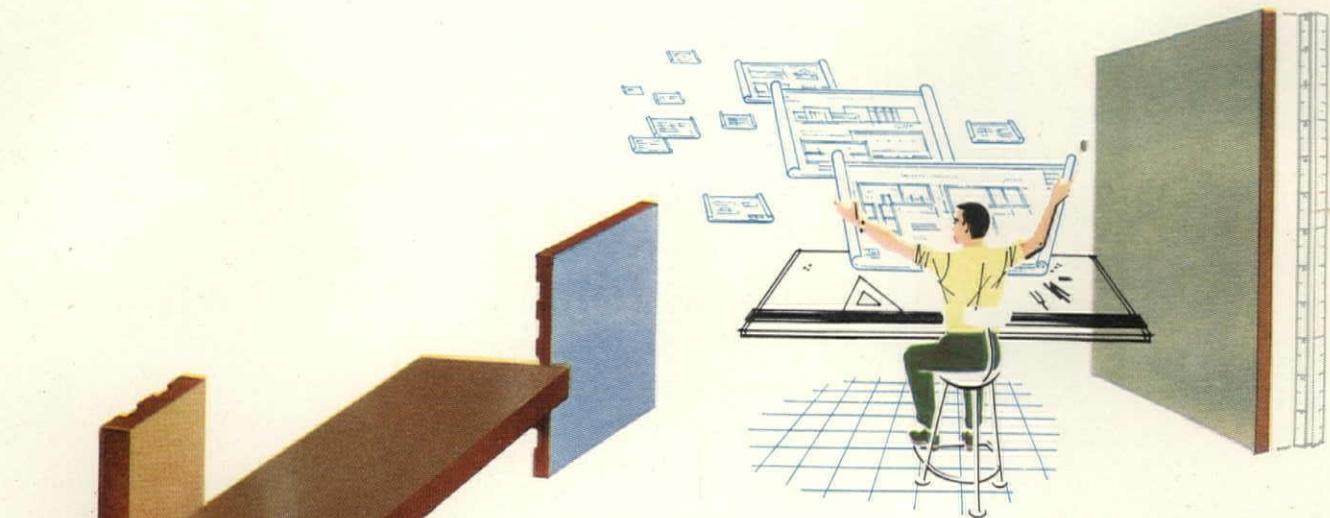


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Building for the community

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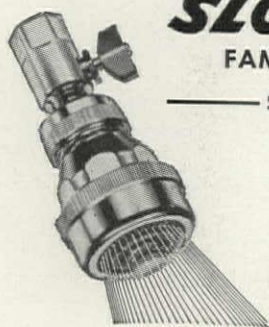
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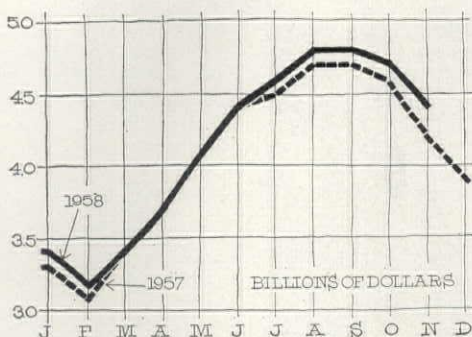
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Construction outlays rising; Congressional fight over federal building programs expected



SPENDING FOR NEW CONSTRUCTION totaled \$4.4 billion in November, about 6 per cent higher than November 1957. For the first eleven months of 1958, total spending was 1 per cent higher than it was in 1957.

BOX SCORE OF CONSTRUCTION

(Expenditures in millions of dollars)

PRIVATE BUILDING	Nov. 1958	Jan.-Nov.		
		1958	1957	±%
Nonresidential	760	7,998	8,757	-9
Industrial	178	2,267	3,280	-31
Commercial	327	3,256	3,258	**
Office buildings, warehouses	167	1,823	1,715	+6
Stores, restaurants; garages	160	1,433	1,543	-7
Religious	81	785	794	-1
Educational	52	517	479	+8
Hospital; institutions	50	561	474	+18
Residential (nonfarm)	1,709	16,236	15,654	+4
Public utilities	487	5,110	5,165	-1
Total Private*	3,087	31,017	31,251	-1
PUBLIC BUILDING				
Nonresidential	379	4,260	4,160	+2
Industrial	30	342	442	-23
Educational	230	2,651	2,599	+2
Hospital; institutions	36	367	325	+13
Residential	83	737	452	+63
Military	125	1,125	1,225	-8
Highways	485	5,000	4,637	+8
Sewer; water	117	1,279	1,245	+3
Total Public*	1,329	13,888	13,101	+6
*GRAND TOTAL ...	4,416	44,905	44,352	+1

* Minor components not shown, so total exceeds sum of parts.

** Less than 1 per cent.

As the construction industry moves into 1959, the year FORUM has forecast will be the first \$50 billion year in building history (FORUM, October 1958), it is clear that the economy has shaken off most of the effects of last spring's business recession. Industrial production rebounded in November to within six points of the all-time peak (147 on the FRB index in December 1956), 15 points above last April's recession low. Business inventories are slowly being rebuilt, and employment has edged up 1 per cent in the past six months. The recovery has so far been slow, but, because of this, it has been sounder than if there had been a sharp boom.

Construction, like the rest of the economy, has been expanding almost in slow motion. Through the first 11 months of 1958, total spending for new construction rose only about 1 per cent above the same period of 1957. Public building provided nearly all the steam (rising 6 per cent), while private construction showed a 1-per-cent decline.

The main reason for the weakness in private construction is still the slump in industrial building. By the end of November, the dollar volume of industrial construction had declined 31 per cent. This was considerably more than the decline in total business capital expenditures which dropped only 17 per cent. This means that businessmen cut back their building of new structures much more severely than they curtailed their purchases of equipment and other nonbuilding capital items.

But with the expected turnaround in capital spending in the first quarter of 1959—which was predicted last month by the Department of Commerce and the Securities and Exchange Commission—the decline in industrial building should begin to abate, although probably not in time to bring total 1959 outlays up to 1958's level. Commerce-SEC estimate that first-quarter capital spending will proceed at a seasonally adjusted annual rate of \$30.5 billion, up from \$29.9 billion in the fourth quarter of 1958, and nearly \$1 billion better than the recession low of \$29.6 billion in the third quarter of 1958.

Another area of private building that was weakening as 1958 ended was office building. In November, spending for new office buildings declined 9 per cent

(compared with November 1957), and this followed a 6-per-cent year-to-year drop in October. On the plus side, however, building of stores, restaurants, and garages is picking up. Such building rose 7 per cent in November, after a 2-per-cent rise the previous month. However, the \$11-million rise in store building from November 1957 to November 1958 was not enough to offset the \$16-million drop in office building during the same period.

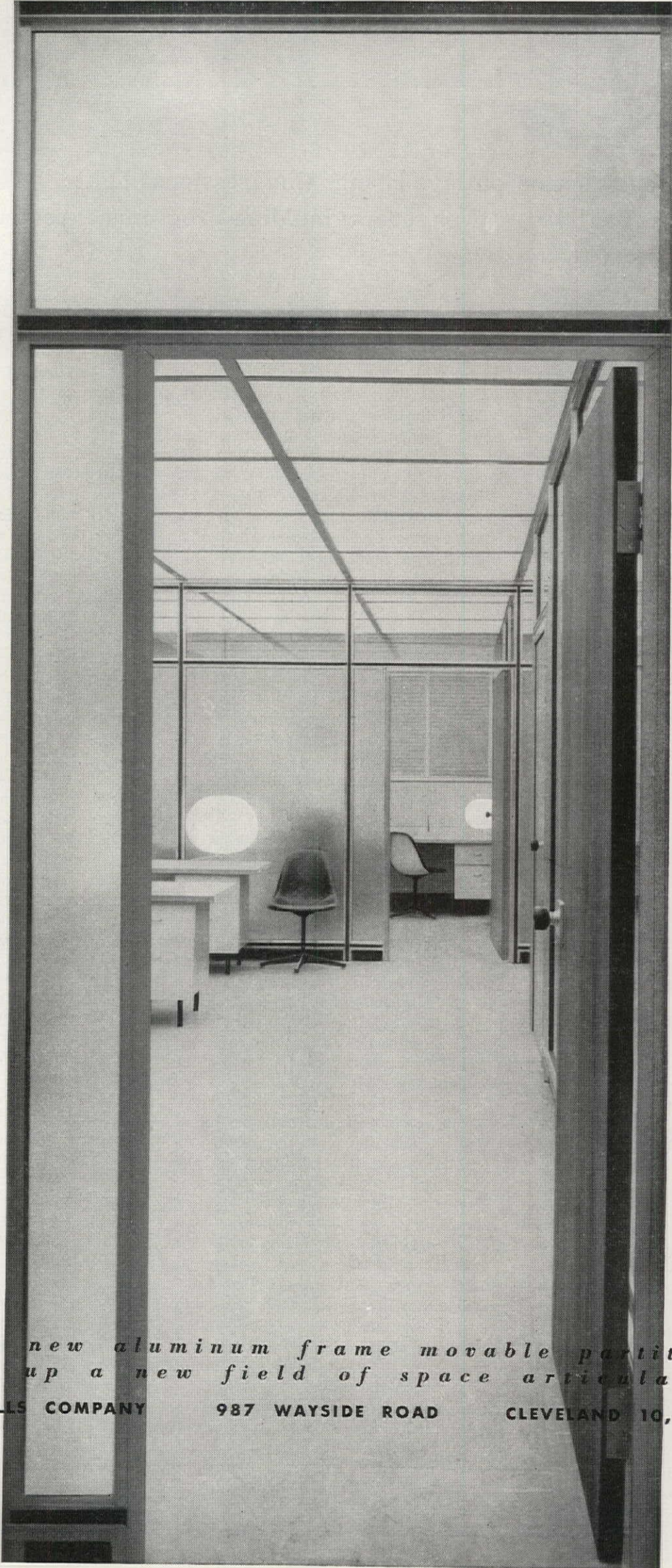
Residential construction continued to rise through November, and home building for the full year should total about \$17.3 billion. This is in line with FORUM's forecast last February of a gain for the year of about 2 per cent. Housing starts in November hit an annual rate of 1,330,000, the highest annual rate since July 1955. For 1958 as a whole, there will be about 1,105,000 new starts, about 12 per cent more than in 1957. The biggest rise has been in starts insured by the Federal Housing Administration. In 1958 FHA-insured starts accounted for about 26 per cent of total starts compared with only 17 per cent the year before.

