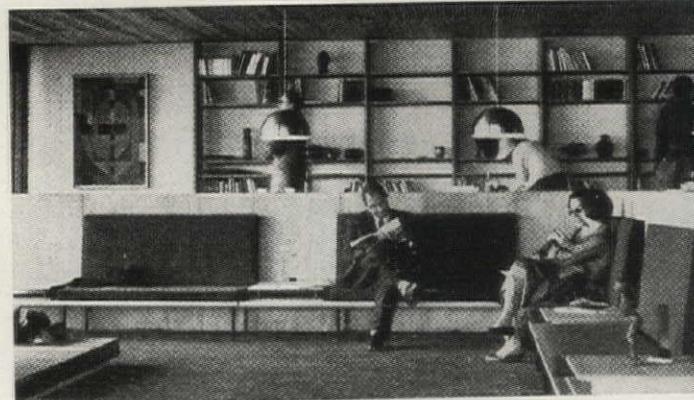
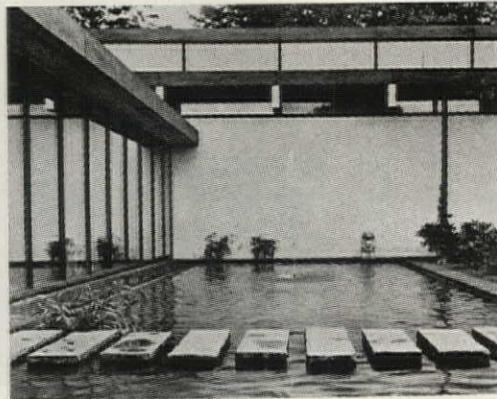
LOUISIANA IN DENMARK



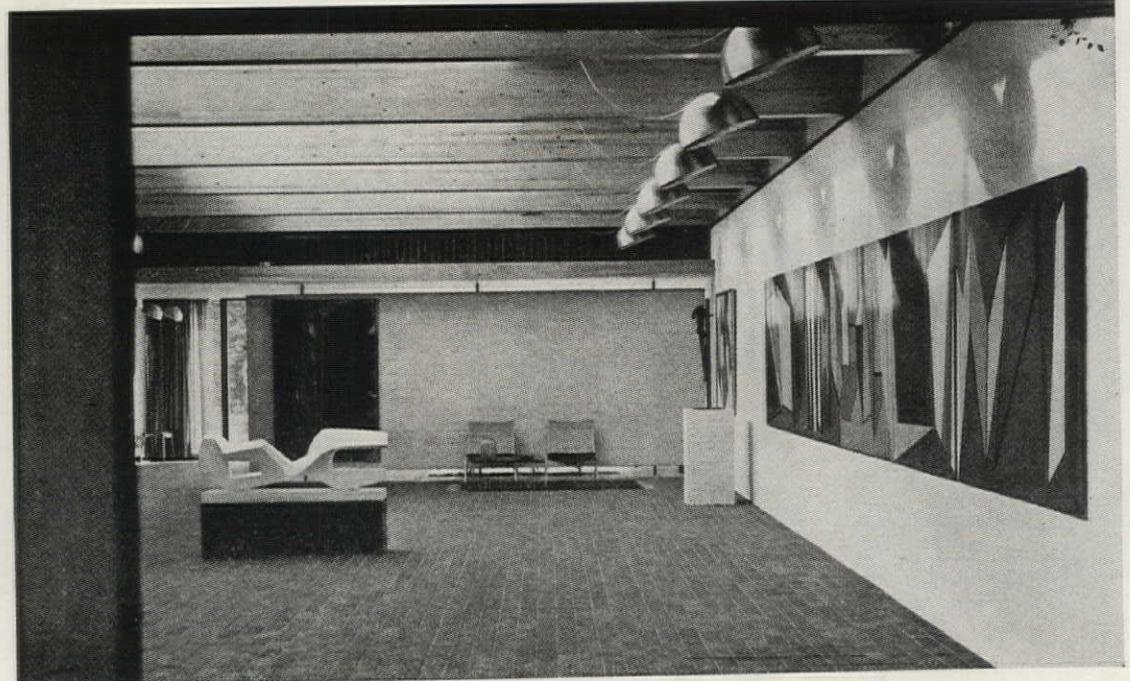
Twenty miles northwest of Copenhagen on an old estate named Louisiana (for a non-Dixie Louise) is a museum of modern Danish art that is among the best anywhere. Reason for its success: the architects, Jørgen Bo and Vilhelm

Wohlert, made the museum appear to be a home in which modern art had naturally been collected. Visitors enter by means of a glazed walkway (plan, left), find themselves at home whether beside the hearth in the library (below, right), in

one of the three major exhibit halls (bottom), or poolside (below, left). The simple structure of the museum (load-bearing brick walls) and its openness to the surrounding gardens encourage the domestic comparison.

