PROGRESSIVE ARCHITECTURE NOVEMBER 1965

NEWS REPORT

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

Pei to Add to Saarinen Work

DES MOINES, IOWA. Designed by Eliel Saarinen, the Des Moines Art Center Building was completed in 1948. Now, two recent gifts make possible needed expansion of the existing structure. One gift, from the Gardner Cowles Foundation, will provide for construction of an enclosed sculpture court. The second, from Des Moines residents, Mr. and Mrs. Ellis I. Levitt, provides funds for a new auditorium.

I. M. Pei has been selected to design these additions. In speaking for the building committee, chairman David Kruidenier commented: "Des Moines is fortunate to have Mr. Pei's interest in this expansion project, which will bring another example of nationally significant architecture to the city." Both the Art Center and Des Moines will be better off if, instead of a structure significant in itself, the design is aesthetically in keeping with the existing structure and with the spirit of this fine Midwestern city.

Aid-To-The-Arts?

WASHINGTON, D.C. With Dr. Walter Gropius and Buckminster Fuller among the 400 persons looking on, President Johnson last month signed into law the Federal aid-to-the-arts bill. "What this bill really does," explained the President, "is to . . . make fresher the winds of art in this great land of ours. America has not always been kind to its artists and scholars. Somehow the scientists always seem to get the penthouse while the arts and humanities get the basement."

By way of atonement, the bill provides funds for "the arts" in the amount of $21,000,000 a year for the next three years. Just how these "basement winds" will freshen architecture is not spelled out, but one hopes that, at least, they will contribute to improving the lackluster character of current Federal architecture. Perhaps funds could be made available for competitions for the design of significant Federal structures. Or perhaps funds could go to metropolitan areas, to help them in drawing up master plans for urban renewal. Or funds could be used to set up the non-profit Urban Design Center proposed by Morris Ketchum, Jr. What is needed, now that token funds are available, are some fresh thoughts on how best to use them.

AIA Calls For National Urban Design Center

LOUISVILLE, KY. Speaking to building materials manufacturers at the forty-fourth annual meeting of the Producers Council, Inc., AIA president Morris Ketchum, Jr., called for the formation of a national Urban Design Center, presently under consideration by the AIA. Such a Center would translate "the best creative ideas of architects, landscape architects, muralists, sculptors, and other artisans . . . into fabricated designs for use in furnishing the outdoor spaces of our cities. The Urban Design Center would work on street furniture: benches, trash receptacles, light standards, and fixtures. It would go extensively into attempts to bring order out of the present chaos of store signs and the graphics of street and highway directional signs. It would study and make recommendations on the uses of water and landscaping in open spaces, in short, all the small things that provide the amenities in urban areas." Ketchum sees the Center as being financed by donations from private individuals and corporations. In theory, it sounds as if it might help delay urban decay. How well it would work in practice is something else. We hope, in any case, that it will be given the chance to prove its worth.

Highway Beautification Bill Is On The Road

WASHINGTON, D.C. As we go to press, the much-touted highway beautification bill rests on the President's desk. It will, of course, be signed into law, even though severe changes have been made over the President's original proposals. President Johnson, for instance, wanted billboards controlled within 1,000′ of the 226,000 miles of the nation's interstate and primary roads. This distance has been cut to 660′. He had also asked that $100,000,000 a year, one third of the Federal funds authorized, be used for construction of roads leading to or through scenic areas. This provision was eliminated from the final bill.

States must agree to control billboards and to remove or screen junkyards along their Federal roads by January 1, 1968, or forfeit 10 per cent of their Federal highway grants.

Each state will receive funds equal to 3 per cent of its highway construction aid to finance this beautification.

No doubt, the influence of the President's wife helped the bill's passage. "I just couldn't say no to Lady Bird," drawled Texas' Representative Roberts.

Measure of Ugliness

WASHINGTON, D.C. Just how "ugly" is America? Although the answer is highly elusive, it is measurable, for ugliness, unlike beauty, does not lie in the eye of the beholder. Few persons, for example, take aesthetic pleasure in the twisted, rusting, chaotically piled-up heaps of discarded automobiles that always seem to adjoin major highways. Throughout the U.S., according to a survey undertaken by the Department of Commerce, some 17,500 monumental eyesores, such as junkyards and scrap metal heaps, line the roads. The survey covered 265,000 miles of interstate highways and other Federal-aid primary routes. This means there is an eyesore every 15 miles. Texas, the leading offender, has 1602 of them; Georgia, in second place, has 957; Pennsylvania is next with 899; and Rhode Island has 22. When is someone going to do a survey of roadside drive-ins? How long will it be before our highways are lined with eyesores in unbroken stretches, with eye-pleasing vistas limited to one every 15 miles—until, as Henry Morgan once said, "you'll have to go to Venezuela to see a tree"?

World Trade Center Stirs

NEW YORK, N.Y. Like most other Goliaths, New York City's World Trade Center is slow moving. But it *is* moving. On September 9, the Port of New York Authority authorized financing (an estimated $525,000,000 in all), selling the first $10,000,000 of the Authority's securities for the Center. Authorized at the same time was the sale of an additional $75,000,000 worth for the Center and other Authority purposes. According to Austin J. Tobin, the Authority's executive director, demolition of the structures now occupying the western portion of the 16-acre site (on the west side of Manhattan's financial district) will be under way by the end of the year. Also by the end of the year, the foundation contract should be out for bids.

The World Trade Center's twin 110-story towers, designed by Minoru Yamasaki & Associates in association with Emery Roth & Sons, and the four- to six-story buildings they plan around the center's plaza, will contain 10,000,000 sq ft of rentable space. Of this space, 4,500,000 sq ft will be set aside for Federal agencies involved in commerce moving through the port of New York. Some 4,000,000 sq ft will be used by trading corporations and companies that support

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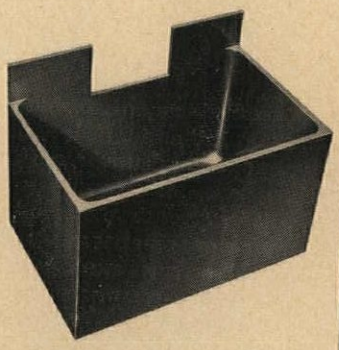

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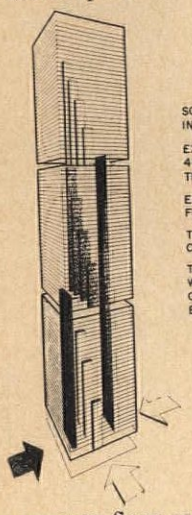
this trade. The rest of the space is for N. Y. state engineers.

According to Tobin, the towers will have over 10 per cent more floor space available than would a conventional building of the same height. Tobin explains it this way: "More space will be available on every floor as a result of the "sky lobby" system. In this system, the building is divided into thirds, with interchange floors, or "sky lobbies," at the forty-fourth and seventy-eighth floors. Each of the "sky lobbies" is reached by extra-big, extra-fast elevators. Conventional elevators serve intermediate floors. By re-use of the same core space for three tiers of elevators in each of the three zones, rentable space (which would only amount to 77 per cent in a conventional 110-story building) is increased in the Trade Center to 87½ per cent of the gross."



THE WORLD TRADE CENTER

SCHEMATIC DRAWING OF REVOLUTIONARY SKYLOBBY ELEVATOR SYSTEM TO BE USED IN THE TOWER BUILDINGS SHOWS THREE SEPARATE ZONES, ONE ABOVE THE OTHER.

EXPRESS ELEVATORS (LEFT) WILL CARRY PASSENGERS TO THE SKYLOBBY AT THE 41 st FLOOR WHERE PASSENGERS WILL TRANSFER TO LOCAL ELEVATORS FOR TRANSPORTATION BETWEEN THE 42 nd AND 74 th FLOORS.

EXPRESS ELEVATORS (RIGHT) WILL CARRY PASSENGERS TO SKYLOBBY AT 74 th FLOOR WHERE PASSENGERS WILL TRANSFER TO LOCAL ELEVATORS FOR FLOORS ABOVE

THE EXPRESS CARS, THE LARGEST AND FASTEST EVER BUILT, WILL BE ABLE TO CARRY 55 PEOPLE, OR 10,000 POUNDS, AT A SPEED OF 1,700 FEET A MINUTE

THE SKYLOBBY SYSTEM, WHICH REQUIRES A FEWER NUMBER OF ELEVATOR SHAFTS, WILL MAKE AVAILABLE MORE USABLE AREAS IN THE BUILDINGS THAN IN THE CONVENTIONALLY EQUIPPED SKYSCRAPERS. IT ALSO WILL DECREASE TRAVEL TIME BETWEEN FLOORS WITHIN THE ZONES

The New Macy's Store Gets Good Marks in Traffic Flow...

QUEENS, N.Y. If anyone can do it, R.H. Macy & Company is the one. And it *has* done it. The new Macy's in Queens (the fifty-first store in the Macy family) is open, offering its customers the goods and an easy way to get them (see p. 75, APRIL 1964 P/A). The store, 426′ in diameter, has peripheral parking for 1250 cars on each of its six levels. To insure efficiency, a computer directs customers to vacant parking spaces; the concrete grilles of the façade facilitate ventilation of the parking areas. Entrance and exit is by way of the two interlocking helices on the side of the structure (see photo).

The department store—an SOM design of white quartz aggregate—professes to serve the community in a civic as well as a commercial way. In its second-floor Community Room, educational courses will be open to the public in everything from baton-twirling to tabletop decorating. At night, the store will function as a civic monument, with light shining through the slits of the façade—a Queens Coliseum of sorts, sitting amidst the ruins.

Yet the building itself is an effective one, simple and consistent, with only two brassy Macy signs to mar the façade.

...But Fails Geometry

QUEENS, N.Y. When Macy's was planning their circular store for the borough of Queens, one of the people they talked with was Mrs. Mary Sondek. Mrs. Sondek owns a plot of land that Macy's needed; part of the store would cut across it. Mrs. Sondek still owns the land and the house on it. And Macy's, Queens, has a notch in the side of its circular structure where the store cuts around—instead of across—Mrs. Sondek's yard. Mrs. Sondek has a dog: "I've got a dog, and he has to have a place to run," she says. An he does have a place, even though Macy's offered her a reported $200,000 for her land, and ended up spending $50,000 putting in the notch.

Macy's has had trouble acquiring land before. When they built on Manhattan's Herald Square at the turn of the century, they had to build around a wedged-shaped plot on the corner of Broadway and 34th Street. The five-story building there still stands today—with a four-story "Macy's" sign across its façade. One hopes the same fate will not befall the indomitable Mrs. Sondek.

Friendly Harvard Hall

CAMBRIDGE, MASS. The exterior of the Roy E. Larsen Hall at Harvard University looks like a genial robot. Its solid brick façade is massed rigidly. Were it not for the playful, humorous, almost whimsical, fenestration and arched entrances, the building's outstanding characteristics would be strength and dignity. As it is, these characteristics are offset so well that Larsen Hall emerges with both strength and humor. It is a building one would like to get to know well.

Deep vertical window slits penetrate both front and back of the building, exposing floor spandrels, and marking the otherwise hidden floor levels the way markings on thermometers mark degrees.

The building houses faculty offices, conference rooms, and study space for students at Harvard's Graduate School of Education. Each floor is organized around an informal meeting area, intended as a place to stimulate exchanges of ideas. Short hallways, with the resulting close proximity of offices,

are meant to contribute to the same sense of intimacy.

Architects Caudill, Rowlett, Scott, while showing their appreciation of the work of Breuer and Le Corbusier, have created a distinctive building.

Hommage á Corbu

Ceremonial tributes to Le Corbusier have started in this country with testimonials at Columbia University and Harvard University. The Columbia meeting, held on October 18 and sponsored by the school of architecture, featured a eulogy by José Luis Sert and a performance by Edgar Varese of his "Poème Electronique," written for Corbu's Brussels Fair pavilion. Dean Sert also spoke at the Harvard gathering, together with Dr. Walter Gropius. A special exhibition of the late architect's work had been mounted in Carpenter Center for the Visual Arts, his sole building in the U. S.

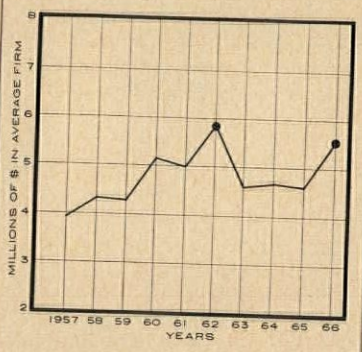
SIGNIFICANT RISE IN ARCHITECTURAL BUSINESS SEEN FOR 1966

Architects across the U.S. report a substantial 16.5% increase in business for 1966. The average dollar volume per office is $5,518,584, according to 1284 respondents in PROGRESSIVE ARCHITECTURE'S annual business survey, the only one of its kind in the architecturally designed building field. With seven of the ten major geographical areas of the country reporting gains, total work on the boards in these 1284 offices for next year is $7,100,000,000. Riding at the second highest level in the past 10 years, the average dollar volume per office should be welcome news not only to architects, but also to consultants and suppliers.

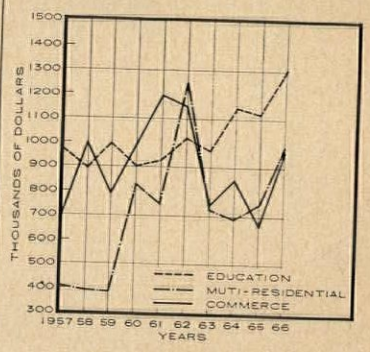
Education continues to be the leading breadwinner for architects, as it has for the past three years, with the average office reporting 23.8% of their work in this category. This represents a slight percentage drop over last year, although the average dollar volume is up slightly, to $1,312,433 *(Table 3)*. Continuing in second place is Residential (Multiple) (18%), with Commercial building not far behind (17.5%). Residential (Private) work continues to slump, with an even smaller percentage (1.7%) reported than last year. A slight percentage rise in both Industry (9%) and Defense (3.1%) may reflect the war effort in Viet Nam and the push into outer space but reflects just as surely the continued expansion of a healthy economy.

Seven of the ten geographical regions reporting will enjoy an increase in business in 1966. These are: Northwest, North Central, Great Lakes, Northeast, Southeast, Gulf States, and Texas. In the Great Lakes states, this year's most active area (replacing the Central States in top spot), business in the average office has more than doubled. In every region, either Education or Commerce is the leading building category, except in California-Hawaii, and the Southeast, where Residential (Multiple) leads. In the latter two areas, the substantial Residential (Multiple) work may mean that these areas are just now feeling the apartment boom that swept most of the rest of the country three years ago *(see graph)*. The split of work between public (36.8%) and private (63.2%) clients is almost exactly the same as a year ago. But slightly more work is in the preliminary design stage than last year at this time, meaning that the high dollar volume of business will continue throughout 1966. A reported 47.3% is already in the working drawing stage, so the first half of the year will show healthy activity.

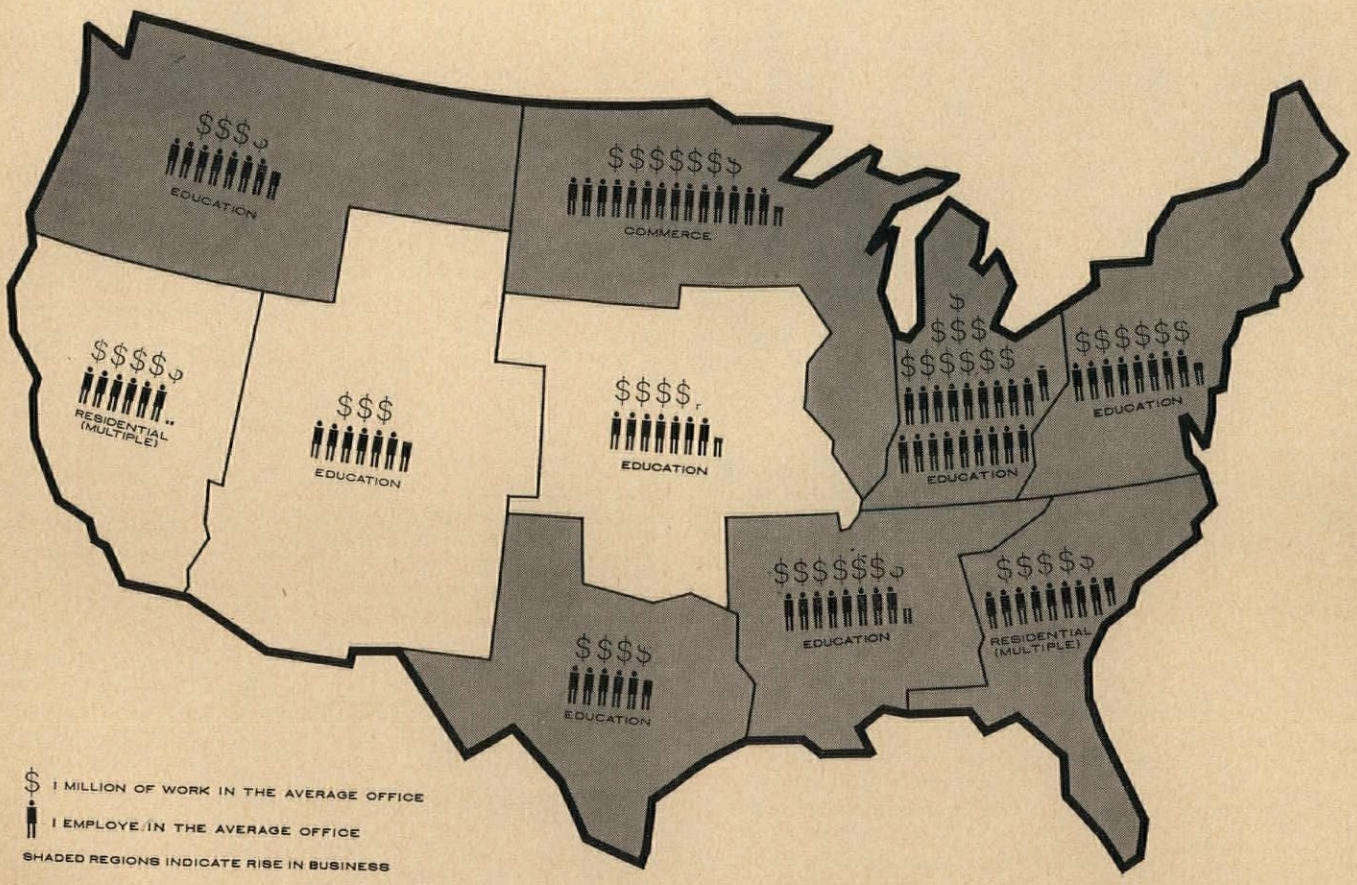
After a three-year decline, specialization in one building



Ten-year breakdown of dollar volume of business in average firm. Survey shows that 1966 will be second busiest year for architects since 1957.