The money dilemma

There are signs, however, that FHA and VA home-building activity is feeling the pinch of tight money more severely now than at any time since early 1958. FHA Commissioner Norman Mason has noted that there was "considerable weakening" in the volume of FHA's new home applications in October (applications declined 14 per cent from the previous month), and the November figure was 48 per cent lower than October. Appraisal requests for the Veterans' Administration program of mortgage guarantees dropped 25 per cent in November (but were still nearly 30 per cent higher for the first 11 months than for the same period in 1957).

There is little doubt that mortgage lenders are backing away from federally backed mortgages, largely because of the legal interest rate limits of 5½ per cent on FHA mortgages and 4¾ per cent on VA mortgages. This is a recurring problem, with considerable

continued on page 7



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significance for the over-all problem of maintaining economic stability. It can only be remedied by Congress. For to give federally backed mortgages a fighting chance in a competitive money market, Congress would have to free interest rates on government-backed mortgages completely. The Administration has already indicated that it may urge such a move this year.

Battle looms over federal building programs

Federal building programs are sure to be caught squarely in the cross fire between "spenders" and "economizers" when the 86th Congress convenes early this month. Although specific legislation has not been drawn up in every case, the battle lines are already clear. Basically, the Administration wants no new building or housing programs nor is it in favor of enlarging existing programs. Democratic liberals in both Houses of Congress, on the other hand, have announced that they will push for a broad program of social welfare legislation. Here is a brief run-down of some of the major building proposals that Congress will soon consider:

Housing: The Budget Bureau will shortly ask Congress for \$200 million in appropriations for urban renewal and another \$200 million for the college dormitory loan program. The Urban Renewal Administration would get only \$100 million of the new funds; the other \$100 million would replace the discretionary funds that the President released for the program last summer. The Administration also will press for a gradually declining share of federal aid in renewal, from the present two-thirds to 50 per cent by 1962. And for fiscal 1960, the Administration will not ask for any additional public housing authorizations, nor is it expected to ask for any more college dormitory funds. Unless Congress rules otherwise, the college dormitory aid program will be allowed to die when the \$200 million runs out, probably to be replaced by some system of federal guarantees for college housing loans.

The Democratic leadership in Congress will oppose this limited program (FORUM, December 1958). Both Representative Albert Rains (D, Alabama) and Senator John Sparkman (D, Alabama) are expected to ask for vastly expanded urban renewal programs,

perhaps even the \$600 million per year for ten years that the National Association of Housing & Redevelopment Officials wants. They will also urge more rather than less college aid.

Rains has spoken vigorously on the need for more funds for the Federal National Mortgage Association, and for its special assistance programs (buying FHA and VA mortgages). But President Eisenhower reluctantly signed an emergency appropriation for Fannie Mae last spring, and is expected to veto any further expansion of the agency's special assistance functions. He almost certainly would veto any broad expansion of the urban renewal and college housing programs. But Democratic leaders believe they have enough strength to override a veto.

Airport construction: President Eisenhower has asked for a reduction in federal grants to states for airport construction (which will total \$63 million in fiscal 1959). But Representative Oren Harris (D, Arkansas) recently hinted that the House may try to revive the \$437-million airport building aid bill that the President killed last year, and Senator A. S. Mike Monroney (D, Oklahoma) has proposed a \$575-million federal aid program.

Distressed areas: Last year the President vetoed Senator Paul Douglas' bill calling for \$300 million in loans and \$75 million in grants to distressed areas. He is expected to do the same should Douglas push his bill through this year. Ike considers the Douglas measure "unsound," but the Illinois Democrat feels that the last Congressional elections were in effect a vote of confidence from the people to go ahead with the measure.

School construction: Representative Frank Thompson Jr. (D, New Jersey) said a few weeks ago that "chances are better than ever" for passage of a \$1.5-billion, five-year federal school construction aid bill. Such a bill was stymied in a House committee at the last session. The President is said to be opposed to such a measure now, although he once favored federal aid for school construction.

A key move in the plans of House liberals to expedite social welfare bills will be to diminish the powers of the House Rules Committee. Last summer, this committee bottled up the omnibus housing bill (Chairman Howard W. Smith, a Virginia Democrat, and William M. Colmer, a Mississippi Democrat, voted with the four Republicans on the committee to create a six-to-six deadlock), which then had to be brought to

the floor under a suspension of the rules. It failed to pass by six votes.

House liberals want to change the line-up in the Rules Committee by adding at least one and perhaps two liberal Democrats so that such bottlenecks cannot develop, and to reinstate a 1949-50 rule that would force any bill onto the floor of the House after no more than 21 days in the Rules Committee.

New York architects deny school "waste" charges

A new and bizarre chapter was written in the controversy over school costs a few weeks ago when New York City Comptroller Lawrence Gerosa suddenly charged that the city had lost \$100 million through "waste and extravagance" in school building in the past eight years. Gerosa made his charges in the form of a report that he released while the city's Board of Estimate was considering the 1959 capital budget, which includes school construction funds. Gerosa also charged that:

► About \$5 million was added to
continued on page 9



IBM'S LOS ANGELES HEADQUARTERS

Among the last projects to be designed jointly by William Pereira and Charles Luckman (see page 37) is this new 13-story western headquarters for International Business Machines Corporation, built by McNeil Construction Company. The building is sheathed in gray and white glass tile panels, and its windows are shaded by vertical aluminum louvers. About 600 IBM employees moved into the building last month.

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school building costs in the years 1951-1958 as a result of "unnecessary" contract revisions after construction had started on 190 projects.

► School projects often call for 200 to 500 contract revisions, while there are typically only 30 to 40 on other public building projects, which frequently cost more than school buildings.

► Private architects hired for school designs by the Board of Education are paid fees of 5 to 6 per cent, while architects for other public buildings get only about 4 per cent.

Gerosa, who was himself a building contractor before he was elected to his city post, also pointed an accusing finger at some specific examples of "extravagance," particularly the use of blue glazed brick for one public school facing, curved façades on "a banjo-shaped school," and the use of murals.

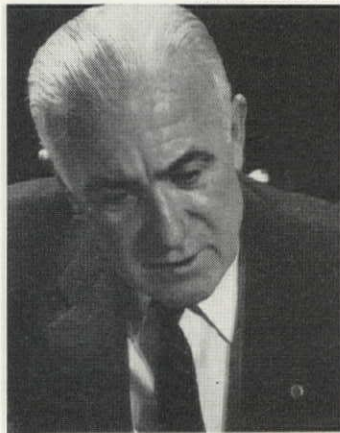
Counter attacks against Gerosa sputtered at first, probably because nobody seemed sure just what it was the comptroller was against. He had denied that he was against building new schools as needed, yet was opposing a \$500-million proposal to finance new school construction outside the city's debt limitations. He was striking out at "waste and extravagance," yet he had approved all the schools in question when proposed, and two weeks after his charge was made he approved a \$73.4 million school construction budget for 1959 without any complaint.

Charles J. Bensley, chairman of the Education Board's buildings and sites committee, retorted angrily that Gerosa's charges were "wild conjectures," and said the comptroller was using them "as a springboard to climb to the mayor's chair on the back of the city's school children." (Observers of the New York political scene saw in the Gerosa report an attempt to embarrass Mayor Robert F. Wagner as part of the continuing power struggle between Wagner and Tammany Hall Leader Carmine DeSapio, with whom Gerosa has been associated.) The Board of Education later issued a thorough, three-part refutation of all Gerosa's charges, defending contract revisions as being necessary in much of the period in question due to the pressure of fast-rising enrollments. And the Board added that change-order costs for schools amounted to less than 2 per cent of the total construction cost, which is well below the 5 per cent "normally permitted by the administrative code to an agency of the city."