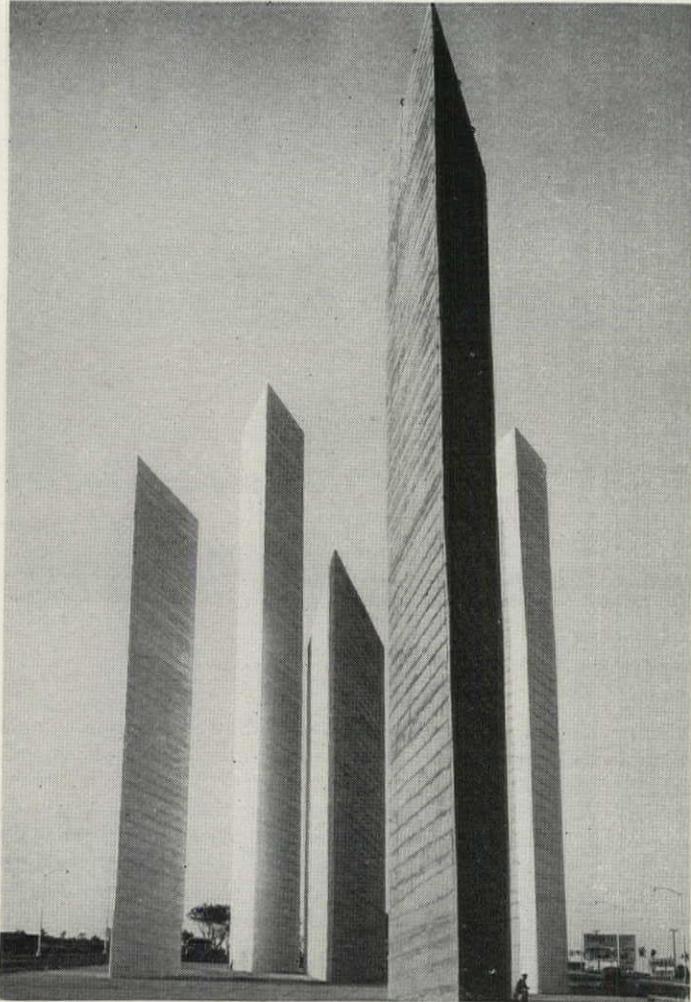


PHOTOS: JESPER HOM, COURTESY "WERK"





PHOTOS: CAROLA



SUPERBLOCK IN MEXICO

About nine miles north of Mexico City stand five towers that, from a distance on the desert highway (above), appear as a mirage of Manhattan. The illusion is deliberate, for Architect Mario Pani, Landscape Designer Luis Barragan, and Sculptor Ma-

tias Goeritz wanted to make the entrance to their Mexican new town look inviting, urbane, and powerful. The wedge-shaped, concrete towers range in height from 120 to 180 ft., are painted orange (three of them), yellow, and white.

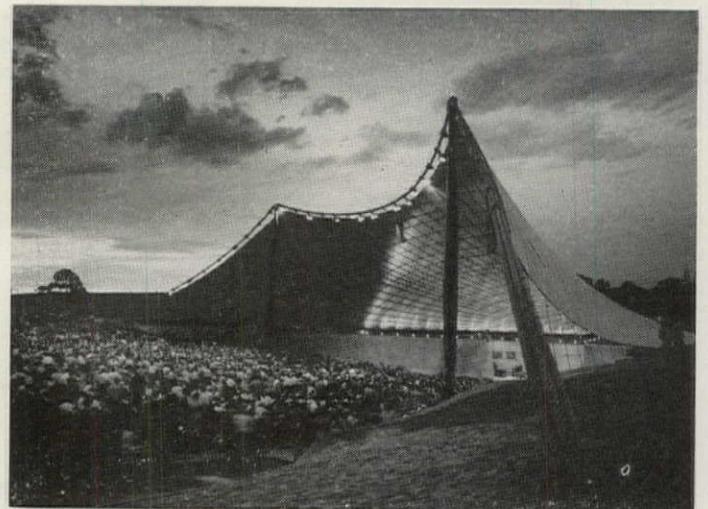
TENTING DOWN UNDER

The most interesting modern structure in Australia is the Sydney Myer Music Bowl on the outskirts of Melbourne. Designed by Architects Yuncen, Freeman Brothers, Griffiths & Simpson to resemble a festival tent, the \$500,000 structure provides shelter for

2,031 seated concert-goers beneath an "alumpy" canopy (aluminum-faced plywood). The canopy is suspended from a main cable that is actually seven 3½-in. galvanized wire ropes anchored 70 ft. into the ground. The main steel cable is supported by two steel masts.