The three most active building categories are plotted for last 10 years, showing average dollar volume in each category in average firm. Education has had fairly steady growth. Others have been more erratic.



type seems to be increasing, with a total of 10.24% of firms reporting specializing in some sort of work *(Table 5)*. For the most part, these specialized firms are small, recently formed ones with commissions so far in only one building category. Defense, in which no firm specialized last year, is back on the list; urban design, on the other hand, has disappeared. The make-up of the majority of U.S. architectural firms is indicated in Table 4, which shows *categories* of projects on the boards in percentage form, as opposed to those types responsible for largest average dollar volume *(Table 3)*.

Tabulation of offices according to number of employees is almost exactly the same as in 1965 *(Table 6)*, with a slight decrease in those employing more than 40 persons. Following the pattern set 10 years ago, when this forecast was first reported in its present form, the typical architectural office (77.5%) will have up to nine employees. Categorized on the basis of dollar volume of work in progress, the great majority of U.S. firms (88.0%) will be in the up-to-$10,000,000 category.

Asked about the reasons for the steady rise in architectural business in the last 15 years *(see graph, facing page)*, most respondents attributed the increase to uninterrupted years of peace. The population explosion and inflation, as well as easy financing and a steady increase in cultural appreciation and taste, were also thought significant factors.

The bold increase in architectural business in 1966 is, of course, partly the result of these same factors. Also cited is increasing urbanization. But, paradoxically, some respondents feel that business in 1966 will be brisk because of war in Viet Nam. Evidently, the architectural business, like show business, now flourishes in both peace and war.

Business next year will be affected, most respondents feel, by rising construction costs and labor demands, counteracted somewhat by a greater efficiency in construction. The trend toward prefabrication and automation will continue. And, of course, as in the past, new materials and techniques are expected to create opportunities for new design concepts.

TABLE 1

Number of firms reporting and regional distribution

Region	No. of Firms	% of Firms
Northwest	73	5.4%
North Central	135	10.5
Great Lakes	122	9.5
Northeast	337	26.3
Southeast	149	11.6
Gulf States	73	5.7
Central States	62	4.9
Texas	75	5.9
Western Mountain	80	6.3
California-Nevada	178	13.9
Total	1284	100.0

Although regional distribution of returns remains about the same as in the past, the number of firms reporting from California, Nevada, and Hawaii more than doubled. Only one return was received from the Virgin Islands. No replies were received from Montana, Nevada, Nebraska, or New Hampshire.

TABLE 2

Average dollar volume by region

Region	Average $ Volume
Northwest	$3,520,832
North Central	6,697,880
Great Lakes	9,745,280
Northeast	5,837,054
Southeast	4,644,671
Gulf States	6,547,638
Central States	4,223,565
Texas	3,790,773
Western Mountain	3,086,200
California-Nevada	4,525,381
National Average	$5,518,584

Dollar volume lead moves from Central States to Great Lake States. National average is almost $1,000,000 greater than in any of past three years.

TABLE 3

Dollar volume averages and % distribution of work by types of buildings in all regions

Type	% of All Firm's Work	$ Volume in Average Office
Education	23.8	$1,312,433
Residential Multiple:	18.0	994,921
(Low Rise)	(10.8)	(596,395)
(High Rise)	(7.2)	(398,526)
Commerce:	17.5	964,128
(High Rise)	(9.1)	(502,826)
(Low Rise)	(8.4)	(461,302)
Health	10.8	594,541
Industry	9.0	495,383
Public Use	6.7	372,873
Religion	3.1	173,901
Defense	3.1	169,376
Urban Design	2.3	126,922
Other	2.1	113,919
Recreation	1.9	107,276
Residential Private	1.7	92,911
Total (average office, all regions)	100.0	$7,085,862,236

Education, Residential (Multiple), Commerce, Industry, Defense, Urban Design, and Recreation show gains for 1966. Commercial work shows the greatest gain; Public Use the largest decline.

TABLE 4

Activity of architectural firms in types of buildings

Types of Buildings	% of Firms Reporting Current Work
Commerce	57.2
Education	48.4
Residential:	
(Multiple)	43.1
(Private)	42.2
Religion	27.6
Health	26.6
Public Use	23.5
Industrial	22.7
Other	9.3
Defense	6.9
Urban Design	5.4

Most U.S. firms have work in more than one building category, so percentages add up to more than 100.

TABLE 5

Specialization of architectural firms

Types of Buildings	% of Firms Doing Only This Type
Education	2.3
Commercial	2.1
Residential:	
(Multiple)	1.8
(Private)	1.6
Religious	.9
Industrial	.6
Health	.4
Public Use	.2
Other	.2
Recreation	.07
Defense	.07
Total	10.24

Total specialization has increased slightly since last year. Defense work is back in the list after a year's rest, but this year none of the firms reporting specialize in Urban Design.

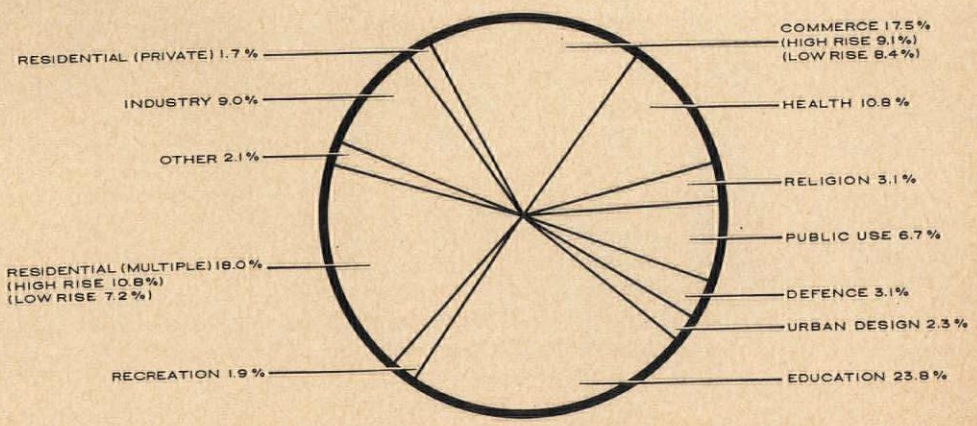
TABLE 6

Sizes of architectural firms

Size of Firm by Number	% of National Total
Up to 4 employees	46.1
5–9 employees	31.4
10–19 employees	14.0
20–39 employees	5.7
40–100 employees	2.1
Over 100 employees	.7
(Total Reponse: 1284)	100.0

Size of Firm by $ Volume of Work on Boards	% of National Total
Under $1 million	29.6
$1–10 million	58.4
$10–50 million	10.4
$50 million or over	1.6
	100.0

Percentage of firms with over 40 employees is down slightly, while percentage with over $10,000,000 is up.



GSA APPOINTS ARCHITECTUAL PANEL

WASHINGTON, D.C. In an obvious reply to criticisms of some recent Federal buildings —and of the appointment of a lawyer (Lawson B. Knott, Jr.) as head of the agency — the General Services Administration has named a 17-member panel of architects to review building designs.

Selections were made to give geographic representation, and also, according to Karel Yasko, assistant GSA commissioner for design and construction, to provide a panel equally balanced with "design-oriented and construction-oriented architects." The panel, which will serve for one-year term without pay, will: (1) review all designs for GSA-built buildings; (2) review GSA design standards and recommend changes; (3) advise Knott on selection of architects, for "nationally significant" projects; (4) propose criteria for selecting architects, and for contract terms.

Chairman of the panel will be William A. Schmidt, now Acting Commissioner of Public Buildings Service. Panel members include: Max Abramovitz, David L. Eggers, and Grant Fordyce, of New York; Max Brooks, Austin, Texas; J. G. Durrant, Dubuque, Iowa; Max Flatow, Albuquerque, N.M.; A. S. Goleman, Houston; Robert F. Hastings, Detroit; James Hunter, Boulder, Colo.; G. E. Kassabaum, St. Louis; Vincent G. Kling, Philadelphia; Charles Luckman and Henry L. Wright, Los Angeles; William G. Lyles, Columbia, S. C.; A. G. Odell, Jr., Charlotte, N. C.; Cyrus Silling, Charleston, W. Va.; Warren W. Taylor, Nashville, Tenn.

Note that no panelist is located in Washington itself. Local architects, said GSA, are taken care of through their membership on the Fine Arts Commission, which oversees design of buildings in the capital.

UN Competition Produces Planning Ideas for Devastated Yugoslav Town

1

SKOPJE, YUGOSLAVIA Two years after a one-and-one-half square-mile area of Skopje was destroyed by an earthquake, Kenzo Tange and The Town Planning Institute of Zagreb were announced as co-winners of the United Nations-sponsored competion for design of a new Central City. On July 26, 1963, when the quake hit the then-third-largest city in Yugoslavia, 85 per cent of Skopje's buildings were detroyed; damage inflicted totaled $1,300,000,000. Of the total population of 230,000, 1200 were killed, 2400 injured, 700 crippled and 170,000 left homeless.

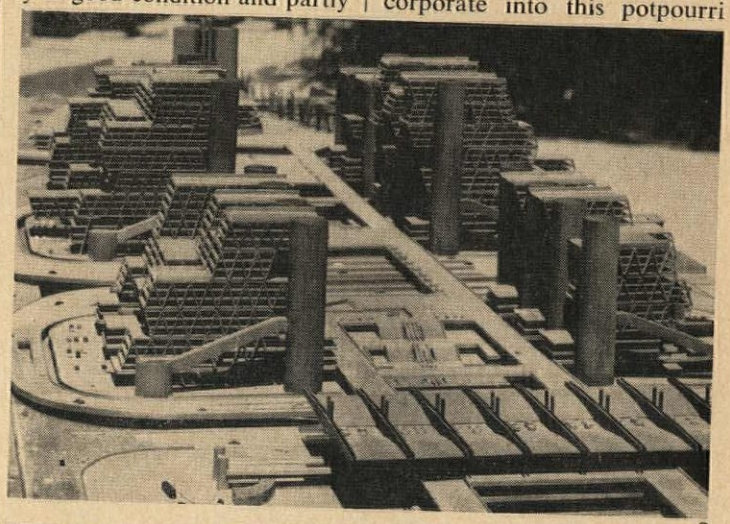
The Competition

The competition for a City Center design was promoted under rules for international competitions drawn up by U.N.E.S.C.O. Eight firms were invited to compete: four from Yugoslavia (Town Planning Institute of the Town of Ljubljana; Macedonia Project of Skopje; Town Planning Institute of the Town of Belgrade; and Town Planning Institute of the Town of Zagreb); Kenzo Tange (Japan); Luigi Piccinate (Italy); Maurice Rotival (U.S.); and Van der Broeke & Rakema (Netherlands). Each firm was to receive $20,000 for its 4½-months' efforts; an additional $20,000 would be awarded the winner.

Called for from the competing firms were: one model; an over-all plan (same scale as model); and five separate maps of the Center City, showing traffic circulation, green areas, layout, zoning, and one composite map showing the over-all organization. Also required were a written report on the design conception and solution.

Each firm was told that the design should be simple, provide for an estimated population of 350,000 by 1981, and contain the technical answer to many social problems: "The City Center will extend over to the left bank of the River Vardar, into the oldest and most historic part of the city. There are still preserved, partly in good condition and partly in ruins, some beautiful and valuable architectural monuments. They will have to be incorporated into the spatial arrangements of the new city and they will have to be brought to life. The center should include economic, cultural, social, and political activities. There are a variety of ethnic groups living in different parts of the city. . . . They should be encouraged to participate in the creation of that particular character of their homes, neighborhoods, and that of the entire city." In March 1964, a representative of each competing firm was flown to Skopje at Special Fund expense for a three-day conference where final questions were asked and answered.

Despite the remarkably thorough destruction caused by the earthquake, creative planning for renewal was hampered by the existing buildings, waterworks, sewage system, electricity supply, road system, and bridges, plus the need to incorporate into this potpourri the perimetral, prefabricated houses (built quickly right after the quake) and the added services and places of employment these houses will create.



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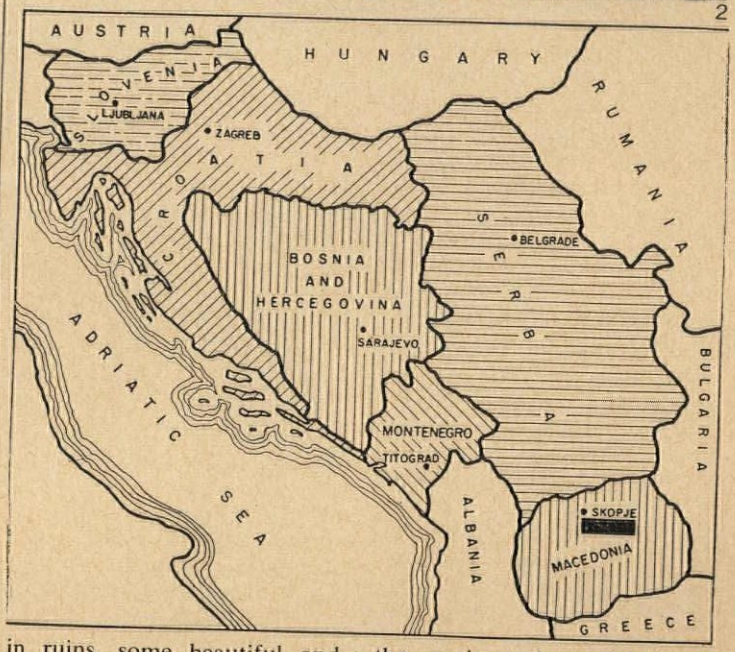
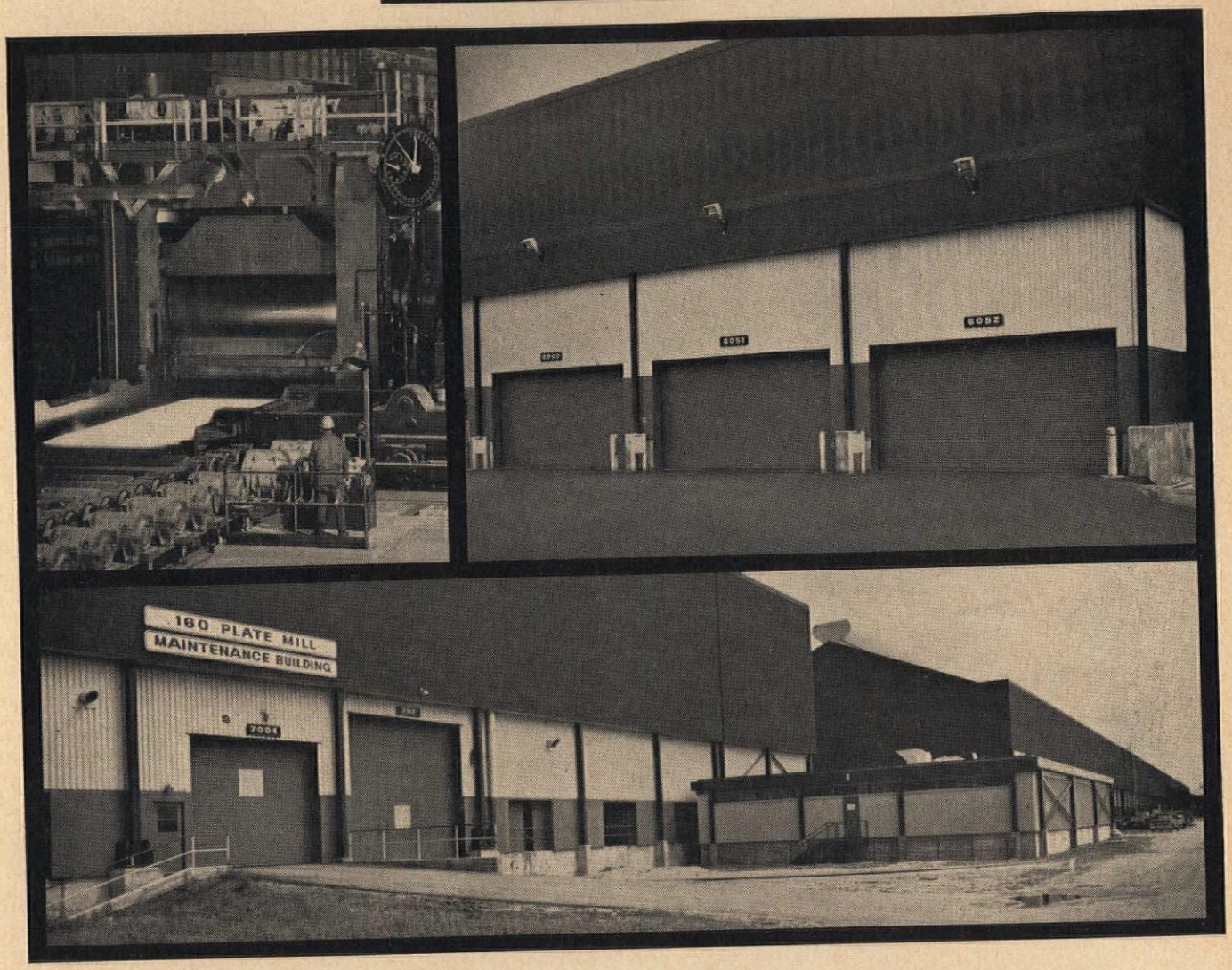