The attack on architects' fees was answered by both the Board of Education and Albert H. Swanke, who is head

of the fees committee of the New York Chapter of the American Institute of Architects. Swanke charged angrily that comparing fees for schools, which are relatively complicated structures, with fees for other public buildings, such as garages, and is "ridiculous."

LIFE: WALTER SANDERS



GEROSA

\$100 million of "extravagance."

Gerosa's charge of "frills" in school building was answered both by the Board and by L. Bancel LaFarge, president of the New York Chapter of AIA, who observed that "Children from drab home surroundings should find in schools a first view of a richer life." The blue brick, on a school designed by Harrison & Abramovitz, he declared, dressed up the entire neighborhood, and actually is easier to care for than most facing materials, as it is washed clean by rain. The banjo-shaped school by Kelly & Gruzen not only won a New Jersey AIA award five years ago, but

was claimed to be cheaper to build than two other rectangular-shaped designs suggested by the same firm.

Two state commissions and one city agency are now investigating Gerosa's charges, as is the city's own investigation commission. With both sides claiming to represent the will of the people, the answer to what New York's electors really want in their schools may not be answered until next fall, when New York voters vote on a \$500 million school bond issue.

AIA urges higher fees for public housing design

There were signs last month that the long romance between the federal Public Housing Administration and the American Institute of Architects was heading for the rocks.

At a meeting held recently in Clearwater, Florida, the Institute's Board of Directors took the Public Housing Administration to task for its failure to give proper recognition to the architects' role in public housing. It adopted the following resolution:

"That the AIA's support of the incumbent administration of PHA be dependent on production by that agency of contracts and schedules of fees consistent with sound professional practice and adequate service, and further dependent upon PHA's effectiveness in assigning the role of the owner to the

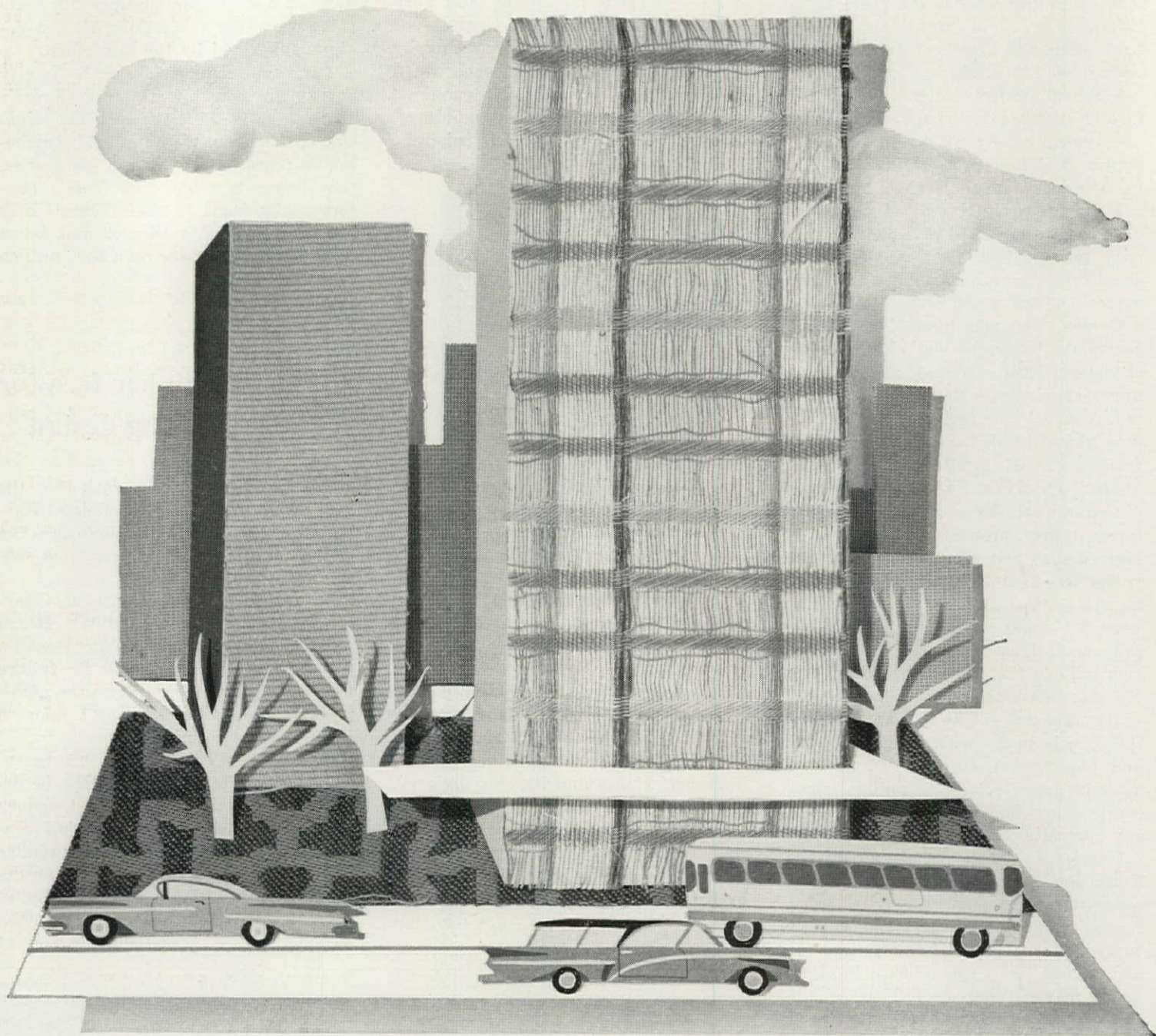
continued on page 11



YAMASAKI'S GRACEFUL WAREHOUSE

Detroit Architect Minoru Yamasaki has designed for Parke, Davis & Company, a structure that takes much of the stigma from the word "warehouse." The building is near San Francisco, and is small—it cost only \$765,000, and has 30,000 square feet of floor space in its one story. In order to give the pharmaceutical company the interior space it wanted, Yamasaki designed the warehouse roof of 64 precast concrete arches, which are tied together with

steel. This way the building has only six interior columns instead of three or four times that number. And the graceful series of arches sets off the smaller glass-walled administration building that nestles midst the larger structure. In back of the administration building is a small open patio, with shrubs, a fountain, and a pool with saw-toothed edges. Knorr-Elliott Associates, of San Francisco, collaborated with Yamasaki; Williams & Burrows Company were the contractors.



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local authorities and role of architect to the architect and that the Institute make known its position to the public."

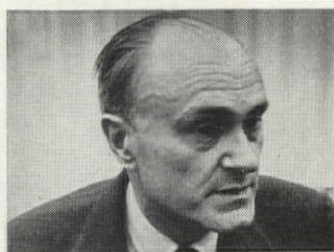
The AIA contends that the local housing authorities are, in effect, the owners of the housing projects and that they should, therefore, be allowed to deal with architects without any interference from PHA. The AIA also objects to PHA's imposition of fee schedules which are below the prevailing rates for other work in the area.

PHA argues for lower fees on the grounds that it is obligated to keep a close check while construction is in progress. This tends to relieve the architect of some of his supervisory functions. Also, because PHA spells out many of the design specifications, architects do not have so much creative work to do, says PHA.

Philip Johnson fights to save Omaha post office

Architect Philip Johnson plunged headlong into the struggle to preserve significant American architecture last month. Speaking at the annual meeting of the Nebraska Architects Association in Omaha, Johnson expressed his dismay that, because of the projected construction of a new ten-story federal post office in the city, the present post office, across the street, might be demolished. To raze the building, a *hotel de ville* designed in 1892 by John Latenser, of Omaha, in the vigorous "Richardsonian Romanesque" style of the time, and finished in 1906, mainly in rock faced granite, would be "a travesty . . . a crime against humanity. We need to preserve our heritage. What else would you have, a parking lot?"

Omaha was somewhat embarrassed by Johnson's spirited defense of the grimy old building. (Johnson, whose own buildings are crisp and clean as polished plate glass, even defended the grime, saying: "Personally, I like a



JOHNSON

"I like a bit of dirt on a building."

bit of dirt on a building. It gives it character. It deepens the shadow. A clean building has a flat look.") The city once planned to buy the building, but could never quite see its way clear to actually do so. There had been talk of making the building a museum, but Omaha's leaders in things cultural are more interested in developing a cultural center closer to the existing Joslyn Memorial art museum. Omaha politicians are puzzled over what to do with the building.

If the building is finally saved, it may well be for economic, rather than either cultural or political reasons: Engineers estimate that it would cost more to topple the sturdy structure, with its yard-thick granite walls, than it would for the city to buy it and "leave it stand."

Chicago City Council passes renewal plan

Following the lead of its housing and planning committee, Chicago's City Council, in November, unanimously approved the \$38-million Hyde Park-Kenwood urban renewal plan to redevelop 900 acres on the city's South Side (FORUM, November 1958). However, the plan was held up for a time while many groups, including the Archdiocese of Chicago, the Cook County CIO and local Negro groups, argued for certain modifications of the basic plan. Most important, perhaps, was their demand for more public housing in the area than the 84 units that had been scheduled. Catholics wanted to modify the plan before it was passed to insure more public housing, while other groups felt the additional public housing could be added by administrative procedure after the plan was passed.