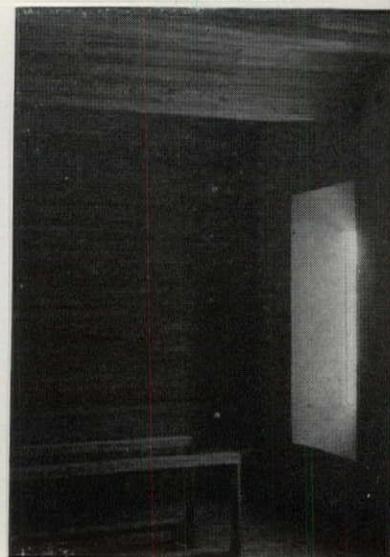
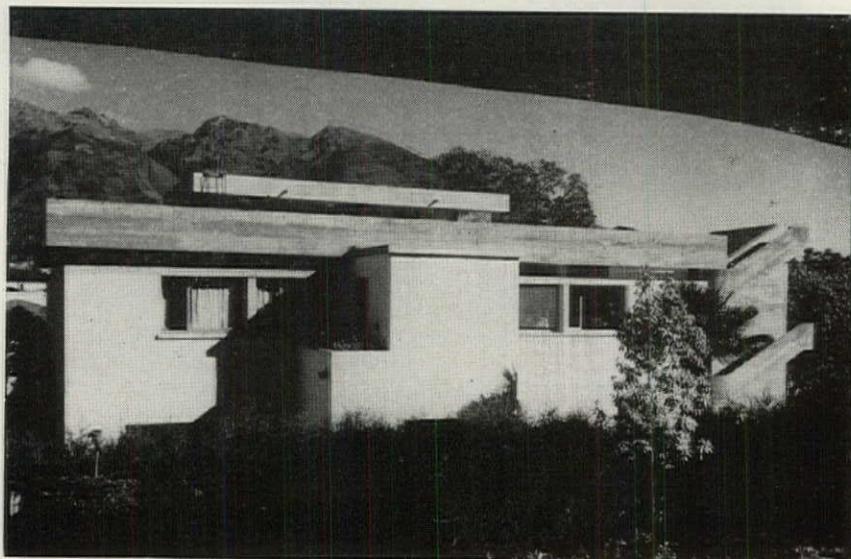