Jury Report

A 10-man jury met on July 12, 1965, and spent 9 days deliberating the submissions. The jury included: Ernest Weissmann; Adolf Ciborowski, Jean Canaux (France) representing the U.N.; Arthur Ling (U.K.) represent-

MAHON IS IDEAS

IN ROLLING STEEL DOORS



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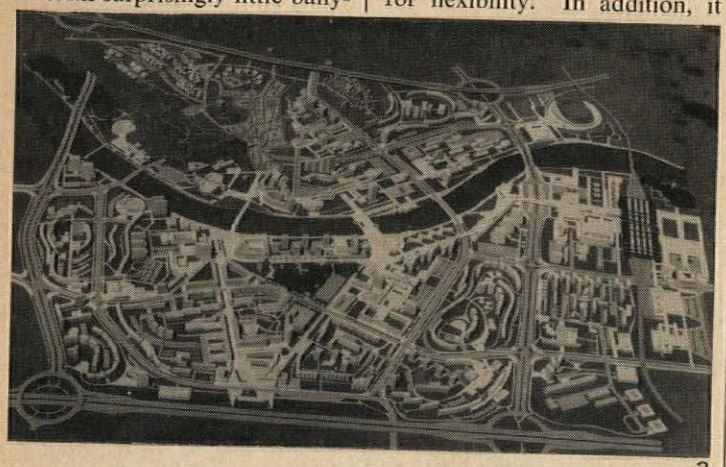
ing the International Union of Architects; Martin Myerson (U.S.), dean of the School of Architecture at the University of California, Berkeley; Tiberic Kirijas, Ljube Pota, and Sasha Sedlar, all representing Skopje local authorities; Vojislav Midic of Yugoslav Town Planning Associates; and Uros Martinovic of Yugoslav Architects Association. Also present were six consultant-specialists on historic monuments, transportation, traffic flow, economics, and structural and seismological problems.

With surprisingly little ballyhoo, the Tange project **(1, 2)** was awarded 60 per cent of the $20,000 prize; the group from Zagreb **(3)**, 30 per cent. A jury report, which examined in minute detail the pros and cons of each entry, showed that no one proposal adequately solved complex planning problems. "In the jury's considered opinion," it stated, "the eight entries submitted by the participants provide a wealth of imaginative town planning and architectural ideas. Together, they offer a fruitful source of study for the optimum solution for the design of the new Skopje City Center. . . . No one entry should be the single basis for implementing the reconstruction of the Center of the City."

The Tange project was praised for the architectural interpretation of the larger structures and design of the urban ensembles; for the siting of new cultural facilities and monuments; for the multilevel pedestrian movement plan that allows important areas and buildings within the city center to be linked together. The scheme was critized for its traffic plan; for the underground railway facilities solution; for the location of the University; and for some unnecessarily large, out-of-scale structures.

The Zagreb project was praised particularly for the "opportunity it provides for realization in stages and thus for flexibility." In addition, it incorporated sensible treatment of the river area, respect was paid to historical and natural features; the vehicular traffic and circulation scheme was simple and efficient; and there was possibility for a variety of residential spatial arrangements. It was considered weak in "architectural invention," and in unsatisfactory arrangement and scale of some buildings.



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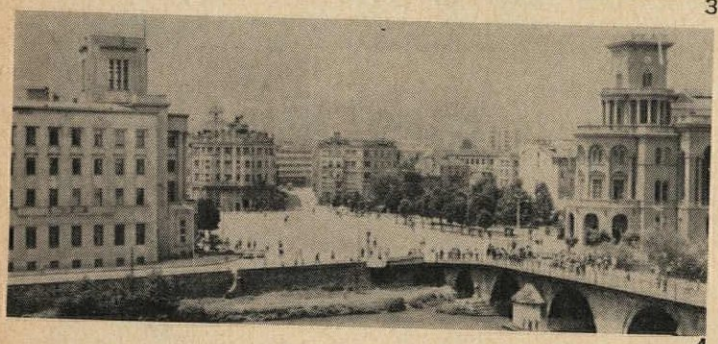

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In conclusion, the jury released several sweeping planning recommendations—among them that the Vardar River should be a unifying element in the composition. Kale Hill, the highest natural feature in the area, should dominate and its natural beauty be left unspoiled. The Turska Carsija (old quarter) should be restored; housing should mix high-rise and low-rise, according to population preferences; many sports and recreation facilities should be scattered throughout the city; Marshall Tito Street, an arm of what was the most beautiful square **(4)**, should be given a special and consistent character. Highways ringing the center should be landscaped.

What Now?

Unrivaled talent and effort have been focused on Skopje's problems through this U.N.-sponsored competition. The question remains: How long must Skopje sit in ruins until the proposals are coordinated and converted into approved plans, and those plans realized in mortar and concrete?

CIB Meets in Denmark

The following report was written for P/A by George J. Santry, president of the Schokbeton Products Corporation, who was one of 900 persons attending the Congress for Industrialized Building in Copenhagen, August 22–28.

A report on this Congress should be prefaced by stating that future meetings will be severely tried to equal the outstanding manner in which all phases of this program were organized and conducted.

I wish I could continue to report in glowing terms of the effectiveness of the many seminars or group discussions, which were for the most part very ably chaired. As yet, I have been unable to pinpoint to my own satisfaction the missing ingredient. Certainly, the following agenda and the predistributed papers seemed to provide a basis for challenging debate and discussion, but somehow the spark to ignite such an atmosphere failed to appear. With rare exception, speakers seemed merely to be confirming knowledge already acquired or proven by the audience, instead of exploring the exciting territories of materials, design, and technology.

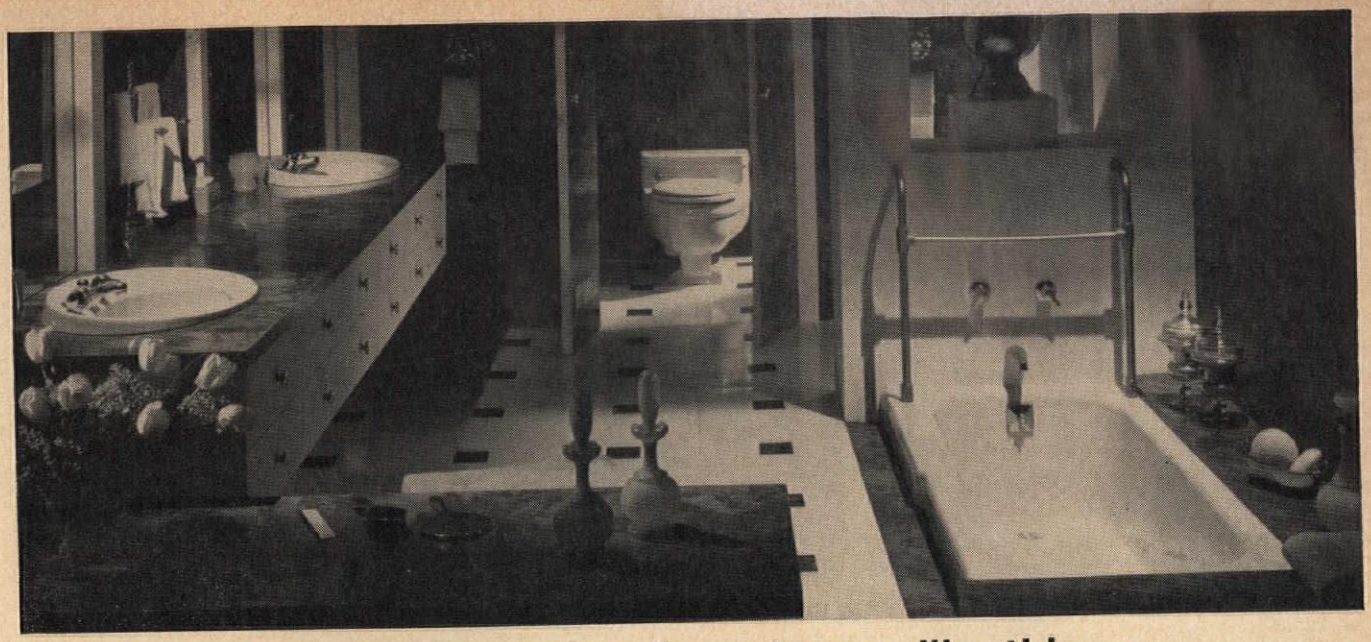
The papers submitted, published, and distributed prior to the group meeting are certainly worthwhile, and, as a folio, represent a very interesting cross-section of thought, opinion, and current status of the field of industrialized building today. I hesitate to say these are a "must" for those interested in this field, but they are definitely an asset in one's reference library.

It is apparent that most countries in Europe (including those in the Soviet orbit) are convinced that the answer to the shortage of so-called "social housing" lies in the industrialized production of components.

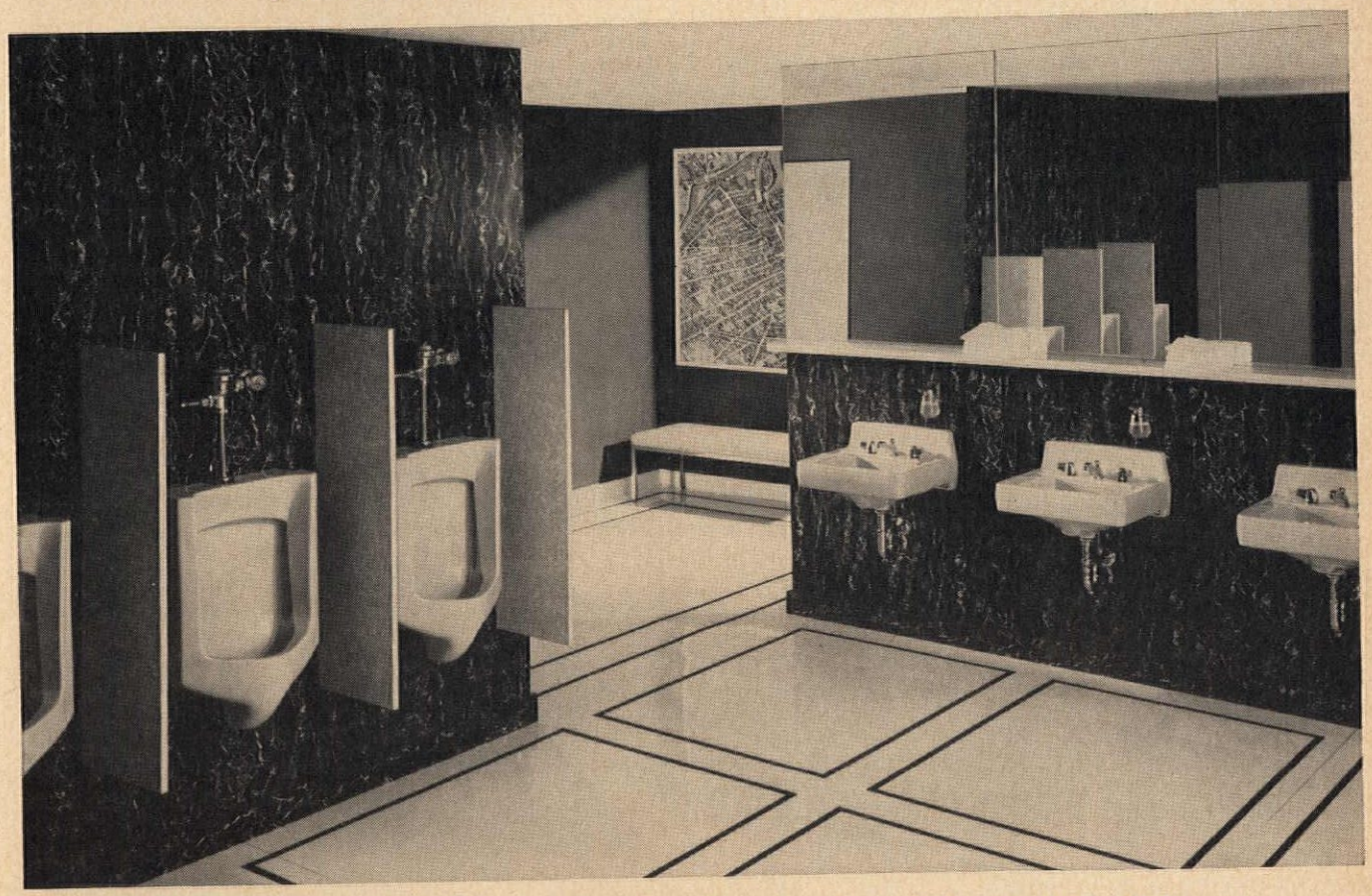
Using arbitrary percentages to express the differences between the United States and Europe, I came to the conclusion that the problems in industrialization of "social housing" in Europe are perhaps 75 per cent technical and 25 per cent sociological. By contrast (although I am not inviting challenge), based upon the United States' industrial competence, I am convinced that our problems facing a true solution to industrialized "social housing" are 25 per cent technical, 40 per cent *sociological*, and 35 per cent *jurisdictional*. While the United States can gain a great deal from Europe's experiences, there is nothing of a technical nature that cannot be overcome in short order, providing the way is cleared to accomplish this objective.

It must also be recognized that in the area of public housing, Europe's problem is by no means comparable to our own. Their buildings, which are architecturally attractive and meet their necessary functional and social standards, would fall short of our requirements and result in future slums. When most European countries, particularly the Scandinavian ones, speak of public or "social housing," they are referring to occupancy by persons in the *lower income bracket*. From the standpoint of their *social* level, however, they are at least equal to our middle-income strata. This results in the impeccable maintenance of property and surroundings and the nonexistence of deliberate destruction.

While in the United States the difference between the construction standards of low-cost and luxury housing are nominal (primarily space, location, and finishing), the public housing we visited in Denmark is definitely inferior in construction to middle- and upper-income developments. For example, with the exception of the precast structural components, most materials are definitely flimsy. The curtain wall, composed of an exterior of flat asbestos concrete board backed with fiberglas mats and wall



Fathers and sons from homes like this...



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board, is almost incongruous compared to the structure. Window units are crudely framed in wood with interestingly-designed but cumbersome hardware which would not withstand abuse. Because of the government's desire to have all major industries participate wherever possible, this often results in a compromise in material selection: e.g., prefabricated birch floors floating on risers laid on precast concrete are springy and noisy. It was the opinion of most of the Congress participants that an insulated asbestos or vinyl tile would be far more practicable.

While the over-all impression of the public housing is attractive, I believe most credit must go to the government's generous allocation of land for a given project and the architect's organization of such outdoor areas as parks, playgrounds, parking space, walks, etc. There is a definite feeling of spaciousness and light, the absence of which would make the project very ordinary.

The overriding question remains to be answered in the U.S.: Is our country ready to face realistically the task of overcoming our urgent need for low-cost housing in a manner and with the speed compatible with our day without creating greater problems for future generations?