As it finally turned out, everybody will win. The plan was passed, but with a series of recommendations tacked on, which city officials have pledged to carry out. Chief among these is a requirement for 120 additional units of

public housing (half of them for the elderly), and a set of relocation standards that would not leave any cleared land idle. Now that the plan has been approved, the city must negotiate a loan and grant contract with the federal Urban Renewal Administration.

Briefs

The largest federal building outside Washington, D.C., second in size only to the Pentagon, will be built on Manhattan's Foley Square by the General Services Administration. The building, which will cost at least \$68 million, for an estimated 1.5 million square feet of floor space, will be used by the U.S. Customs Court and 11 other federal agencies. Architects for the building will be Kahn & Jacobs, Alfred Easton Poor, and Eggers & Higgins, all of New York City.

The Arvida Corporation, the real estate firm controlled by Arthur Vining Davis, the 91-year-old ex-chairman of the Aluminum Company of America, finally got itself untangled from the coils of the Securities and Exchange Commission, and its underwriters managed to sell 2.5 million shares of stock in the Florida land development company at \$11 a share. Arvida and its underwriters had been enjoined by a federal court from proceeding with the sale after SEC charged them with starting a selling campaign before the issue was registered (FORUM, November 1958).

An ordinance banning wood for use on the exteriors of new or renovated buildings was passed a few weeks ago by the small but booming municipality of Lake Park, near West Palm Beach, Florida. Ignoring loud protests from local lumber dealers, builders, and architects, Lake Park's mayor says: "Wood may be universally used, but masonry has served the purpose better here." The chief reason for the new ordinance is to obstruct low-cost, mass housing developments.

FHA "land insurance" for developers of large subdivisions was the subject last month of conferences between the Federal Housing Administration and building industry leaders to explore the feasibility of extending FHA insurance to include the cost of land itself and certain "community facilities" such as water and sewage pipes needed for large-scale housing developments.

END



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This beautiful new building contains the very latest in effective, maintenance-free air filtration equipment. AAF's revolutionary ROLLOTRON combines the ultimate efficiency of electrostatic precipitation and the maintenance-free features of renewable-media filtration.

Dust particles are electrostatically attracted to the dry plates of ROLLOTRON's precipitator section. When the dust build-up becomes great enough, the accumulation is carried by the air stream onto the automatically renewing media of the storage section. Here, the dirt and used media are tightly wound into a compact roll for easy disposal.

For complete information on the ROLLOTRON, call your nearest AAF representative or write direct. Address Mr. Robert Moore, American Air Filter Company, Inc., 427 Central Avenue, Louisville, Kentucky.

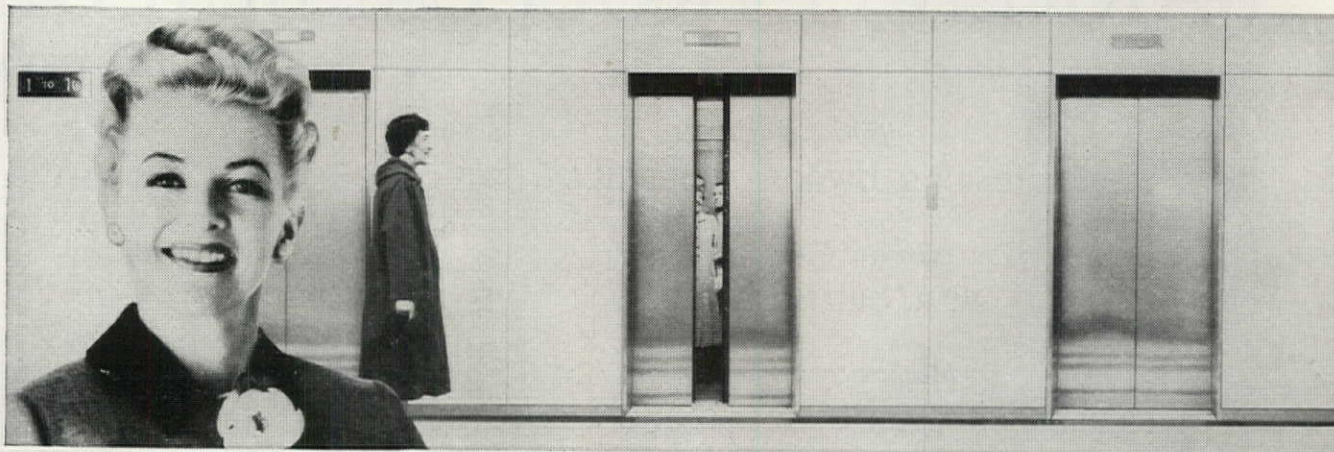


American Air Filter
BETTER AIR IS OUR BUSINESS

See the new ROLLOTRON at the AAF Exhibit, International Heating and Air Conditioning Exposition

"SEEING EYES" CONTROL WESTINGHOUSE

YOU DON'T HAVE TO "WATCH THE DOORS!"



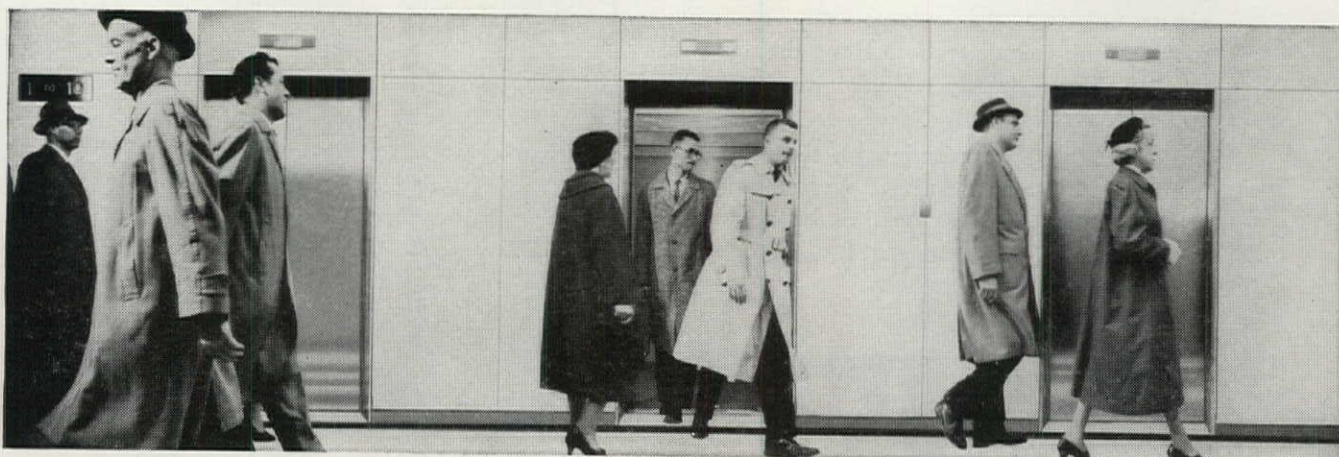
1 "Wonderful comments about Westinghouse operatorless elevators with Traffic Sentinel doors keep coming in from all parts of the country," reports Betty Furness. "There's magic

built into these doors that 'see' electronically. Just follow this demonstration on door courtesy and see what we mean. Here, elevator arrives at floor with a smooth, level landing.



2 "Passengers leave elevator. Doors remain fully open and completely motionless. There is no door action whatever . . . no door feints . . . no threatening 'coming at you' door

movement. Traffic Sentinel electronically sees and senses passenger traffic and controls the doors.



3 "While passengers continue to leave the comparatively full elevator, doors continue to remain wide open. Door movement is governed entirely by passenger traffic and not by

fixed time intervals. Traffic Sentinel recognizes and compensates for all variations in passenger movement—automatically—so that passengers are unaware of the doors.

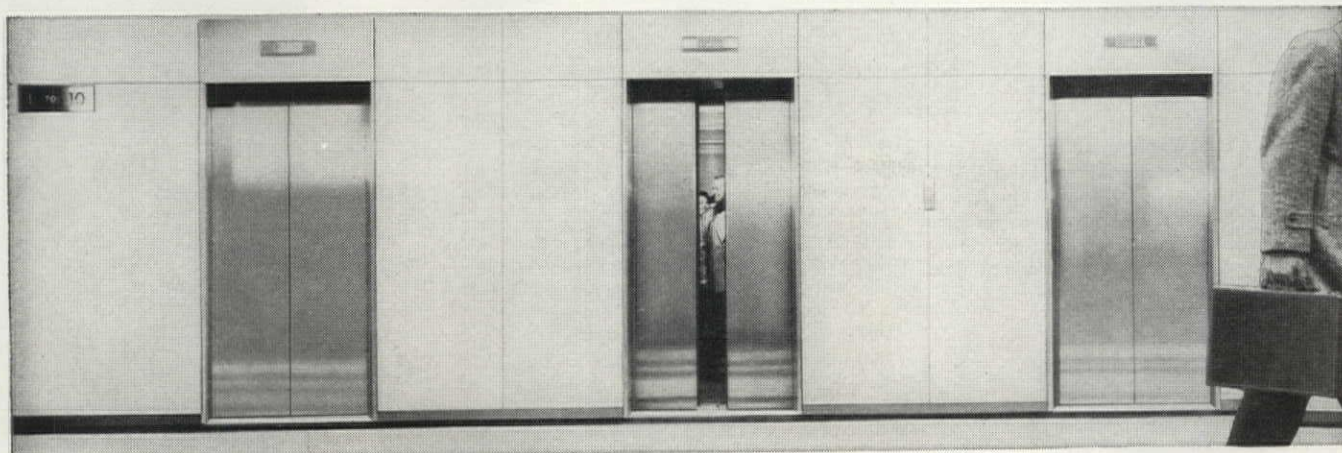
TRAFFIC SENTINEL® DOORS

—THEY WATCH YOU



4 "Waiting passengers now enter with complete confidence. Our polite Traffic Sentinel doors never close prematurely—never budge an inch to scare or annoy them. This is door

control at peak perfection—Traffic Sentinel—an original Westinghouse development.