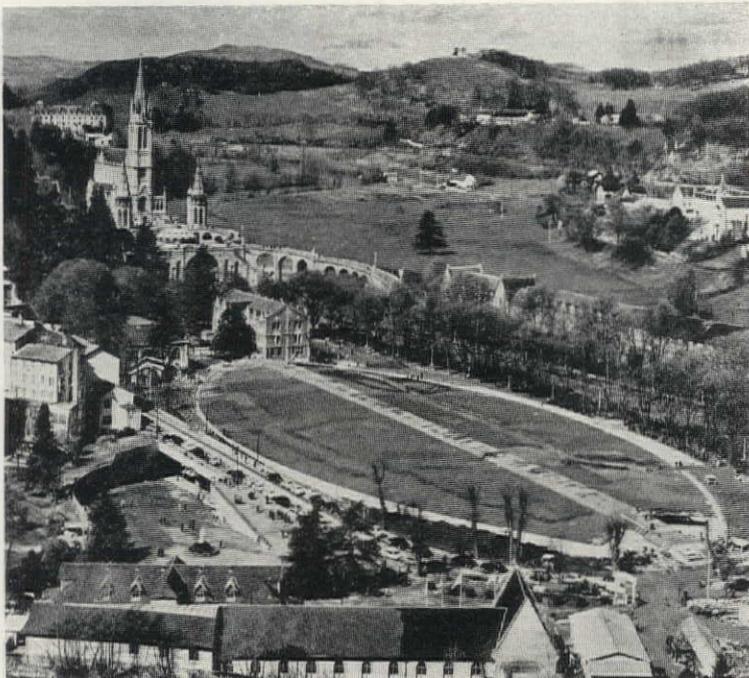
WOLFGANG SIEVERS



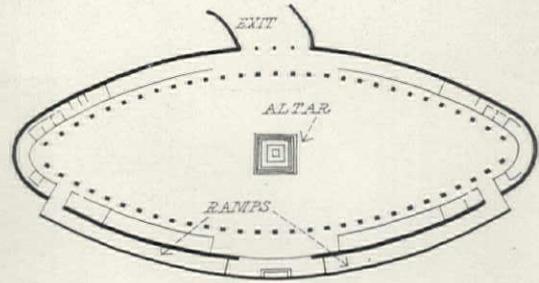
CORKE & CLABBURN

PHOTOS: HIRTZ





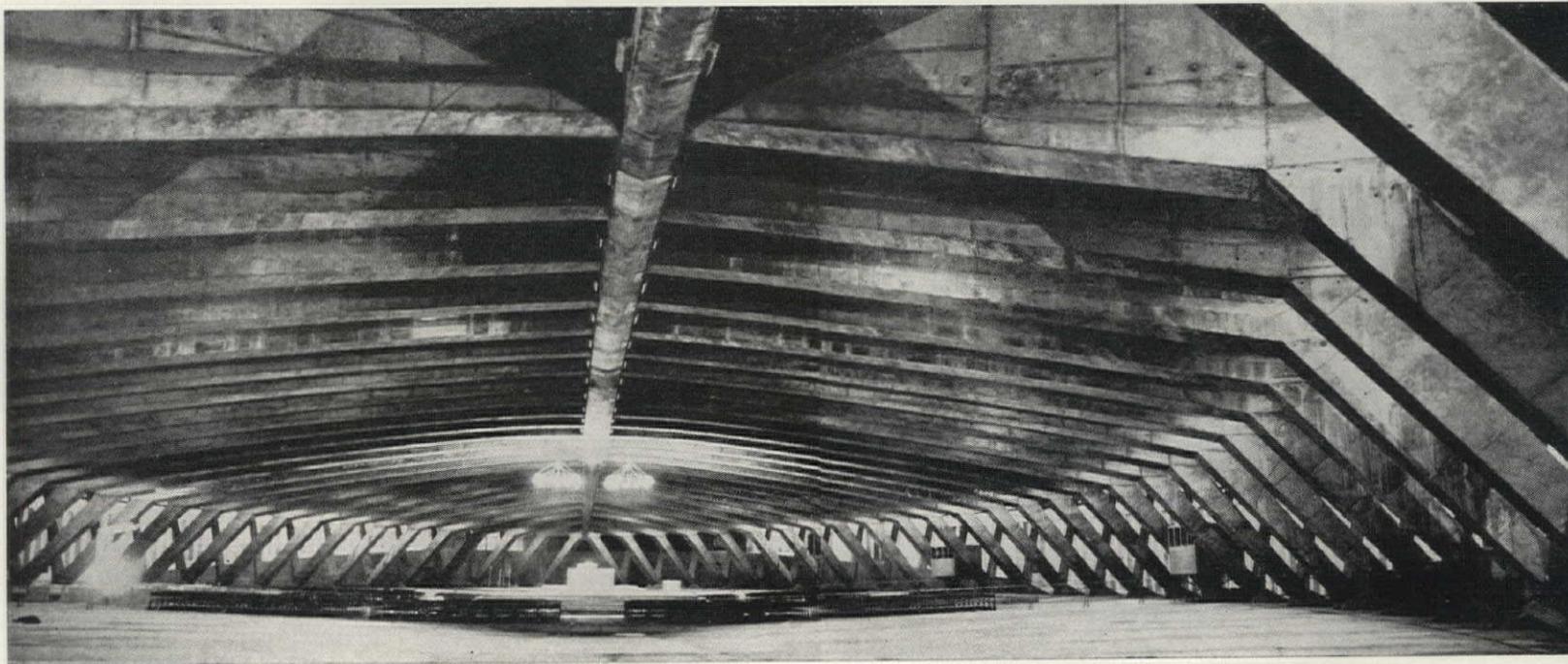
PHOTOS: BARANER, COURTESY "L'ARCHITECTURE D'AUJOURD'HUI"



UNDERGROUND AT LOURDES

A subterranean church that preserves the essence of Lourdes by respecting its site has been designed by Pierre Vago and built in the basin of a natural pool. The structural bones of the church are 29 double arches of pre-