SOUPED-UP MOSQUE FOR SOUTHEAST ASIA

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KUALA LUMPUR, MALAYSIA The devout—10,000 of them—gathered for the opening of Malaysia's Masjid Negara, or National Mosque, in Kuala Lumpur. Although only 58 per cent of Malaysia's population is Moslem, it is the official state religion, and Malaysia would like to become an important Islamic center. As recently as January 1964, the World Muslim Congress decided to make Kuala Lumpur its Southeast Asian headquarters. The National Mosque, which was conceived a month before Malaysian independence in 1957, will accommodate 8000 persons. It was also conceived as a monument to independence.

Architecturally, what emerged looks a little like a corporate pavilion at a World's Fair. It has showmanship. Its relationship to a traditional mosque is comparable to that of the Vatican Pavilion at the New York World's Fair in relation to St. Peters. There is no moving walkway to carry a visitor past a blue-lighted statue; but the

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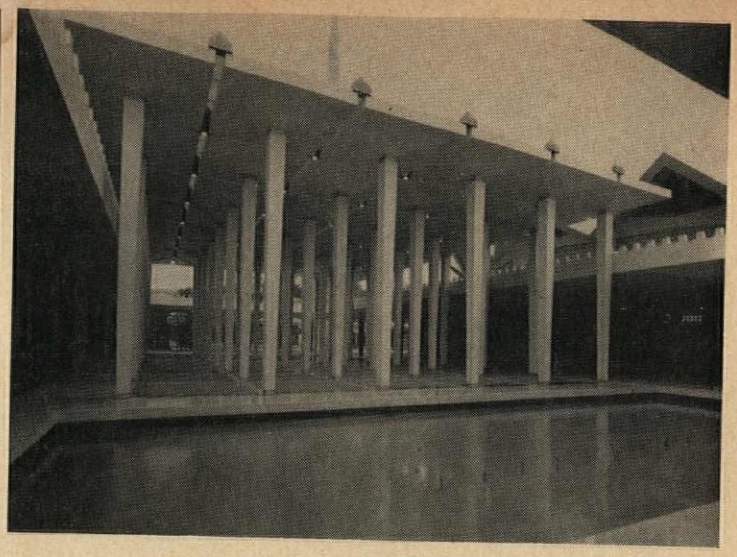
crier who five times daily announces the hour of prayer travels to his perch atop the 245′ minaret by elevator, his voice carried to the multitudes via a public-address system.



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Part of the architectural result reveals a conscious attempt on the part of Malaysian officials to seek out a national architectural style. However, architect Enche Baharuddin bin Abu Kassim, a government staff architect who studied in Great Britain, also tried to give a passing nod to traditional mosque architecture. For this commission, he traveled throughout the East, studying mosques in India, Pakistan, Iran, Turkey, Spain, Arabia, and the United Arab Republic. His design reflects this study, much as the work of Stone, Yamasaki, and Corbu reflect Eastern influences. Baharuddin bin Abu Kassim, however, has not done his work as well. Perhaps it has yet to mature.

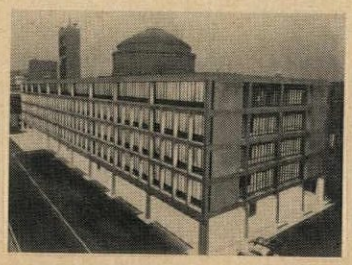
Spreading over five acres of the 13-acre site, the building comprises a grand hall **(1, 2)** (surrounded on three sides by a covered veranda), the minaret and its reflecting pool **(3)**, a decorative courtyard with two pools, a *Dewan* or meeting hall **(4)**, a library, a royal antechamber for the Malaysian King, Yang de Pertuan Agong, and offices for Moslem officials.

The hall is covered with a pleated shell roof of concrete, finished with glass mosaic, and supported by 16 columns each 3′ in diameter. Shaped purposely like an unfurled umbrella, the roof (200′ in diameter and 84′ high, from floor to apex) is symbolic of the royal umbrella, open to shelter the king. The minaret symbolizes the umbrella furled.

Some touches of the traditional mosque remain. The 73 small domes that dot the top of the veranda are based on Saracen design, and the grillework that stretches around the building has a traditional pattern. In the meeting hall, the complex roof system of connoid and pleated shell concrete, finished in white glazed mosaic, is distinctly Oriental. Yet despite these ties to the past, much that is not traditional intrudes. Much of the decorative grillework is aluminum, for instance, and the rosette with a Koranic inscription at the roof of the grand hall, an exact replica of those found under the great dome of the Blue Mosque in Istanbul, is here fashioned from aluminum. The minaret is lit by strip lighting at night.

Perhaps this gigantic project, which cost more than $3,000,000, one third raised by private donation, can become a stepping stone in Malaysia's quest for a distinctive national architectural style.

MIT'S CMSE



CAMBRIDGE, MASS. MIT recently dedicated its newest addition—a $6,000,000 interdepartmental Center for Materials Science and Engineering, the largest building to be erected on the Cambridge campus in some 50 years. Designed by Walter A. Netsch

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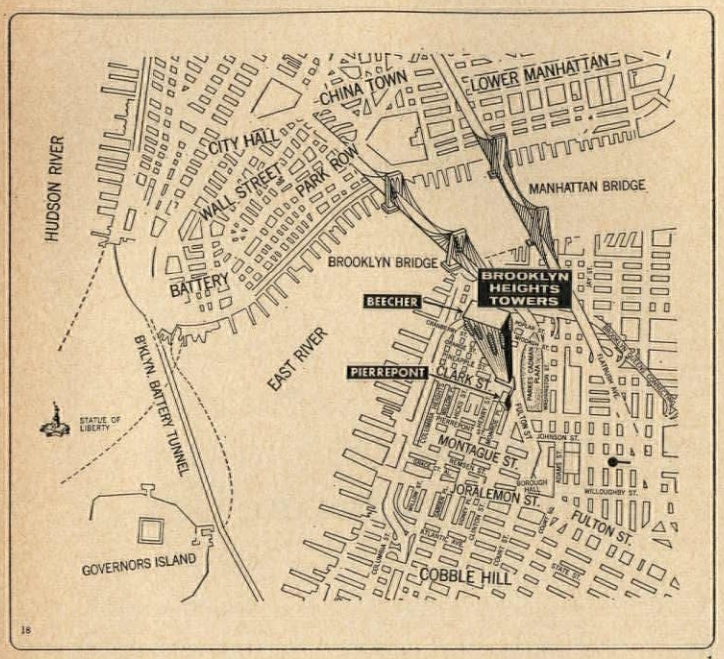
of Skidmore, Owings & Merrill, the five-story concrete-and-glass building fills what was formerly the main MIT parking area, and now makes a new north façade for the university's main building and its familiar dome. The center is the first in the new North Campus master plan, devised by SOM. Planned for the area are a Center for Advanced Engineering Study and a Center for Space Research.

SCALING THE HEIGHTS



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NEW YORK, N.Y. It is curious that while our cities have grown so high, vertical space has been used so unimaginatively: Babylon, with its Hanging Gardens, was built on a more ingenious idea of heights than our towering, obelisk-like apartment buildings with near-useless balconies and ground-level plazas.

It is true that 20th-Century visionaries have lamented that the city is never considered one single structure, with many different levels of indoor and outdoor spaces closely related to each other. Although the concept always appears fantastic and foreign, it is probably closer to our traditional habits of living than the high-rise building where all indoor living is up in the air and all outdoor stretching is down on the ground. But for all practical purposes, the cliché of the high-rise-and-wide-open-spaces still persists, even though it has destroyed the fabric of many old communities and provided much unusable space. The alternative proposal and the more current cliché—the row house—is only a little better: It continues the façade of the street, provides a direct relationship between a vertical and horizontal space; but only on one level. It may be an innovation for suburbia, but for urban living it provides no solution to higher densities.

Perhaps nowhere are the current trends in urban planning more apparent that in two housing projects currently underway in the old community of Brooklyn Heights, in New York. One project, an enlightened synthesis of town house and apartment building, is designed by the architectural firms of M. Milton Glass and Whittlesey & Conklin; the other, by Morris Lapidus Associates calls for two-story row houses sandwiched in between two towering high-rise apartment buildings. One architect is thinking of the city block in terms of a unified structure; the other is still thinking in terms of single buildings. In one, there is an attempt to establish a human scale at two levels; in the other, there is an exaggerated juxtaposition of high and low.

The Flavor of the Old

What this means, in terms of the scale of the community and the effect on the older section of the Heights, is worth noting. Brooklyn Heights is an oasis of small-scale residential living that is one subway stop away from Manhattan's towering Wall Street. It is situated on a high bluff overlooking the East River. The streets are lined with trees and the houses are low—three to five stories—with more than 1000 of them dating from the pre-Civil War period. It is a popular residential area for couples with young children, and one of its major attractions is a promenade along the river that overlooks one of the most spectacular views of lower Manhattan.

Brooklyn Heights, in plan **(1)**, is a long, narrow area oriented toward the river. The area, designated for urban renewal under the Title I program, is a narrow strip of five blocks—formerly occupied by parking lots, garages, and delapidated houses (unfortunately, Walt Whitman's was among those destroyed). This strip was the backyard of the community and acted as a rather seedy buffer between the better residential area and a main highway.

One Bad Apple

The Lapidus project **(2)** is an unfortunate design for this particular site: The two high-rise apartment buildings—33 stories and 26 stories—are completely out of keeping with the architectural character of the community and ludicrously out of scale with both the older houses and the new ones sandwiched in between. The objective—"to save as much open space as possible"—has been achieved; but was it the right objective in the first place? The design breaks up the character of the street façade, and fails to provide a strong, consistent barrier toward the highway. Furthermore, the towers are monuments in a vacuous space. The structures at ground level are enclosed parking lots and the precious earth, so carefully preserved, is likely to end up like all the others—wasted, because it bears no direct relationship to people who live, not on it, but above it. The project, which includes 620 dwelling units, garage space for 620 cars, and a shopping center of 14,000 sq ft, will cost an estimated $18,000,000. One section, Cadman Plaza North, will be ready for occupancy in October of 1966; the Whitman Close Houses will be completed six months later.

Photo: Louis Checkman

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A Distinctive Blend

The Milton Glass, and Whittlesey & Conklin project **(3)**—The Brooklyn Heights Towers—occupies a much smaller area (115,650 sq ft as opposed to 342,173 sq ft. It is far more compactly designed and successful in its use of vertical

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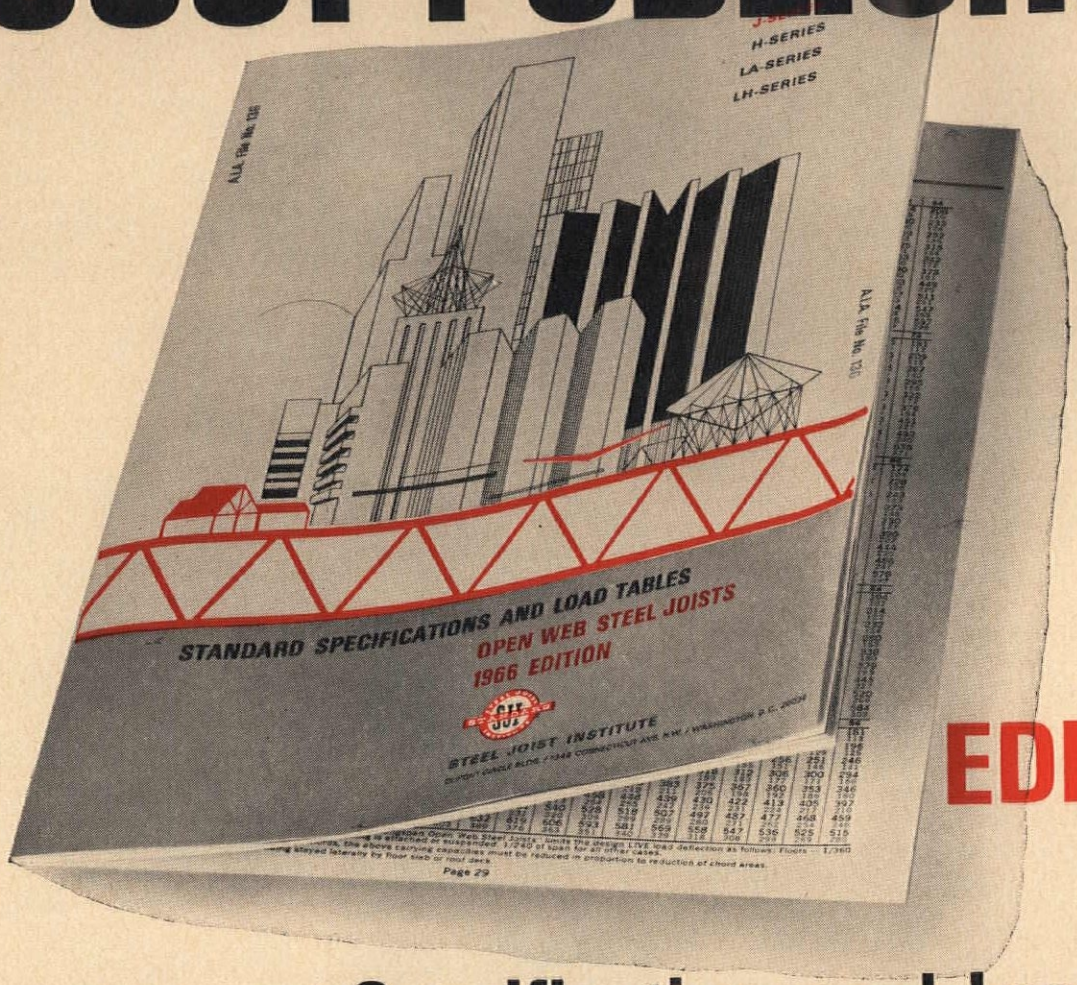

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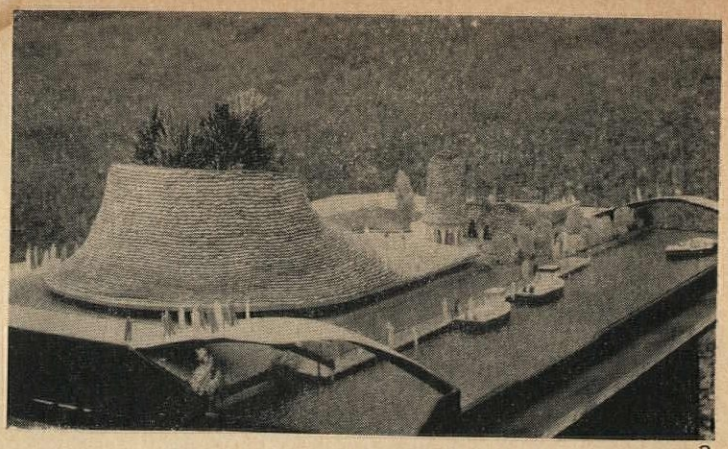
and horizontal space; and, although more radical in concept, it blends in far better with the older community. A row of town houses on the ground level continues the façade of the street (parking facilities are inside), and the "rooftops" become a landscaped terrace—a "ground level"—for another row of town houses and apartments above. It is an emerging Tower of Babel, where at least two levels have direct access to the out-of-doors. For the rest of the cliff dwellers located in the apartments above, there are some imaginative uses of outdoor spaces. Instead of the usual slabs of balconies, projecting, with balustrades, from the façade, the Towers have spaces more akin to porches with a protective roof and side posts, which give a feeling of partial enclosure, privacy, and security, even on the twenty-eighth floor. There are also different types of balconies: some are spacious to sit upon; others are conceived as widows'-walks, as small projections to go out upon, get a view of the river, a whiff of air and return inside (which seems a candid evaluation of the usefulness of many balconies). The project can accommodate 400 families and has a choice of 47 different layouts—a surprising variety in planning. And included in the package are a 500-seat theater, swimming facilities, an indoor garage for 300 cars, and 20,000 sq ft of commercial space in a shopping mall between the high-rise buildings. Estimated cost of the project is $17,000,000. It will be completed in 1967.