5 "Only after the last passenger has safely boarded the elevator will the doors close. Westinghouse modern elevator systems take their proud place in new buildings across the nation

and in existing buildings anxious to modernize with the finest vertical transportation available."

TISHMAN BUILDING, 666 Fifth Avenue, New York

To facilitate speedy movement to and from offices, 666 Fifth Avenue has a Westinghouse Selectomatic® Automatic elevator system which all but eliminates unnecessary waiting time. Twenty operatorless elevators, equipped with Traffic Sentinel controlled doors, carry an estimated 6,000,000 passengers to and from the building's 38 stories in a single year. When you're in New York City, plan to visit the

Tishman Building and test ride these Westinghouse operatorless elevators. If you want to make a detailed study, we will be proud to arrange a behind-the-scene demonstration.

Owner-Management:
Tishman Realty and Construction Co., Inc.
Architects: Carson & Lundin
Lobby and Arcade Design: Isamu Noguchi

YOU CAN BE SURE... IF IT'S **Westinghouse**

J98764AA



WATCH WESTINGHOUSE LUCILLE BALL-

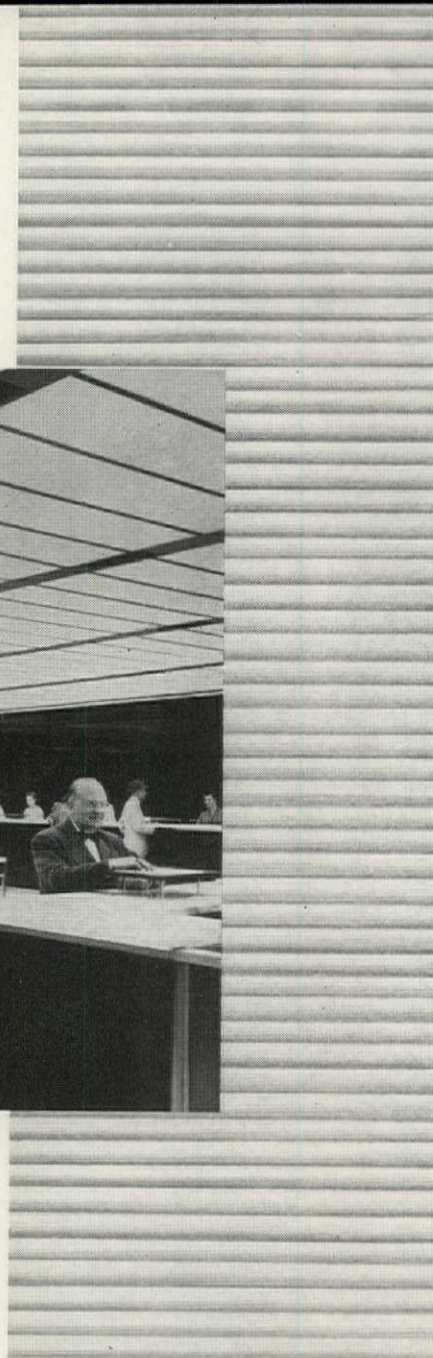
DESI ARNAZ SHOWS CBS-TV MONDAYS

WESTINGHOUSE ELEVATORS AND ELECTRIC STAIRWAYS





In four years, the Manufacturers Trust Company Fifth Avenue office (opposite page), in New York, has become firmly established as an architectural classic. Its luminous ceilings (above) made from BAKELITE Brand Rigid Vinyl Sheets are as clean, glare-free, and impressive as when first installed, contributing to the efficiency of the building by day and its striking effect at night.



IN THE TREND SETTERS...

rigid vinyl sets



A sweeping curve of glareless light, diffused through a ceiling made of BAKELITE Brand Rigid Vinyl Sheets, bathes Chrysler Corporation's styling room. Here, designers can determine the lines and features of future models with a minimum of reflection and shadow.

Ceilings made of these panels can be used to provide sound-deadening advantages, in addition to maintaining a uniform level of brightness.





Ezra Stoller

the design scene

Light, open, airy interiors are the trend for today's modern structures. Translucent ceilings give the effect of outdoors... with even, ample, and beautiful lighting.

Any space for any purpose can be more attractive—and more useful—with luminous ceiling panels. BAKELITE Brand Rigid Vinyl Sheets are easy to install, easily maintained... and economical! Modular panels suit structural needs, blend in with decorative schemes. They can be designed to conceal unsightly sprinklers

since they do not interfere with emergency operations.

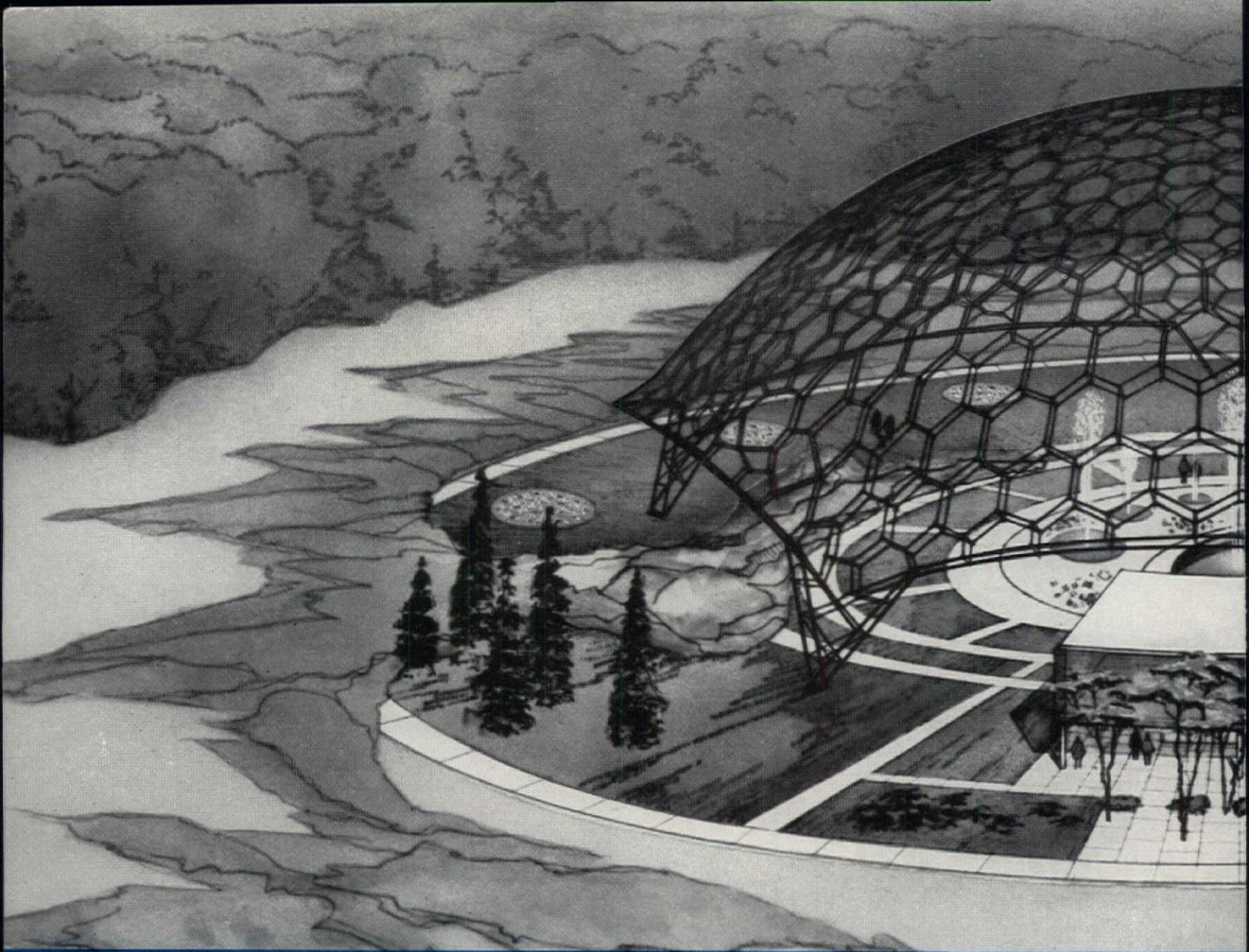
Find out how BAKELITE Brand Rigid Vinyl Sheets can add so much to appearance and convenience of your next building job. For a free copy of the booklet, "New Dimensions in Creative Lighting", write Dept. AO-17L, Union Carbide Plastics Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N.Y. In Canada: Carbide Chemicals Company, Division of Union Carbide Canada Limited, Toronto 7.