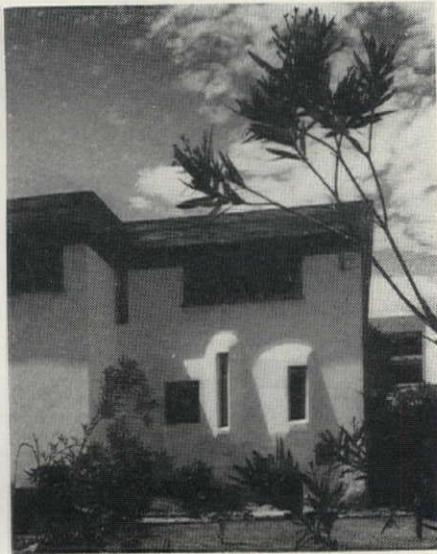
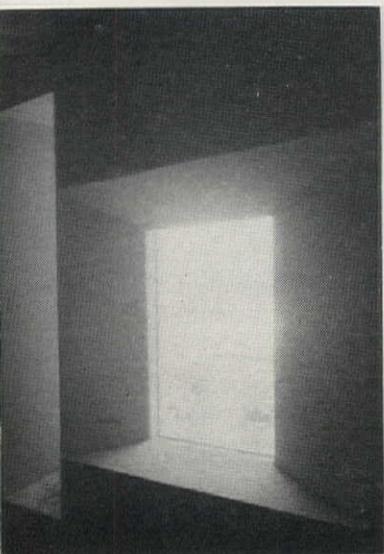
stressed concrete that are joined by a central spine some 600 ft. long. The entire vault covers three acres and is able to house 20,000 people around the central altar (see plan) for ceremonies during inclement weather.



SCHOOL IN QUITO

In Quito, Ecuador Swiss Architect Max Ehrensberger raised the roof of an old Main Street home, remolded it as a convent school (left). The roof, faced with raw concrete, now appears to float above the building's white-washed walls. But the archi-

tect's skill is most conspicuous in his handling of details: the rounded, projecting forms of the windows in the ground-floor chapel; the chapel's wavelike wooden ceiling; and the massive, sculptural exterior staircase (far left) winding down from the sky.





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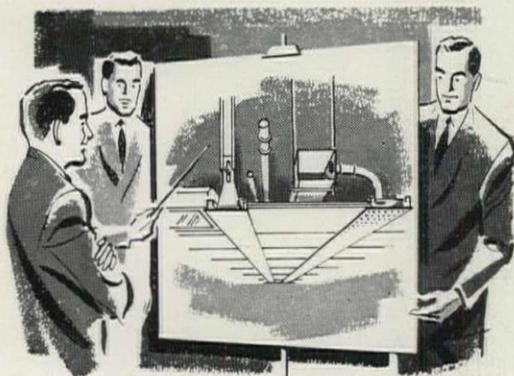
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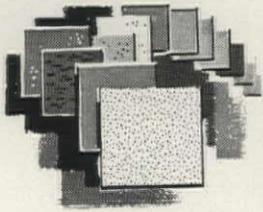


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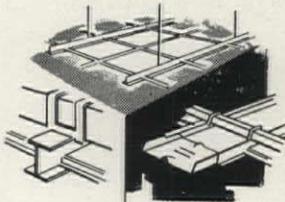
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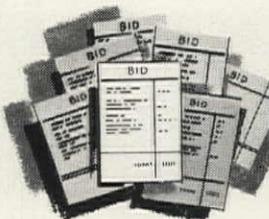
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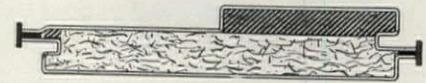
insulated

Glance at the cross section sketches of new Monopan.[®] Isn't this the intelligent way to join metal curtain wall panels? Tongue-and-groove joints are sealed with resilient vinyl gaskets. Installation is obviously simpler and more economical. Fasteners are inside. From outside there are no visible joints or fasteners. And—of course—no caulking.

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Cross-section, single Monopan.



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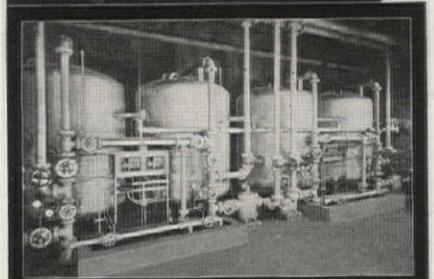
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