What Might Have Been

Although the combination of the high-rise towers on top of the row houses is still slightly awkward, it is because the two are still thought of as separate elements. They have not quite adjusted to one another to become a coherent structure. But the germ of a larger idea is there, and, by connecting the terraces, the architects are beginning to create another level for the community as a whole—not only to one block. It would be interesting to speculate on what the architects might have done had they been given the entire area to design. Had the strip been conceived as a unit, the design could have had greater scope. The entire area might have been covered with a gradually terraced structure that would have faced the river, formed a barrier to the highway, and been more appropriate in character to the rest of the Heights. Also, a more direct relationship between outdoor and indoor spaces could have been established on every level. But that is the stuff that dreams are made of, and the solid reality of the Glass, Whittlesey & Conklin project gives encouragement that, someday, it just may happen on a broader scale.—MD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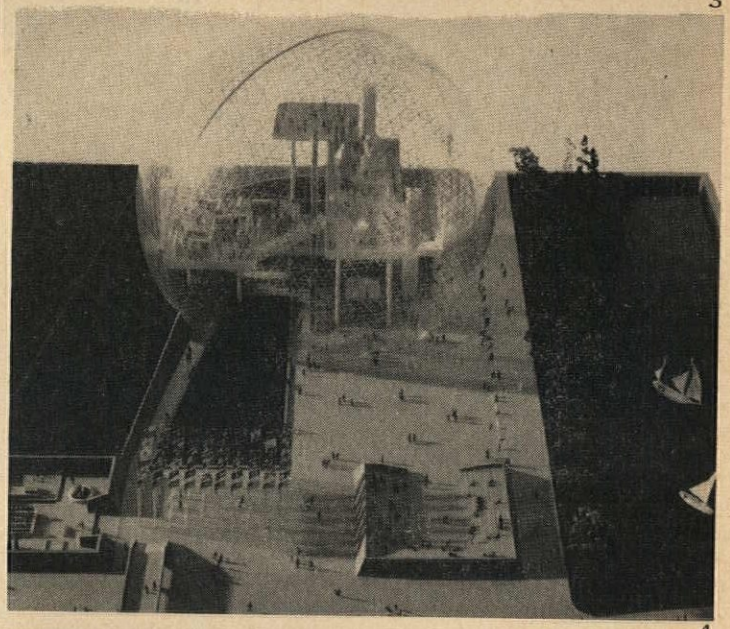
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Photo: Panda Associates
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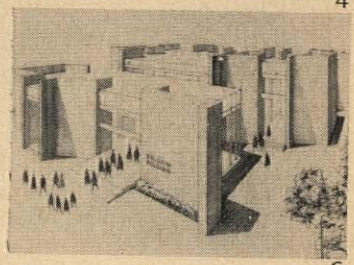
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Photo: Arnott Rogers Batten Ltd.
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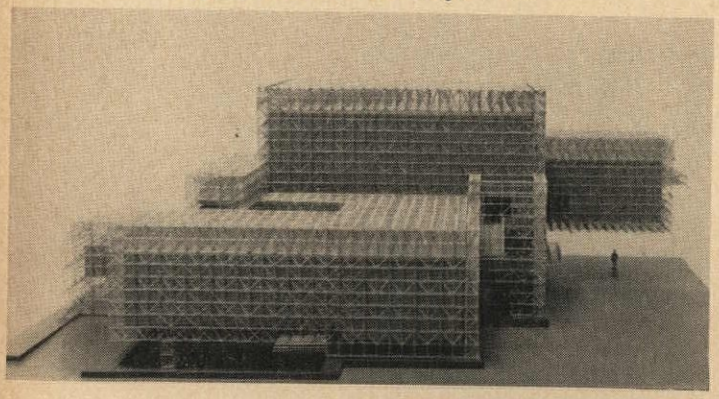
Expectations of Expo '67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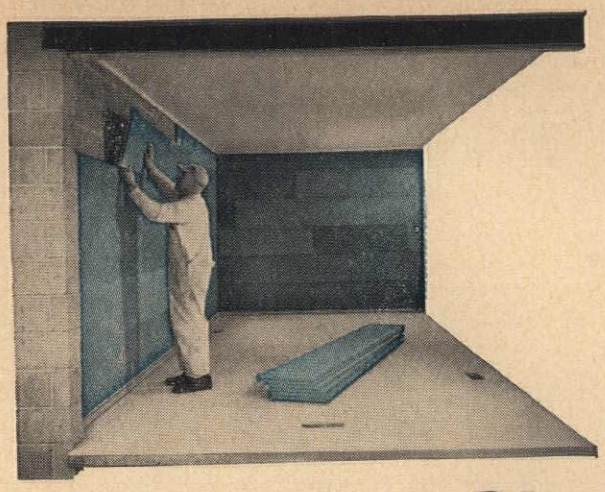
MONTREAL, CANADA. With the New York World's Fair freshly laid in its grave, some 59 nations, 27 Canadian industries, 10 Canadian provinces, and a few more interested parties are preparing for Expo '67. The exposition, marking the hundreth year of Canadian confederation, shares the build-up and expectation that the Flushing Meadows show had, but this one is pitched on a lower key. The fair's run will be one year (April 28 through October 27 of 1967), not two; its anticipated draw, 10,000,000, not 70,000,000; its theme, "Man and His World," not "Peace through Understanding."

Some of the pavilions that will grace the complex of largely man-made islands off Mon-



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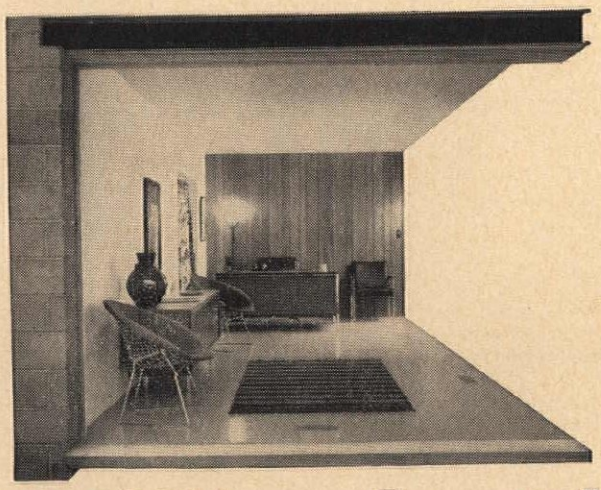

O.K. Now forget it.

(Until your next roofing or wall insulation job.)

DOW

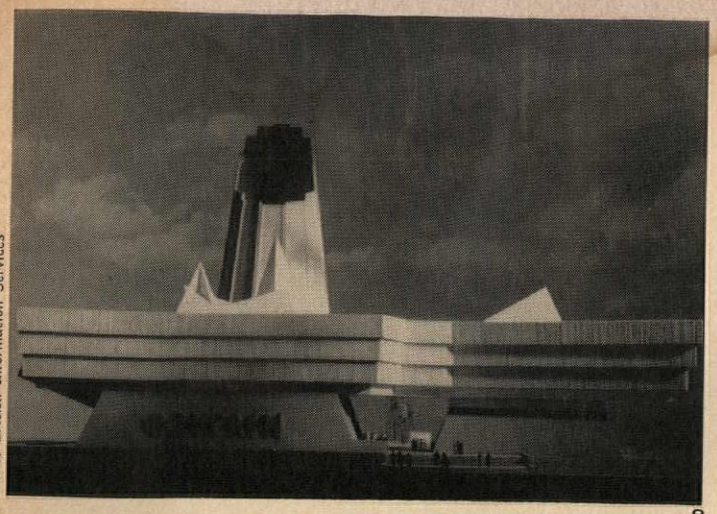

Photo: British Information Services

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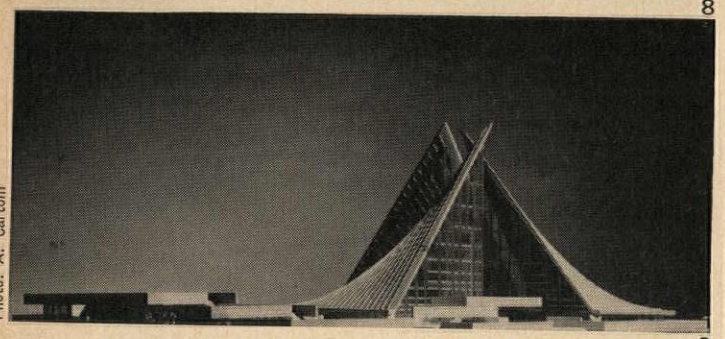

Photo: A. Cartoni

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treal Harbor in the St. Lawrence River are shown below:

(1) Netherlands Pavilion: W. Eijkelenboom and A. Middelhoek, with George F. Eber, Canadian associate.

(2) German Pavilion: Prof. Rolf Gutbrod and Prof. Frei Otto, with O. Tarnowski and George F. Eber, Canadian associates.

(3) Pavilion of the Four Western Provinces: Beatson Stevens Associates.

(4) United States Pavilion: with Buckminster Fuller designing the sphere and Cambridge Seven Associates, Inc., in charge of landscaping, exhibits, traffic, and platforms.

(5) Ontario Pavilion: Fairfield & Dubois.

(6) Belgian Pavilion: René Stapels, with George F. Eber, Canadian associate.

(7) Agricultural Pavilion: Longpré, Marchand, Goudreau, Dobush, Stewart, Bourke. Structure here is an unusual and appropriate combination of earth fill and planting.

(8) British Pavilion: Sir Basil Spence, with Bland, Lemoyne, Edwards, Shine, Canadian associates. Peculiar to this pavilion is its almost graphically mapped out theme of strength, maturity, and aspiration. The 150′ tower, incomplete in form, is meant to stress England's unending contributions to world progress.

(9) Italian Pavilion: Piro & Co., consulting engineers. Italy here stresses her handicraft and art. Floors are of carved Carrara marble. A hand-painted glazed frame encircles one-third of the structure's sails. These three "sails" represent a first in construction techniques—the first application of ⅛″ steel membrane conoids.

And bit by bit, another fair emerges. As it does, we will report it.

OBITUARIES

FRANCIS J. MCCARTHY, San Francisco architect, died there early in August at the age of 55.

OTHMAR AMMANN, builder of bridges, died at his home in Rye, New York, at the age of 86. His achievements span the United States. The San Francisco Golden Gate Bridge, the Delaware Memorial, the Walt Whitman, the George Washington, the Triborough, the Bronx-Whitestone, the Bayonne, the Throgs Neck, the Verrazano-Narrows Bridges and the Lincoln Tunnel are all testaments to his greatness.

RICHARD HAVILAND SMYTHE, restorer of Stony Brook, Long Island, and designer of the Thom McAn shoestore storefront, died here at the age of 76.

LORD BOSSOM, British architect and pioneer of American skyscrapers, died in London at the age of 83.

JEAN B. FLETCHER, partner in The Architects Collaborative, died in Cambridge, Massachusetts, at the age of 50. With her husband, Norman C. Fletcher, she won the Pittsburgh Plate Glass Competition in 1945 and the Smith College dormitory competition in 1946.

WASHINGTON/FINANCIAL NEWS

BY E. E. HALMOS, JR.

Census Bureau will begin work early in 1966 on its first attempt in more than 26 years to take a census of the construction industry.

The census will be part of the five-yearly census of business, and will be taken for the year 1967. Last attempt—admittedly a long way from a resounding success — was in 1939.

Census specialists are now preparing a sample questionnaire, to be sent out as a test to a cross-section of the industry early in 1966. After it has been refined, a final questionsheet will be sent out in 1967 to some 200,000 contractors.

The results, Census experts hope, will provide the first accurate profile of the industry as a whole: how many people it employs, what types of work it does, how much and what it buys. A further result may be the updating of many of the statistical series now maintained.

"Beauty" Bills

An "beauty" aspect of the debate—an outgrowth of recent Congressional action that gave overhead power lines (needed by the Atomic Energy Commission) precedence over efforts by a California community to implement its own beautification program—resulted in two new bills (S. 2507 and 2508) by Oregon's Senator Maurine Neuberger. The aim of both bills, which will cost $150,000,000 over a 10-year period, is to find out how many overhead transmission lines there are in the U.S., where they are located, and what can be done about putting them underground so that they will not mar the natural beauty of our landscape.

Also strongly affecting the "beauty" program was passage of new amendments to stream-pollution control laws (S. 4), increasing funds available for control work and tightening standards for discharge of pollutants into streams; action came, too, on bills to impose controls on release of pollutants into the air.

Funds for Airports

Federal Aviation Agency has announced allocation of $84,500,000 in matching funds for construction and improvement of 445 civil airports during the current fiscal year. The funds will cover construction of 74 new airports and improvement of 371 existing fields. Major portion of the money will go to obtaining land for clear approach zones, and for construction and reconstruction of runways and other facilities.

Financial

As the year entered its final quarter, continuing evidence of strong public support for public works construction was of key importance to the construction industry. The Investment Bankers Association reported that, in July, for example, taxpayers had approved nearly 92 per cent (by value) of all public work bonds presented to them, for a total of $129,100,000 in new funds authorized. And more than $2,200,000,000 worth of additional bond issues—including nearly $500,000,000 for new elementary and secondary schools—will be presented to voters over the next 12 months.

Private housing, however, continues to show a steady slip downward. In August, according to the Census Bureau, rate of new private housing starts was at an adjusted annual rate of 1,402,000, down 7 per cent from a year ago.

As of September, money rates seemed to be easing a little, according to the Housing and Home Finance Agency. For the first time in many months, average secondary market price for FHA-insured mortgages dropped very slightly (to $98.2 per $100 of outstanding loans).

L-M STYLED MERCURY and STYLESHIELD units in parking lot of Lake Shore Tower Apartments; Cudahy, Wisc.

Architect: TANNENBAUM, KOEHNEN & DEMETER, Milwaukee, Wisc.
Developer: TOWNE REALTY INC., Milwaukee, Wisc.
Contractor: LEMBERG ELECTRIC, Milwaukee, Wisc.

FOR A SYMPHONY OF STYLING AND COLOR

LINE MATERIAL MEDIUM ILLUMINATION OUTDOOR LIGHTING

250-400 WATTS MERCURY and METALLIC ADDITIVE • 620 WATTS INCANDESCENT
10,000-30,000 LUMENS • 1.2-2.0 MAINTAINED FOOTCANDLES

STYLING AND BEAUTY

Give your next lighting job a touch of elegance by choosing from Line Material's line of outdoor lighting. All L-M fixtures are styled by the noted industrial designer, Jean Reinecke, specifically to provide lighting fixtures that are compatible with today's architecture. And you have the choice of 9 colors to add just the right touch to accent or contrast with your landscape and exterior design.

EFFICIENCY, ECONOMY

You realize optimum light efficiency with all Line Material luminaires. Each has been engineered to provide maximum light utilization. *There's no glare or wasted light.* You also realize optimum economy with Line Material fixtures. All are fabricated of aluminum to assure long corrosion-free life. You also obtain the economy of low cost installation and maintenance with standard bases for easy mounting and accessible interiors for easy wiring, cleaning and relamping.

COMPLETE LIGHTING SYSTEMS

You avoid all the problems of coordinating your lighting job if you specify from L-M's complete outdoor lighting line. In addition to luminaires, you can order ballasts, poles, brackets, lamps, and all wiring and power supplies. Service and technical assistance through your Authorized L-M Distributor. And an L-M Lighting Engineer and an L-M Field Engineer are also available to assist you.

LINE MATERIAL'S COMPLETE OUTDOOR LIGHTING LINE ALSO INCLUDES HIGH, MEDIUM-SOFT AND SOFT ILLUMINATION

TURN PAGE

SELECT COLOR AND STYLING FOR YOUR JOB FROM L-M'S MEDIUM ILLUMINATION LINE...

FOR PARKING AREAS • SHOPPING CENTERS • MALLS • OUTDOOR AREAS STREETS • HIGHWAYS • ROADWAY ENTRANCES • AND DRIVEWAYS.

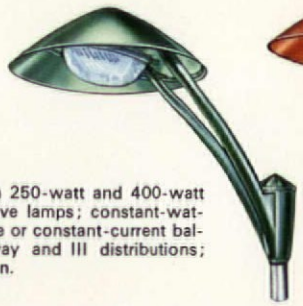
250-400 watts mercury and metallic additive • 620 watts incandescent
10,000-30,000 lumens • 1.2-2.0 maintained footcandles

STYLED MERCURY

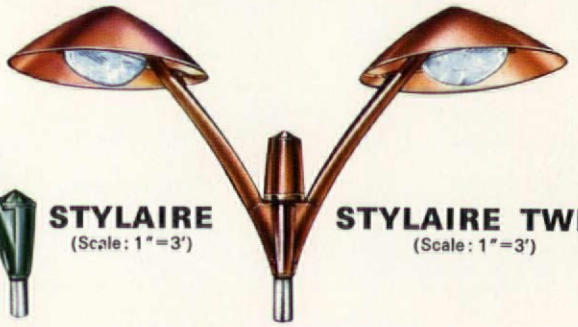
Graceful, elegant styling in distinctive designs. Available in 9 dynamic colors. Provides economy, with 1) shorter poles, 2) standard pole top mounting eliminating support arms, and 3) internal ballast eliminating external ballasting plus related wiring and mounting expense.

STYLEVUE
(Scale: 1"=2')

SPECIFICATION
Units available for use with 250-watt and 400-watt mercury and metallic additive lamps; constant-wattage, reactor, high-reactance or constant-current ballasts; IES Types II, II-4 way and III distributions; photocontrol accommodation.



STYLAIRE
(Scale: 1"=3')

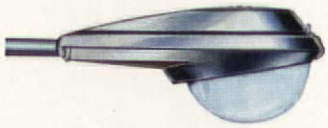


STYLAIRE TWIN
(Scale: 1"=3')

STYLESHIELD
(Scale: 1"=2')

Same modern, distinctive, and sweeping design as Styled Mercury. Ideal for new installations, alone or in combination with Styled Mercury units. Furnished with a choice of 9 decorative colors. Can be mounted on 2-inch supports or davit poles with a 2-inch tenon.