The terms BAKELITE and UNION CARBIDE are registered trade-marks of UCC.

BAKELITE COMPANY has a new name



PLASTICS COMPANY
DIVISION OF UNION CARBIDE CORPORATION



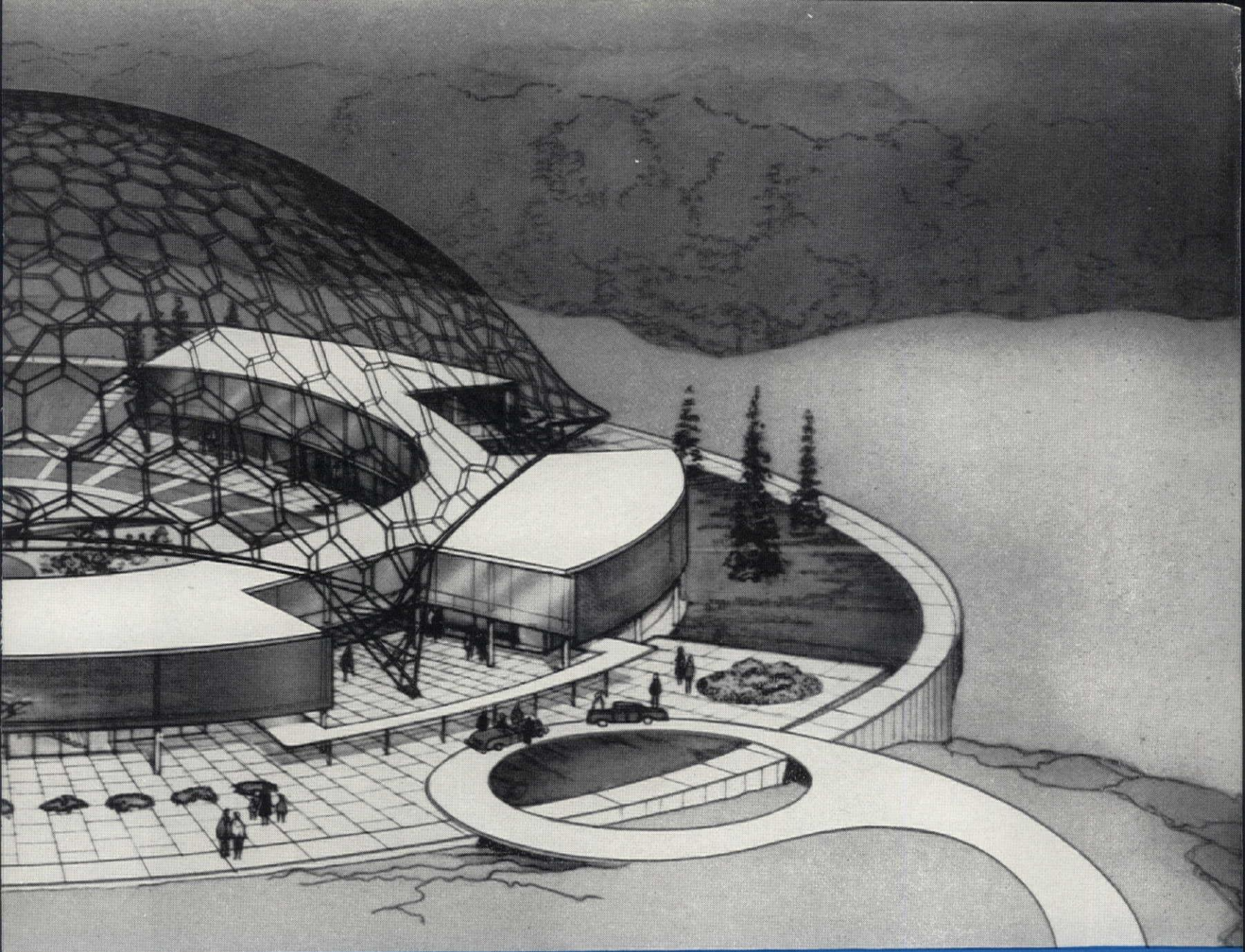
*What the architect
conceives ...
aluminum achieves!*

As an expression of what man has achieved through technology in metals, the architect conceived this giant aluminum dome for the new headquarters of the American Society for Metals near Cleveland, Ohio. The double geodesic "space lattice"—a quarter sphere containing over five miles of aluminum tubing—is 103 feet high and 250 feet in diameter.

**FOR BOTH THE ARCHITECT AND THE FABRICATOR,
ALUMINUM IS AN INVITATION TO ACHIEVEMENT**

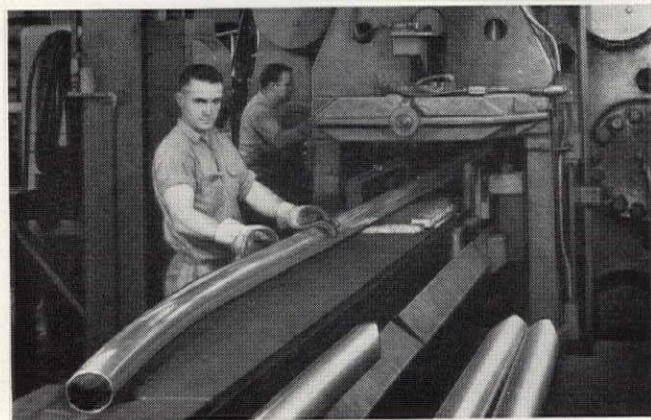
With more useful properties than any other construction material, it offers the architect almost unlimited opportunity for expression. It is light and strong, resists corrosion, reflects light and heat, offers permanent beauty with minimum maintenance.

And because it can be formed by any known method and accepts such a variety of finishes, it gives the fabricator unsurpassed opportunity for creative contribution to building construction.



Kaiser Aluminum Architectural Representatives are working closely with architects and fabricators throughout the country to help apply these advantages of aluminum to architecture. Their service is available without obligation to any architect or fabricator who is interested in the opportunities that aluminum offers.

To request these specialists' service at any time, contact the Kaiser Aluminum Sales Office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., *Executive Office*, Kaiser Bldg., Oakland 12, California; *General Sales Office*, Palmolive Bldg., Chicago 11, Illinois.



Aluminum tubing for the ASM "space lattice" emerges from extrusion press at Kaiser Aluminum's Halethorpe, Maryland plant. About 5½ miles of tubing were supplied (4 and 6-inch diameters) ... plus aluminum sheet, castings, forgings and 7¾ miles of extruded tension rod. Total: about 200,000 pounds of aluminum!

ARCHITECT: John Terrence Kelly

GENERAL CONTRACTOR: Gillmore-Olson Company

FABRICATOR: Columbus Division of North American Aviation, Inc.

ERECTOR: Mak Construction Company



See "MAVERICK" • Sunday Evenings, ABC-TV Network • Consult your local TV listing



New CLIP used in Beam Fireproofing Now has official 4-hour rating

SAVE THOUSANDS OF DOLLARS IN ERECTION COSTS. Gold Bond's new Beam Furring Clip instantly attaches metal lath to steel beams —eliminates costly bracketing. Takes only a hammer to fasten lath securely to beam. Easier and faster than wire tying.

Consider this method of fireproofing steel beams on your next job. It can save thousands of dollars.