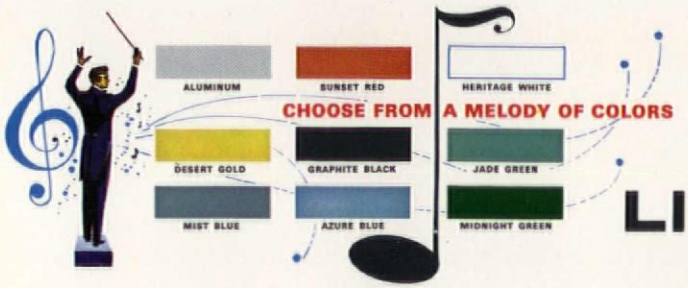
SPECIFICATION
All units available for use with 400-watt mercury and metallic additive lamps; IES Types II, II-4 way, III, and IV distributions; photocontrol accommodation.



UNISTYLE
(Scale: 1"=2')

Clean, modern lines and efficient lighting. Designed for 1¼-inch or 2-inch supports. Available in aluminum finish. Provides installation economy with 1) one-piece lower housing that removes readily for ease of installation, 2) internal ballast, and 3) independent leveling assembly.

SPECIFICATION
Available for use with 250- or 400-watt mercury and metallic additive lamps; internally mounted constant-wattage, high-reactance, reactor or constant-current ballasts; IES Types II, II-4 way, and III distributions; built-in photocontrol receptacle.



FOR COMPLETE INFORMATION on Line Material's line of outdoor lighting contact your L-M Distributor or write Line Material Industries, Milwaukee, Wisc. 53201.

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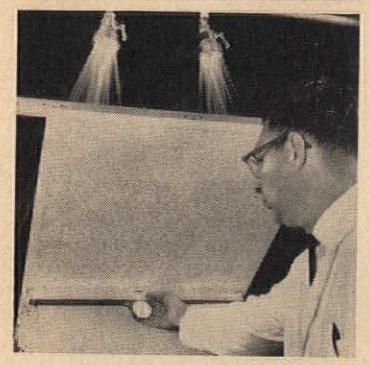
LINE MATERIAL® McGRAW-EDISON
INDUSTRIES
McGRAW-EDISON COMPANY

Acoustics



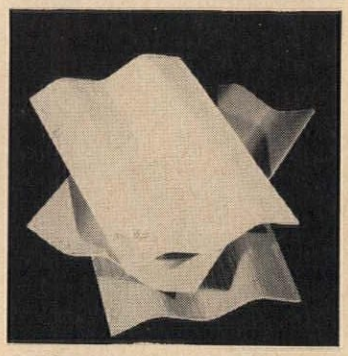
Acoustical Material for Wet Locations

"Ceramaguard" acoustical material is, according to the manufacturer, unaffected by moisture, even when submerged in water. It is a ceramic-type material with a totally inert composition that does not expand, contract, or weaken under prolonged exposure to high humidity. Product also has good spanning strength and is claimed to be almost sagproof when installed in an exposed grid suspension system. Ceramaguard is available in 2'x2' and 2'x4' units to accommodate standard grid suspension systems. Panels have a fissured surface and an acrylic paint finish that gives this material good grease resistance, washability, and whiteness. Armstrong Cork Co., Lancaster, Pa. 17604.
On Readers' Service Card, Circle 100

Construction

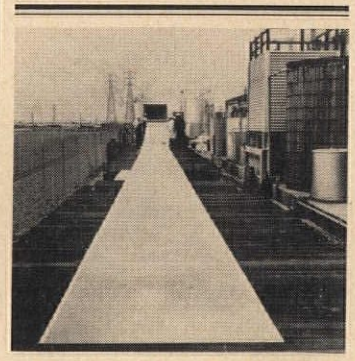
Burglars, Beware!

"Secur-lite," a $\frac{9}{32}$"-thick, two-ply laminated glass, frustrates efforts of smash-and-grab burglars. It is ideal for store windows, because it resists breaking, even after several blows with a heavy weapon. Although the glass cracks, it does not fall out of place or shatter. Available in clear, opaque, or tinted varieties, and in sizes up to 84"x130". Secur-lite needs no special framing, and is installed like ordinary plate glass. Amerada Glass Corp., 2201 Greenleaf Ave., Elk Grove Village, Ill.
On Readers' Service Card, Circle 101



Chemically-Resistant Plastic Panel

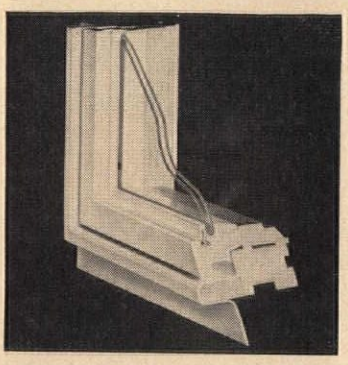
Corrugated plastic panels are for roofing and siding in buildings subject to severe corrosive atmosphere. Panels are suitable for chemical, paper and fertilizer industries. Material has low flame-spread ratings of 30 and 35. Manufacturer claims that "Econo-Dur" Panel is not affected by environmental stress cracking. Neither field cutting nor drilling reduces chemical resistant values. Econo-Dur is produced in standard corrugated profiles in lengths up to 42'. This opaque material is available in gray, green, and white with standard finish of pebble-grain on one side or smooth finish on both sides. Steelite Buildings Inc., 239 Fourth Ave., Pittsburgh 22, Pa.
On Readers' Service Card, Circle 102



Plastic Panels Made In Any Length

Cast acrylic plastic, called "Swedcast 500," can now be produced in a continuous sheet. It is available in flat, clear, or colored cast sheet in any width up to 8' and in thicknesses from 0.060" to 0.250". It is also available in corrugated sheet or sheet with prismatic, matte, or other surface patterns as part of the continuous casting process. Leaves, coins, and other small objects can be embedded in the acrylic plastic during production. Cast acrylic sheet is a tough, "water white" thermoplastic material. It weighs about half as much as glass or aluminum. Swedcast 500 has good dimensional stability and resists shrinkage, deterioration, weathering, and ultraviolet degradation. Acrylic provides about 20 per cent better thermal insulation than glass, says the manufacturer. This material replaced glass at a school in New York City and saved $500,000 a year in breakage costs. Panels of acrylic are used in the Houston Astrodome roof. Other suggested applications include partitions, spandrels, diffuser panels, illuminated window glazing, skylights of curved or flat configuration, luminous walls, unbreakable doors, patio enclosures, and roofs. Swedlow, Inc., 12605 Beach Blvd., Garden Grove, Calif. 92641.
On Readers' Service Card, Circle 103

Doors/Windows

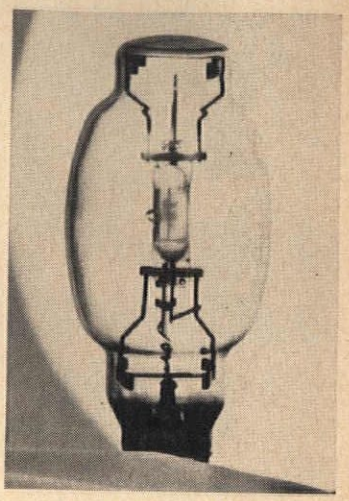


Wood Window Frames Encased in Rigid Vinyl

"Perma-Shield" is a new line of wood window and gliding door frames protected with "Geon," a rigid vinyl manufactured by B. F. Goodrich Co. For windows, preformed rigid vinyl is bonded to the exterior surfaces of the wood frames.

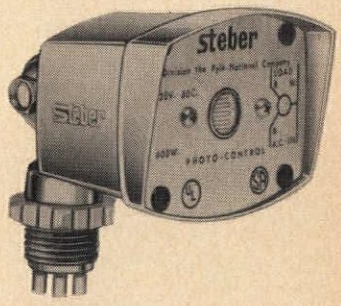
The rigid vinyl eliminates joints at the corners of the frames; interior trim is left uncoated to preserve the natural wood finish of the frames. For gliding doors, vinyl is applied to both exterior and interior surfaces of the door panels and frames. Perma-Shield casement, awning, and fixed windows are available in 21 basic unit sizes; gliding doors are available in five sizes. Andersen Corp., Bayport, Minn.
On Readers' Service Card, Circle 104

Electrical Equipment



True Red Light

Recently developed 175-w "Metalarc" lamp is used in small-area commercial applications. Lamp has rated output of 10,500 lm and allows compact fixture design. Metalarc features intense light and good color rendition. Objects containing certain colors, such as red, retain their true color value when exposed to this lamp. Sylvania Electric Products, Inc., 730 Third Ave., New York, N. Y. 10017.
On Readers' Service Card, Circle 105

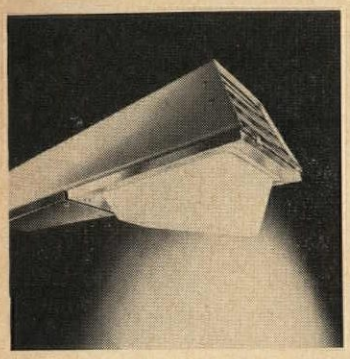


Floodlight Switch-Off

"Series S-590" photoelectric switches provide automatic, dusk-to-dawn, on-off operation of various size floodlights. If circuit fails, a built-in "fail-safe" device continues floodlight operation. Switch can operate in temperatures ranging

Readers' Service Card Now Located Between Pages 74 and 75

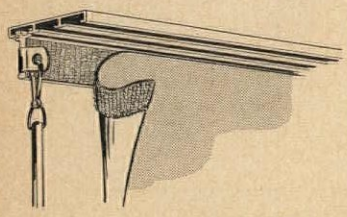
from —30 F to +140 F. S-590, which operates at 120-v, is available in capacities of 600-, 1000-, 1500-, and 2000-w. It can be mounted on cluster boxes or troughs, singly or in combination with high capacity floodlights. Housing for switches is die-cast aluminum with heavy-duty chrome-plated finish. Steber Div., The Pyle-National Co., 1334 North Kostner Ave., Chicago 51, Ill.
On Readers' Service Card, Circle 106



Outdoor Lighting

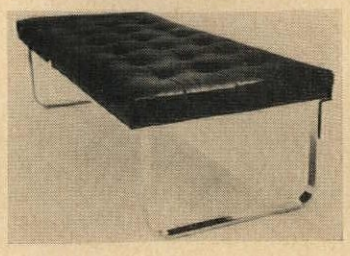
Recent line of exterior mercury lights is available in 1000-, 400-, and 250-w sizes. "Concept 6" luminaires are housed in aluminum trapezoidal-shaped diffusers that fit onto walls or light standards. Revere Electric Mfg. Co., 7420 Lehigh Ave., Chicago, Ill.
On Readers' Service Card, Circle 107

Furnishings



Innovational Window Treatment

A most imaginative and potentially elegant window-covering technique has now been made generally available with the introduction of Kirsch's "Paneltrac" drapery hardware system. Developed originally to implement the SOM-designed window treatment, the system supports flat panels which look something like narrow shoji screens. Paneltrac permits the panels of fabric to slide, when drawn by a baton, and to stack behind each other at the sides of the window. An additional feature of the system is the use of Velcro on the sliding clips; fiddling with hooks and other fasteners is thus eliminated. The flat-panel system is said to require 50% less fabric than the ubiquitous traverse drapery. Kirsch Company, Sturgis, Mich.
On Readers' Service Card, Circle 108



New Furniture Firm

Nicos Zographos, designer formerly with SOM and Albano, has opened his own furniture manufacturing company and show room with some of his familiar, elegant, metal-and-leather pieces, and he has added to the line. Among the additions are a button-tufted leather, overstuffed armchair on polished aluminum runner base and a bench (60" x 25" x 16" high), which has a base of bent, mirror-polished stainless-steel bars with welded joints and a platform of individual welted panels of calfskin. Zographos Designs Ltd., 510 Madison Ave., N.Y., N.Y.
On Readers' Service Card, Circle 109

All-Resistant Tabletops

Wood tabletop is resistant to flame and stain as a result of aluminum foil laminated beneath the veneer. The foil reportedly absorbs heat, preventing the wood from burning. In addition, veneer (walnut or teak) has been treated with an epoxy-type finish that is said to be impervious to acid and alcohol. Even though this technique is not new in cabinetmaking (bars have been finished in this way for a number of years), the tables are the first "residential-quality" furniture to use the process. Tables come in four heights (14", 16", 20", and 24") and four shapes: round, rectangular, long, and square. Springer-Penguin Inc., 11 Brookdale Place, Mt. Vernon, N.Y.
On Readers' Service Card, Circle 110

Free Forms for Outdoors

A sinuous group of indoor and outdoor seating of molded glass fiber introduces a long-hoped-for direction of design originality on the part of the Burke Division. Two-section construction unifies seat and base—a noteworthy accomplishment. Designed by Stylianos Gianaokos and Andrew Moorison, the Athena *(left)* and Adonta *(right)* are available only in white (though they can be painted) with optional upholstered pads. The Burke Division, Brunswick Corp., Dallas, Tex.
On Readers' Service Card, Circle 111

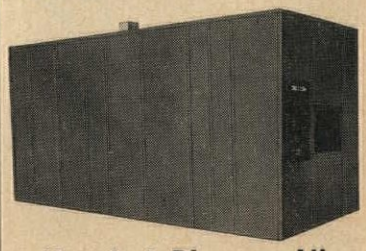
See These Vinyls

Union Carbide's entry in the vinyl race is gaining by lengths. At least six new numbers of "Vileau" will be of use to architects. Among them, "Sand" is a suedelike wall-covering in 29 plain colors; "Castilian" *(illustrated)* is a newly developed, high-gloss, deep crush vinyl for upholstery, which is available in leather-grain colors and 22 solid colors. Union Carbide Corporation, Fibers and Fabrics Division, 270 Park Ave., New York, 10017, N.Y.
On Readers' Service Card, Circle 112

Laminates by Noyes

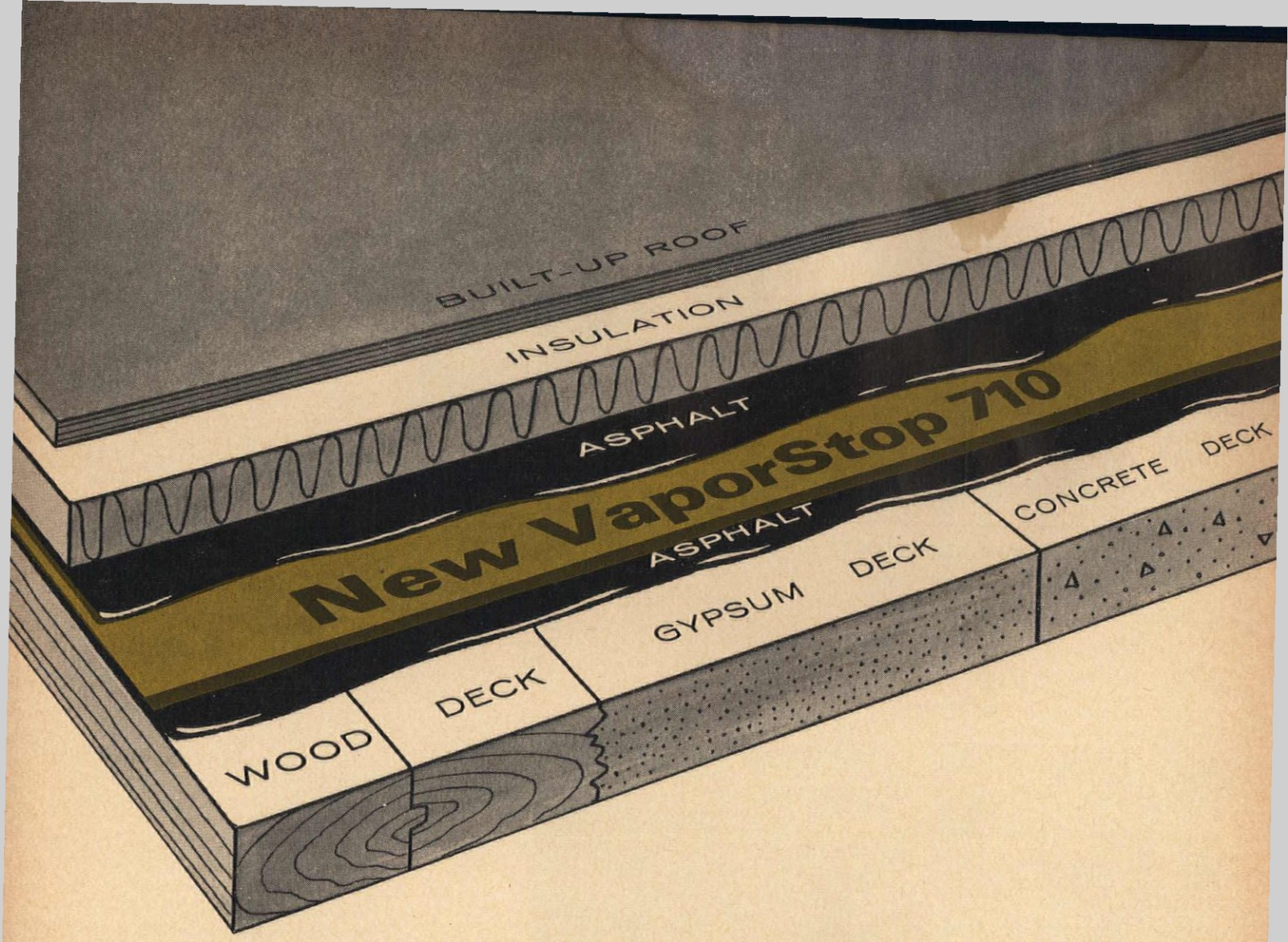
Eliot Noyes has assembled 36 new colors for Micarta plastic laminates that range from bright to muted (including taupes and olive tones). They reflect the best of the industrial design tradition and lack the harshness of many laminate lines. These Micarta colors can be coordinated with other furnishings by referring to the Ostwald international color coding system, which Noyes has used. Sample chips are packaged in bound volume or box and are available (without charge) from Westinghouse Electric Corp., Micarta Division, Hampton, S.C.
On Readers' Service Card, Circle 113

Sanitation/Plumbing



Hospital Dispose-All

"Des-Inerator" hospital waste disposal system consumes 8000 lb of refuse per day. It is capable of handling all disposables including plastics, hypodermic needles, syringes, fabrics, dishes, pathological wastes, etc. System is push-button operated by a control panel located on the incinerator. Incinerator re-



Revolution in Vapor Barriers for Built-up Roofs

VaporStop 710 Sisalkraft's new prebuilt, manufactured vapor barrier. It eliminates the quality risks of fabrication on the job; positively protects insulation with **one-ply application.** Applied cost is 20% less than conventional 15 lb. felts.

VaporStop 710 lays down as a one ply, pre-manufactured vapor barrier. It consists of two sheets of stretchable kraft laminated by a special plastic vapor barrier adhesive, with tough fiber edge reinforcing. It gives the owner the most efficient vapor barrier possible for these 6 reasons:

- Continuous low (0.28) perm rating is assured
- Expands as roof expands
- No absorbing or holding of moisture
- Less chance of moisture entrapment
- Weight is 80% less per square in place, with 5 fewer roll changes and end laps
- Greatest possible assurance of 100% coverage

Send for *Vaporstop 710* Bulletin and sample.
Sisalkraft, 56 Starkey Ave., Attleboro, Massachusetts.

SISALKRAFT DIVISION ST REGIS

On Readers' Service Card, circle No. 439

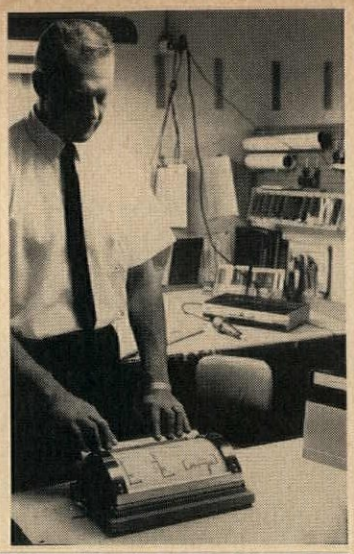
duces volume of waste material up to 99.6 per cent, manufacturer says. Water wash section cools exhaust air temperature to less than 300 F, therefore eliminating need for special refractory smokestacks. Incinerator can be located indoors or out. Despatch Oven Co., 619 E. Eighth St., Minneapolis, Minn. 55414.
On Readers' Service Card, Circle 114

Special Equipment

Detail Reproducer

Recently developed reproducing system enables draftsmen

to make translucent photographs of details that can be superimposed on drawings. Manufacturer says that drafting time on architectural projects could be reduced by 35 per cent. This dry process of



making transparencies comprises two units: light exposure assembly that transfers the required image onto a film and a heat developer assembly that develops the transparent film. Among the applications for this technique are transferring portions of previous jobs to new working drawings, reproducing subcontractor shop drawings in files, copying directly from manufacturers' catalogs, and copying specifications from government agency building code specifications. 3M Co., 2501 Hudson Rd., St. Paul, Minn.
On Readers' Service Card, Circle 115

Potable Water Plant

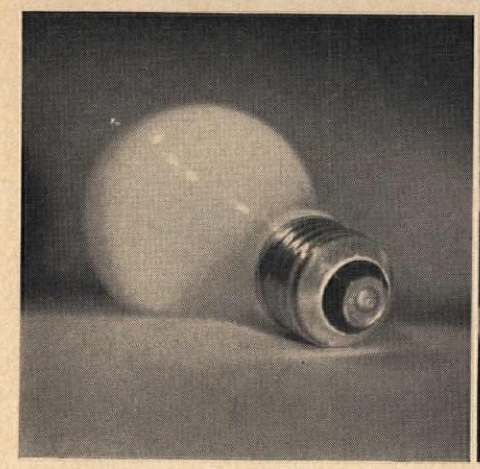
"Centra Filter" is an automatic water treatment plant with no moving parts, pumps, motor driven agitators, or mixers. Plant is powered by natural gravity and controls the inflow rate of raw water, adds chemicals, settles out most color and turbidity, filters out any remaining impurities, backwashes itself, and delivers potable drinking water. Unit is available in six sizes, from 4′-diameter tank producing 7500 gal per day to a 17′-diameter tank with a daily output of 165,000 gal. Suitable for small communities, isolated factories, and camps. Permutit Co., Box 41, Paramus, N. J.
On Readers' Service Card, Circle 116

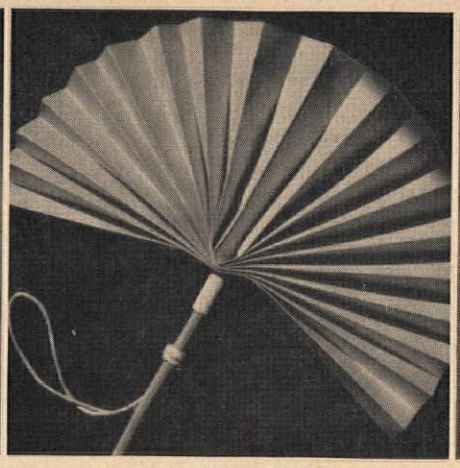
Surfacing

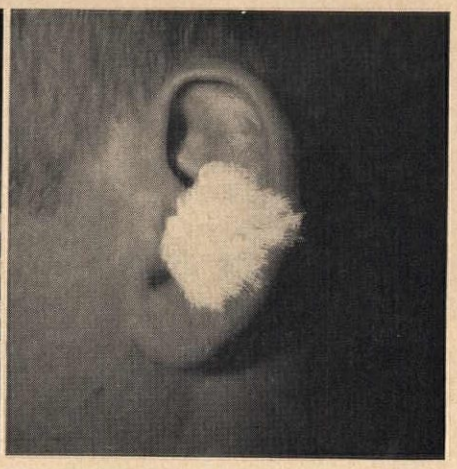
Crystal-Like Flooring

"Variegated Duresque," a seamless resilient flooring, is available in seven pastel colors. Manufacturer says flooring is impervious to corrosion by chemicals and to marring. It is composed of a translucent glaze to which are added large chips. Torginol of America Inc., 6115 Maywood Ave., Huntington Park, Calif.
On Readers' Service Card, Circle 117

Sweating over a bunch of unrelated ceiling components that have to be tied together and sugar coated to sneak by?







Cool it with Quartette, the total integrated ceiling that looks great and works great.

Organizing competing components into an attractive, environmental ceiling that really works is practically impossible. Achieving the "impossible" called for a new concept. Quartette is it: A total ceiling with complete control of environment functions in each module.

Take Quartette's light: Marvelous. Shielded, glare-free, subtle, controllable from 75 to 400-plus footcandles. Will an area's changing needs require more light in 1970? With Quartette, planning now will provide for it by a simple change of lamps and ballasts.

Take Quartette's air exchange: Complete. Each module incorporates its draftless, noiseless 180° air diffuser, located below lamp level. Generated lighting heat is not blown into room space. Reduces air conditioning workload and costs.

Take Quartette's acoustics: Excellent. The layin top of each module contributes to ceiling's 80% sound absorption quality, regardless of lighting level. Attenuation 39.3 db.; assured through-ceiling privacy without plenum barriers. Eliminates sound-leaking louvers and wall openings. Plan a private office in a general area — Quartette makes it possible.

Take Quartette's partitioning flexibility: Unequalled. Fast, easy repartitioning with one tool: a screwdriver. No damage to ceiling. No interruption of environment functions. Sound-seal gasketing, clean detailing. Unlimited space-arrangement freedom.

Take Quartette's module: Complete. Every function for its area. All permanent metal, with unique hollow corner-post which imparts immense rigidity to ceiling and partitions; serves as carrier for phone lines, switchlegs, etc. Modules custom-sized from your specs, to fit any bay.

Take *total* Quartette: Best, unequivocably. Beautiful, interesting texture. Total in harmoniously integrating environment functions. Extra years of keep-pace performance, with remarkable operating and maintenance economies.

Why sweat? Specify care-free Quartette. Write or phone

LUMINOUS CEILINGS INC., 3701 N. Ravenswood Ave., Chicago, Illinois 60613 312-935-8900

Quartette — the total integrated ceiling with controlled environment second only to nature's

On Readers' Service Card, circle No. 429

Acoustics

Reducing Industrial Machinery Noise

Report discusses basic principles in determining machinery noise levels and solutions to noise-control problems. It shows how hearing damage, neighborhood complaints, and decreased employee efficiency can be avoided by using noise control enclosures or shields. Brochure lists noise levels generated by typical machinery, acceptable noise criteria, speech interference levels, and data on partial and complete enclosures for machinery. Recommendations for reducing noise by balancing rotating machinery and by using acoustical shields, baffles, and enclosures. 4 pages. Bulletin #6.606.20. Industrial Acoustics Co. Inc., 380 Southern Blvd., Bronx, N.Y. 10454.
On Readers' Service Card, Circle 200

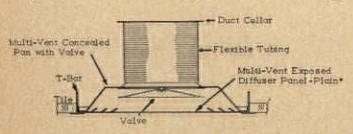
Air/Temperature

Regulating Temperature

Guide presents application information on temperature control of both storage and instantaneous heating/cooling systems. Detailed diagrams show more than 20 temperature control systems from single, single-loop systems to cascaded pressure-temperature systems that use various types of control. Eight charts list more than 3900 specific application areas in 14 standard industrial classifications. Guide includes complete lines of self-contained and air-operated temperature controls, and how and where to apply each type for stable control. 16 pages. Leslie Co., 265 Delafield Ave., Lyndhurst, N.J. 07071.
On Readers' Service Card, Circle 201

Air Diffusers

Booklet describes five different types of "Multi-Vent" modular, high-capacity air diffusers used for various acoustical ceiling systems. Diffusers have an angular-throw aperture along



the outer edges of the exposed surface of the diffuser panel. Balance of the exposed panel surface is available, plain or perforated, in matching colors to complement any type of ceiling materials. Multi-Vent can conform to any arrangement of lighting fixtures, sprinkler systems, or movable partitions. Performance chart lists diffusers at capacities from 40 to 220 cfm. Pyle-National Co., 1334 North Kostner Ave., Chicago 51, Ill.
On Readers' Service Card, Circle 202

Construction

Fire-Retardant-Treated Plywood Roofs

"Fire-Retardant-Treated Plywood Roofs" explains how plywood can be used for economy and still receive low insurance rates. Manufacturer states that treated plywood roofs now receive insurance rates comparable to rates for unprotected, ordinary steel roofs. Brochure explains various support systems that can be used with fire-retardant plywood: fire-treated wood joists, long-span steel joists and trusses, and a plywood stressed-skin system. Map shows rates allowed in all states. American Plywood Assn., Tacoma, Wash. 98401.
On Readers' Service Card, Circle 203

Mortar Aggregates

Brochure studies two types of fine aggregates for making mortar: crushed stone, gravel, or air-cooled blast-furnace slag; and natural sand made of rounder, smoother, particles than manufactured fine aggregates. These sands produce mortars with different workability properties. The brochure discusses graduation, deleterious substances, alkali-aggregate reactivity, bulking, proper handling, and stockpiling of the materials. 4 pages. Portland Cement Assn., 33 West Grand Ave., Chicago, Ill. 60610.
On Readers' Service Card, Circle 204

Heat-Absorbing Glass

Leaflet describes blue-green heat-absorbing glass, its characteristics, and design considerations. According to the manufacturer, "Aklo" glass is 25 per cent more resistant to thermal shock than regular patterned or wired glass. Leaflet gives specifications, shadow problems encountered in the use of heat-absorbing glass, and maximum recommended sizes for regular glazing, and glazing using cork or asbestos impregnated tape. American Saint Gobain Corp., P.O. Box 929, Kingsport, Tenn.
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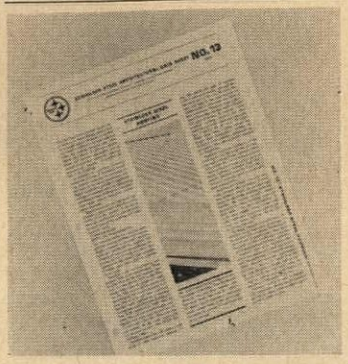


Stainless-Steel Roofs

Stainless Steel Architectural Data Sheet No. 13 briefly illustrates details of stainless-steel roofing. Five types of roofing methods are shown: welded standing seam, batten seam, flat seam, diamond tile, and corrugated roof. 6 pages. American Iron and Steel Institute Committee of Stainless Steel Producers, 150 East 42 St., New York, N.Y. 10017.
On Readers' Service Card, Circle 206

Doors/Windows

Framing Doors After Wall Construction

Metal door frame system can be installed after all wall work, including painting or papering, has been completed. Bulletin outlines economy of post-construction door frame installation, particularly in apartments, hospitals, schools, and office buildings. System is adaptable to any wall width or building material. Brief specifications and standard details. Overly Mfg. Co., Door & Frame Div., 574 W. Otterman St., Greensberg, Pa. 15602.
On Readers' Service Card, Circle 207

Electrical Equipment

How to See Better

"Lighting Fundamentals for Architects" covers the process of seeing, the importance of balancing "task" and "surround" lighting, lighting terms, how to improve visibility, light sources, light distribution curves, comfort in lighting, and control of light. Booklet illustrates text with photos, charts, and photometric curves. 16 pages. Holophane Co. Inc., 1120 Avenue of the Americas, New York, N.Y. 10036.
On Readers' Service Card, Circle 208

Polarized Light

Light polarizing ceiling panels are said to nearly eliminate surface-reflected and direct glare in interior lighting by controlling the plane of light vibrations. By using polarized lighting panels, nearly two-and-a-half times as much illumination through the panel face can be produced without discomfort, according to manufacturer. "Polarized" translucent ceiling panels, made of light-stable vinyl, are available with special back panels that absorb ultraviolet light. Available in 2′x2′ or 2′x4′ panels for luminous ceilings or large bay areas. "Polarized" light fixture lenses are available in sizes ranging from 1′x4′ to 2′x4′ in three types. Pamphlet gives test data on visual effectiveness and comfort of the product. 12 pages. Polarized Panel Corp., 9301 Wilshire Blvd., Beverly Hills, Calif.
On Readers' Service Card, Circle 209

Finishes/Protectors

Polysulfide Sealant

Brochure describes "Rodofix," a two-component polysulfide sealant for calking, glazing, and sealing concrete, metal, masonry, wood, or glass. Details include physical properties, test data, colors, applications, and advantages over other types of sealants. Brochure gives recommendations for installation of back-up materials and joint design. Electrovert Inc., Construction Materials Div., 240 Madison Ave., New York, N.Y. 10016 .
On Readers' Service Card, Circle 210