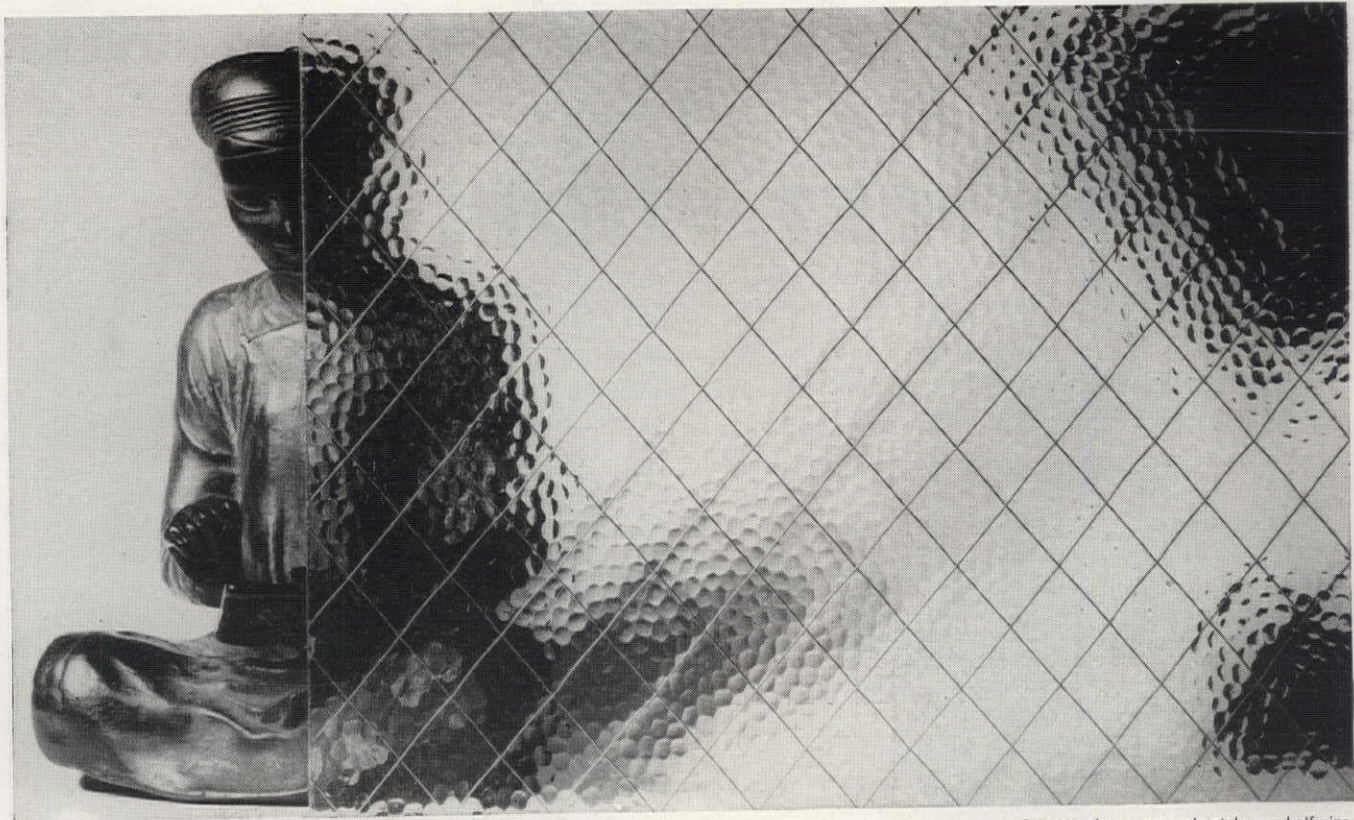
Gold Bond® Beam Furring Clips are made in four sizes to fit all beam flanges from ¼" to 1" thick. For more information write National Gypsum Company, Dept. AF-19, Buffalo 13, N. Y.



Gold Bond

BUILDING PRODUCTS

NATIONAL GYPSUM COMPANY



Patterns shown approximately one-half size.

Creative Idea from Blue Ridge . . .

GLASS THAT BEAUTIFIES AS IT PROTECTS

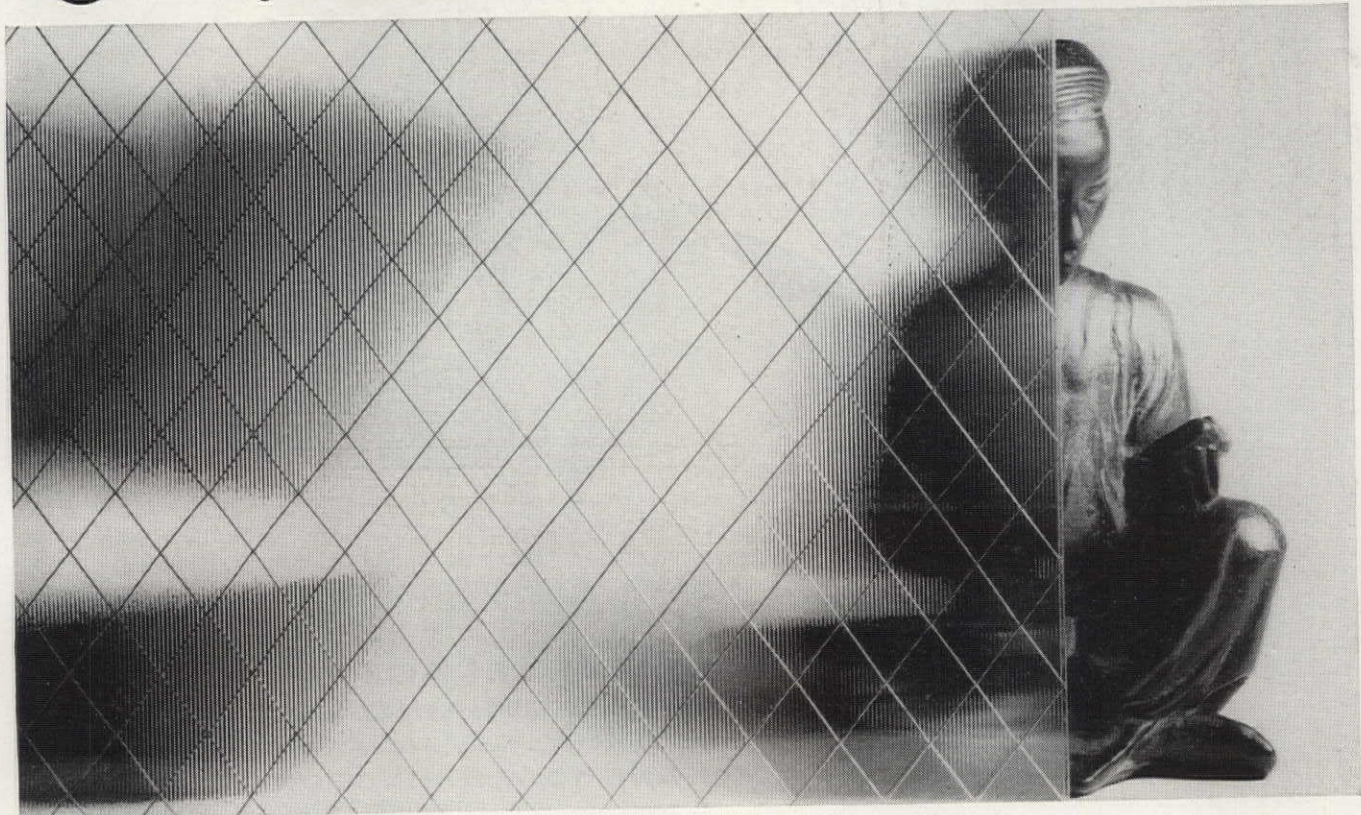
Of course, wired glass can be beautiful. The pictures are proof of that. Blue Ridge has combined the exciting textured beauty of its Patterned Glass with the symmetry of Nuweld® wire mesh. To-

gether they provide a thoroughly functional material that lends itself to unusual creative ideas. It's available in the patterns shown, or polished. Write for samples.



**Patterned Wired Glass
by Blue Ridge**

BLUE RIDGE GLASS, Kingsport, Tennessee
a division of American-Saint Gobain Corporation
SOLD THROUGH LIBBEY-OWENS-FORD DISTRIBUTORS AND DEALERS