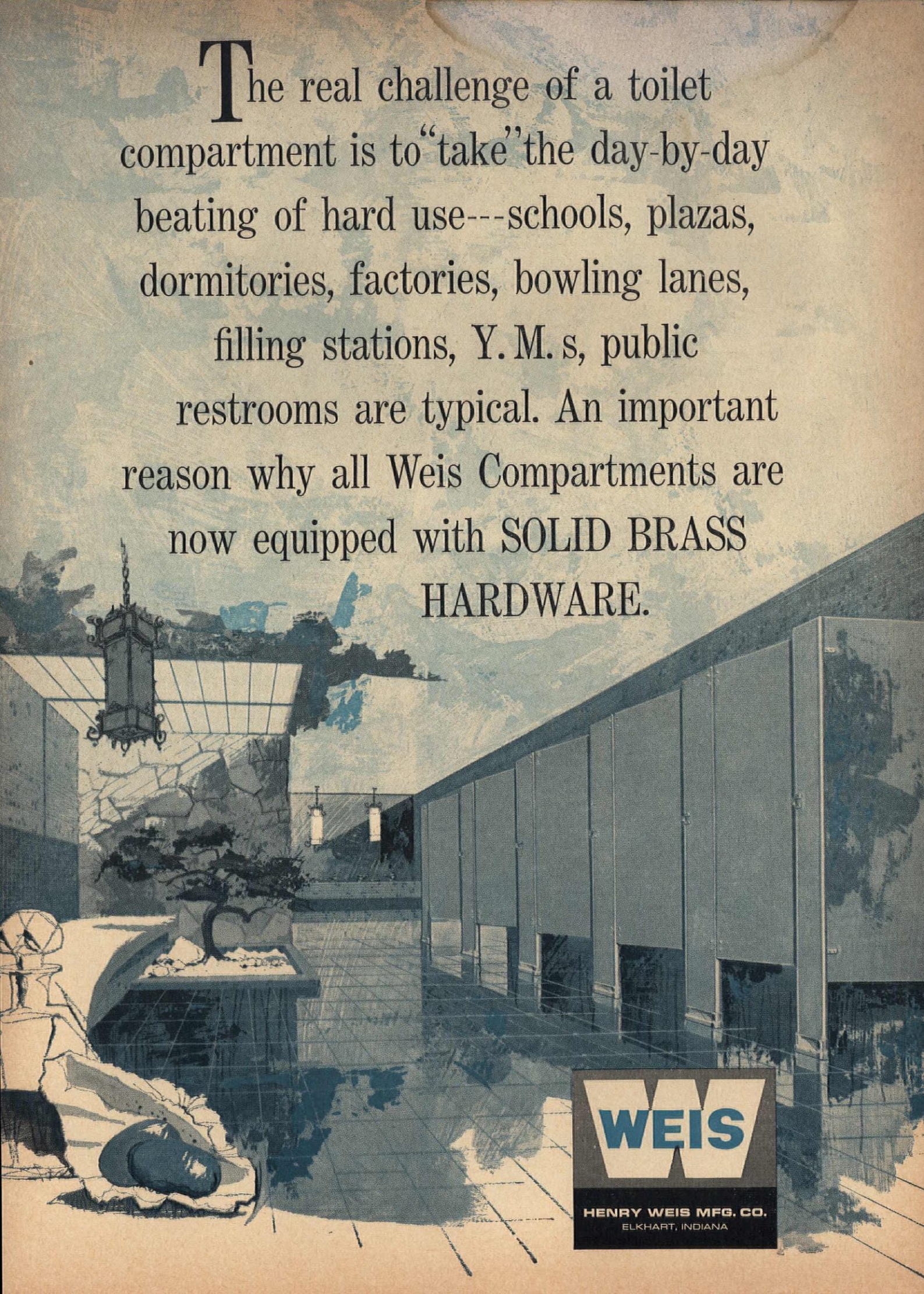
Velvet Paint

"104 Series Velvet Coating" is applied like normal paint and provides a virtually perfect light-diffusing surface, says the manufacturer. Coating uniformly scatters light regardless

Readers' Service Card Now Located Between Pages 74 and 75

On Readers' Service Card, circle No. 427 ➤

The real challenge of a toilet compartment is to "take" the day-by-day beating of hard use---schools, plazas, dormitories, factories, bowling lanes, filling stations, Y. M. s, public restrooms are typical. An important reason why all Weis Compartments are now equipped with SOLID BRASS HARDWARE.



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of incidence angle and provides a velvet-like appearance without the glare of ordinary flat and textured finishes. Dirt and light abrasion marks are removed from the smooth surface without changing its original appearance. One gal. covers 400 to 450 sq. ft. when screen-processed on a smooth surface. Spraying covers about 175 to 200 sq. ft. per gal. and brushing and hand roller coating about 250 to 350 sq. ft. Brochure includes samples of 21 stock colors and 9 factory colors. 6 pages. 3M Co., 2501 Hudson Rd., St. Paul, Minn.
On Readers' Service Card, Circle 211

Tough Exterior Coating

Booklet illustrates applications of "Aroflint 505" oxirane-polyester polymer finishing system, an exterior coating with a high initial-gloss and superior-gloss retention. Manufacturer says product compares well with epoxy, urethane, alkyd, and spar varnish systems. Booklet gives detailed formulations of basic coatings, together with application procedures. Photographs compare Aroflint with other formulations after prolonged exposures. Manufacturer also claims that 505 has good crack-resistance on difficult to paint wood substrates, such as fir-plywood and Southern pine. 20 pages. Archer Daniels Midland Co., 733 Marquette Ave., Minneapolis, Minn. 55440.
On Readers' Service Card, Circle 212

Bushhammering Concrete

Brochure lists procedures for obtaining a varicolored textured surface on cast-in-place concrete by bushhammering. Covered are durability, suitable concretes, techniques, suggested specifications, and before and after photos. 4 pages. Portland Cement Assn., 33 West Grand Ave., Ill. 60610.
On Readers' Service Card, Circle 213

Insulation

Too Darn Hot, But Not Anymore

Catalog describes "Unibestos," an amosite-fibered asbestos material for high-temperature insulation applications, ranging from 100 F. to 1500 F. Tables of recommended thicknesses for power and utility industries, industrial use, process industries, and personnel protection are given. Also included are engineering drawings for joints and fittings, a chart of expansion control, and typical specifications. 12 pages. Pittsburgh Corning Corp., One Gateway Center, Pittsburgh, Pa. 15222.
On Readers' Service Card, Circle 214

Blanket Insulation

Brochure gives properties and recommended applications of "G-B Ultralite," a glass-fiber insulating blanket. Sketches show methods of insulating walls and roofs. Table lists physical properties of the blanket. Also included is a booklet explaining the fundamentals of heat transfer. 12 pages. Gustin-Bacon Mfg. Co., P.O. Box 13126, Kansas City, Mo.
On Readers' Service Card, Circle 215

Special Equipment

Store Fixtures

"Spacemaster" catalog contains merchandising tips, suggestions for better display techniques, visual merchandising trends, applications, schematics, and specifications. Booklet is cross-indexed into 18 basic product categories. 290 pages. Reflector Hardware Corp., Dept. FP-10, 1400 N. 25 Ave., Melrose Park, Ill.
On Readers' Service Card, Circle 216

Chemically-Resistant Asbestos-Cement Panels

Brochure describes "Colorlith" and "Colorceran" asbestos-cement sheets designed to resist chemical and physical abuse associated with laboratories. Manufacturer recommends the material for tabletops, around sinks, fume hoods, shelving, and other laboratory areas. Colorlith is highly resistant to acids, alkalies, and solvents. Colorceran is similar to Colorlith, except that it has added to it a ceramic-like surface to improve resistance to staining. Booklet lists resistance properties of both materials to a number of chemicals. It also tabulates physical properties of both products, and recom-

a specification from Hillyard . . .

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APPROVALS: Maple Flooring Mfrs. Assn., Institutional Research Council. Listed by Underwriters' Laboratories as "slip resistant" In use: 12 years on all major basketball tournament floors.

REFERENCES: Sweets Architectural File, section $\frac{13n}{Hi}$
A.I.A. File No. 25G
A.I.A. Building Products Register

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mends procedures for installing, jointing and maintaining Colorlith and Colorceran. 12 pages. Johns-Manville, 22 East 40 St., New York, N.Y.
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Swimming Pool Specs

Two brochures outline minimum standards for public, semipublic, and residential pools. Topics covered include chemical treatment of water, safety devices, heaters, life-saving equipment, and plans. Tables for determining minimum filter and pipe sizes are given. National Swimming Pool Institute 2000 K St., N.W., Washington, D.C. 20006.
On Readers' Service Card, Circle 218

Surfacing

Plastic Laminate

Technical brochure describing "Panelyte" high-pressure, plastic laminate surfacing was prepared by Justin Henshell, AIA, former President of the New York Chapter of the Construction Specifications Institute. Panelyte is composed of layers of kraft paper impregnated with specially formulated resins. It is not affected by most solvents, soaps, cleaners, food, and household chemicals. Types of plastic laminate surfacing include general purpose, vertical-surface, post-forming, fire-retardant, edge banding, backer sheets, and cigarette-proof. Brochure illustrates installation details and gives specifications. Color range has increased from 17 to 35. Samples available upon request. 22 pages. Reliance Panelyte Inc., 2403 South Burdick St., Kalamazoo 34, Mich.
On Readers' Service Card, Circle 219

Tile Patterns

Ceramic tile handbook shows various design applications. Color photos illustrate 50 ceramic mosaic patterns, including 10 new patterns, 8 blends, and 32 stock patterns. Also described is "Conduct-O-Tile," a permanently conductive ceramic tile that provides controlled electrical conductivity in hospital areas that are subject to static-sparked explosions. Diagrams illustrate dimensions of shaped trim tiles and special tiles for thin-setting

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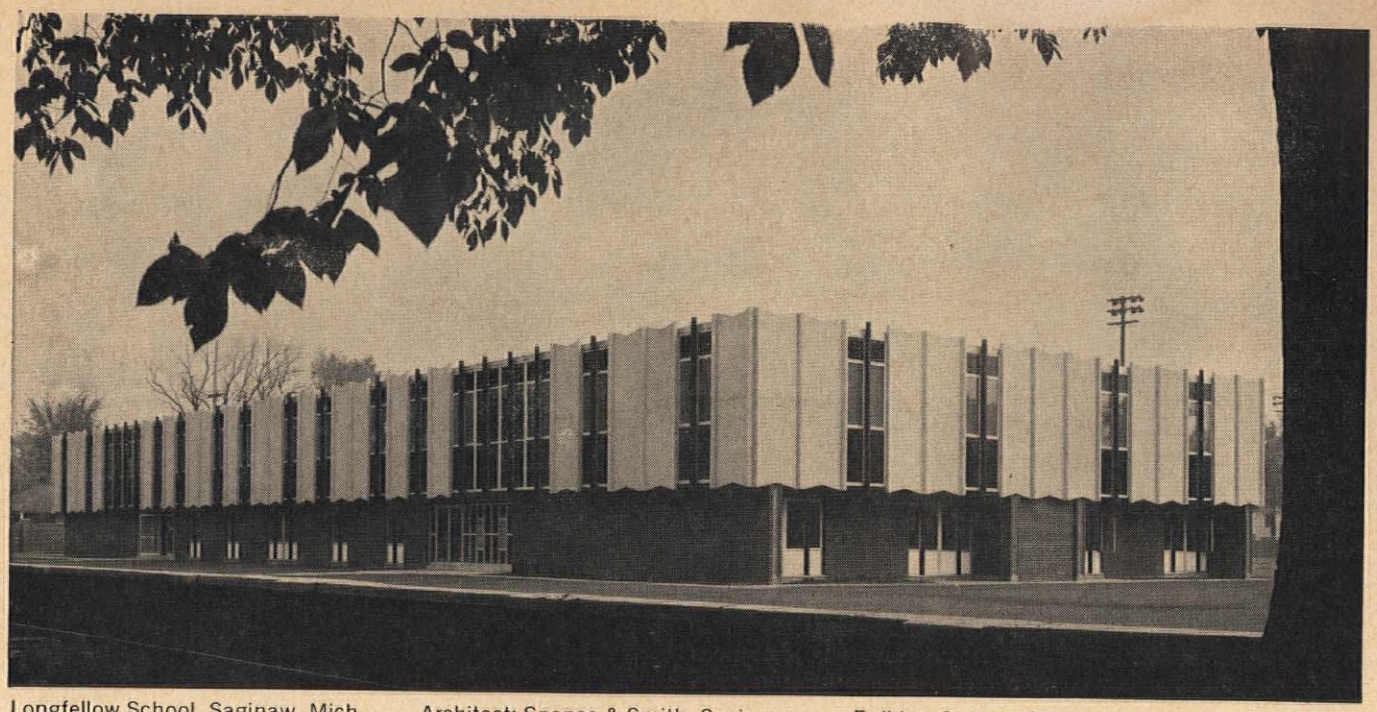

Longfellow School, Saginaw, Mich. Architect: Spence & Smith, Saginaw Builder: Gregory Construction Co., Bay City, Mich.

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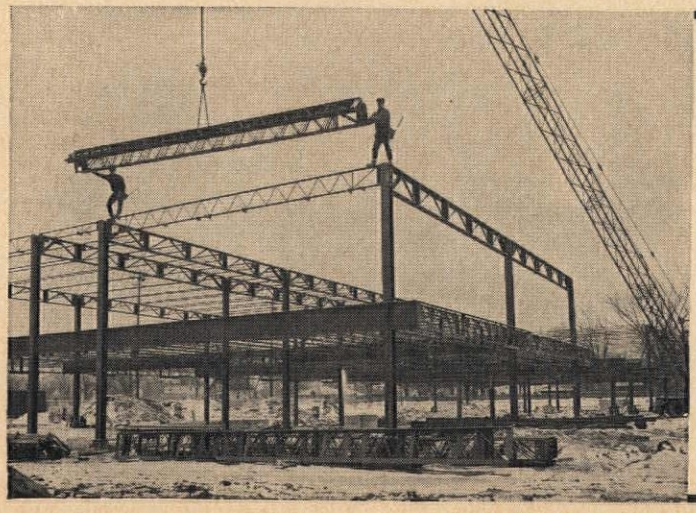

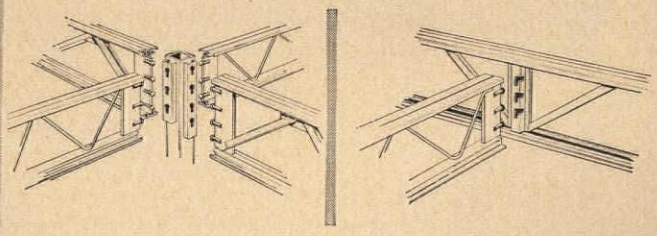

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bed installation. 20 pages. American Olean Tile Co., Dept. AO-119, Lansdale, Pa.
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Tile Designs

Brochure illustrates "Designer Series" of six wall and seven floor tile patterns. They are available in a variety of sizes, colors, and surfaces. These tiles are resistant to acids, oils, chemicals, odors, and scuff-marks. 14 pages. Stylon Corp., 136 Newbury St., Boston, Mass.
On Readers' Service Card, Circle 221

Floor/Wall Cork

Cork wall and floor materials are described in 8-page catalog that includes specs and color photos. Covered are vinyl tile; special and standard cork tile for floors; 21 patterns of tackboard in washable, sanded, and vinyl-faced surfaces; cork for gymnasium floors; cork carpet, brick, wall tile, insulation, underlay, carpet padding; and composition expansion joint materials and adhesives. Dodge Cork Co., Inc., Lancaster, Pa.
On Readers' Service Card, Circle 222

Resilient Flooring vs. Carpeting

A documented report compares the costs of resilient flooring and carpeting. Study was based on the installation cost and maintenance of 112,796,000 sq. ft. of resilient flooring and 572,000 sq. ft. of floors covered with commercial carpeting. The study compares figures obtained from recent installations with information reported several years ago by a study sponsored by the American Carpet Institute. 30 pages. Armstrong Cork Co., Lancaster, Pa.
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NEWS REPORT

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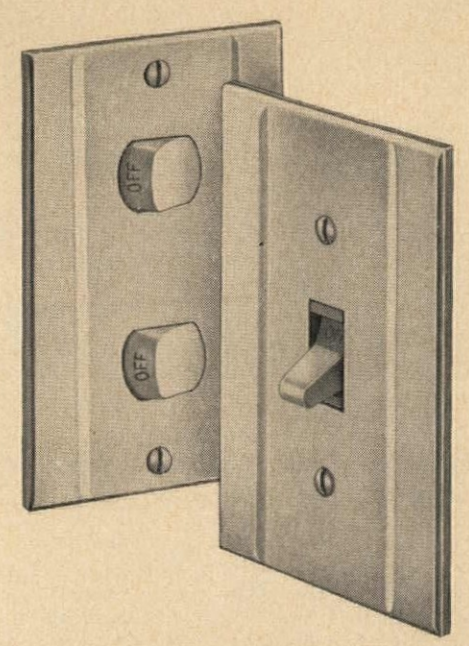

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■ *Holiday fare is waiting for you in the exciting December issue of P/A.*

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■ *Sample: Marcel Breuer opens his vivid imagination and innovates for a client's showroom project.*

■ *Sample: "Finesse the words, show me the buildings," is the complaint of critic Robert Mutrux. In a provocative article, he laments the excess verbiage and the minimal tangible products of today's architects. Agree or not, you'll find the story stimulating.*

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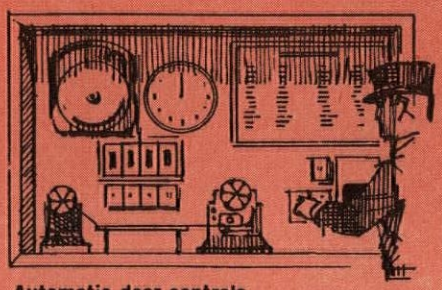

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