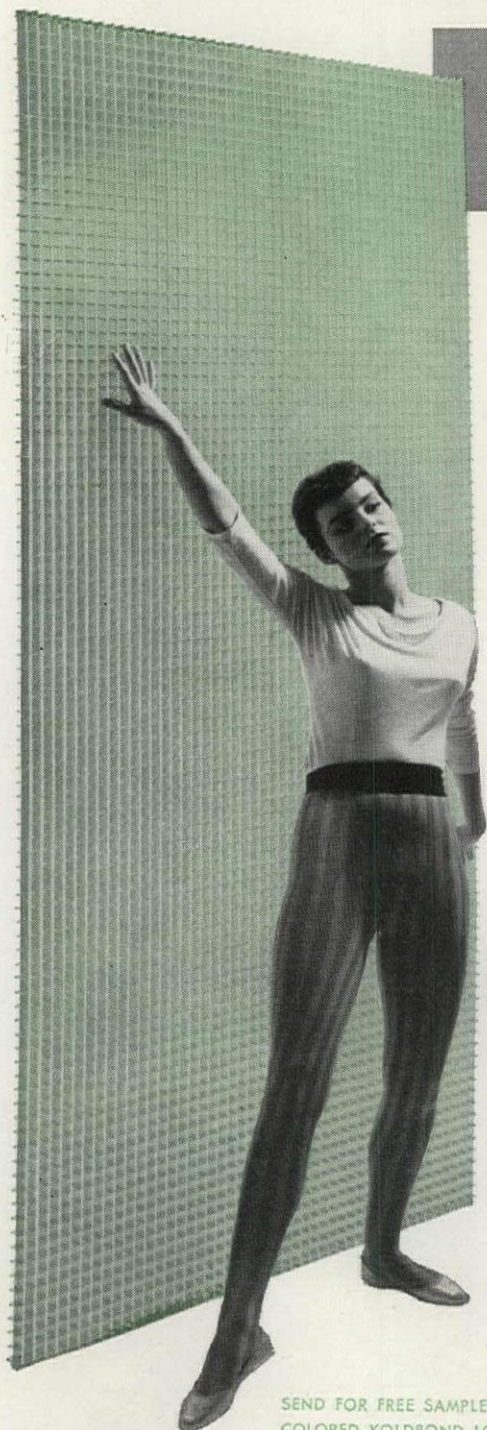


COLUMBIA'S COLORED KOLDBOND ALUMINUM LOUVERS

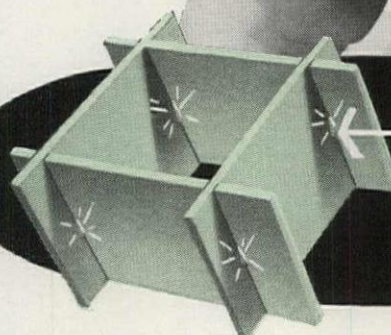
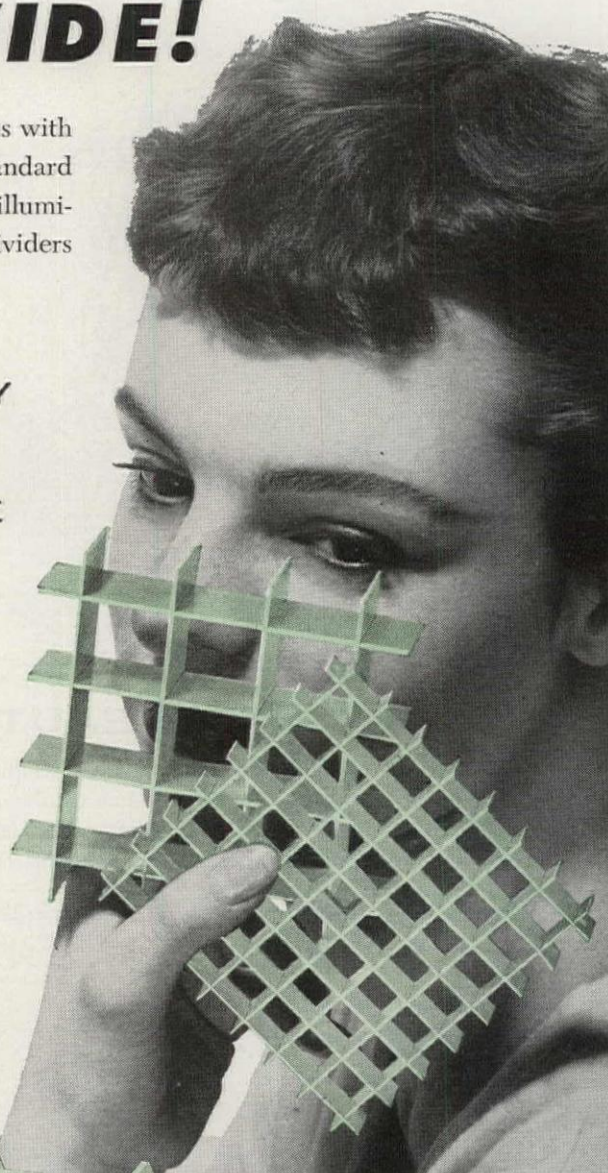
$\frac{1}{2}'' \times \frac{1}{2}'' \times \frac{1}{2}''$ and $1'' \times 1'' \times 1''$...

NOW 4 FEET WIDE!

Big, strong panels rigid enough to stand alone in 8-foot lengths with no bend or crack. All sorts of soft, pastel colors are yours... standard or to your specification. Designed for economy in large-area illuminated ceilings or modules, for interior decorator panels and dividers... or for whatever your creativity suggests to you.



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PERFECTLY
ALIGNED
RIGID
VERSATILE



COLUMBIA'S
KOLDBOND

The exclusive Koldbond process gives Columbia louvers their amazing strength and rigidity. There is no weld to sag or break. Koldbond is unduplicated and unequalled by anyone, anywhere... exclusively yours from

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SEND FOR FREE SAMPLES OF
COLORED KOLDBOND LOUVERS



Projects

A roundup of recent and significant proposals



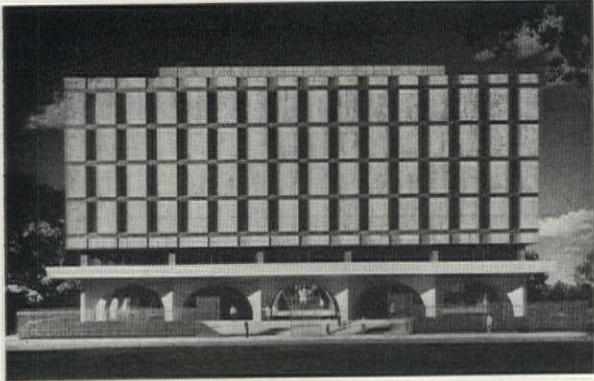
TWO DORMITORIES FOR HARVARD

The rendering above shows the two Harvard University dormitories, each 12 stories tall, which will rise beside Boston's Charles River by autumn 1960, and tower over all other build-

ings on the campus. Designed to house a total of 280 undergraduates, the twin structures, and adjacent, two-story library, will be part of Leverett House, one of the university's

eight residential centers. The Boston firm of Shepley, Bulfinch, Richardson & Abbott are architects for the project, which will be sheathed in glass and limestone.

U.S. EMBASSY BUILDING FOR MEXICO CITY



On the Paseo de la Reforma, Mexico City's main thoroughfare, the U.S. government will build the \$3-million embassy building shown at left. Sheathed in glass, aluminum spandrels, and translucent white marble, the building's five floors will be set atop exposed concrete arches enclosing a traditional Mexican patio. The building was designed by Southwestern Architects & Engineers of Austin, Texas.

NEW YORK MENTAL HOSPITAL

The H-shaped building and two large buildings behind it in the photo below comprise the first phase of New York's Bronx State Mental Hospital, a mammoth \$30 million project soon to be built from plans by Urbahn, Brayton & Burrows and Hart & Jerman, associate architects. Exterior facing will be white brick, glass, and aluminum-clad columns. Ultimate capacity for the complete hospital: 4,000 patients.



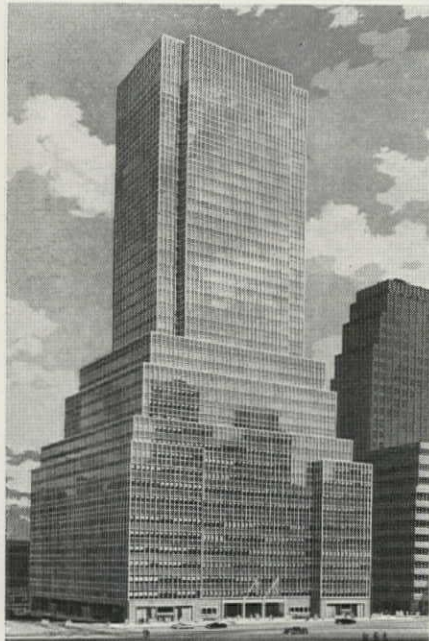
CONNECTICUT CHURCH

Plans for St. Marks Protestant Episcopal Church to be built in New Canaan, Connecticut, include an informal parish hall seating 400, a chapel, kitchen, seven classrooms, a 150-foot-high, freestanding bell tower, and the 700-seat church proper which will be sheathed in cast stone grillwork and topped by an undulating concrete roof. Architects: Sherwood, Mills & Smith of Stamford. Completion is scheduled for Christmas 1960. Cost: \$1.5 million.



MANHATTAN OFFICE TOWER

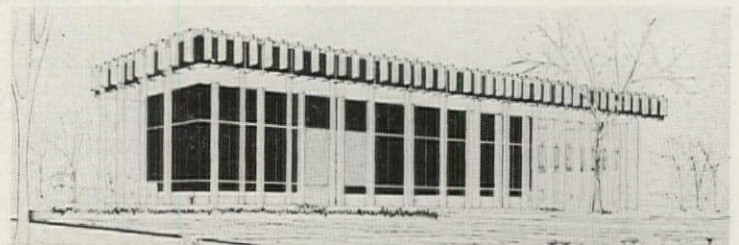
The \$25 million skyscraper shown at left is the first major project to be started in New York City's \$1 billion downtown redevelopment program. Forty stories tall, with more than a million square feet of rentable floor space, the glass-and-aluminum office tower will occupy a full block on Pine Street in the heart of the city's financial and insurance district just one block from the 60-story Chase Manhattan Bank building now under construction. Completion is scheduled for 1960. Architects for the project are Emery Roth & Sons of New York City.



TALL APARTMENT TOWER FOR NEW YORK CITY

By the spring of 1960, Imperial House (above) will rise 30 stories above East 69th Street in Manhattan. The tallest residential building to be erected in New York in the last decade, it will have 380 apartment units renting at \$1,000

and up per room, annually. Total floor space: roughly 50,000 square feet. Financiers for the project, which is the design of Emery Roth & Sons, are Fisher Brothers, builders and developers. Cost: about \$22 million.



INTER-AMERICAN BUSINESS HEADQUARTERS FOR MIAMI

The Organization of American States, a government-backed group dedicated to improving economic relations between countries of the Americas, plans to build a \$4 million Miami headquarters building.

The top floor, jacketed with bronze sun baffles, will contain 21 delegate offices. Three lower levels will include an exhibit area and council chamber. Designer: E. Abraben; architect: Philip Pearlman.

HUGE CONVENTION CENTER FOR LOS ANGELES AREA

On a 37-acre site next to Disneyland outside Los Angeles, a \$15-million convention center, including a 400-room hotel, a 48-lane bowling alley, an aluminum-domed arena accommodating 6,000 people, and a 50,000-square-foot exhibit

building, will be built by Developer James L. Fallon from plans by Architects Daniel, Mann, Johnson & Mendenhall. To be known as Wonder Palace, the vast project is scheduled for completion within the next two years.



APARTMENT HOUSE FOR MIAMI BEACH

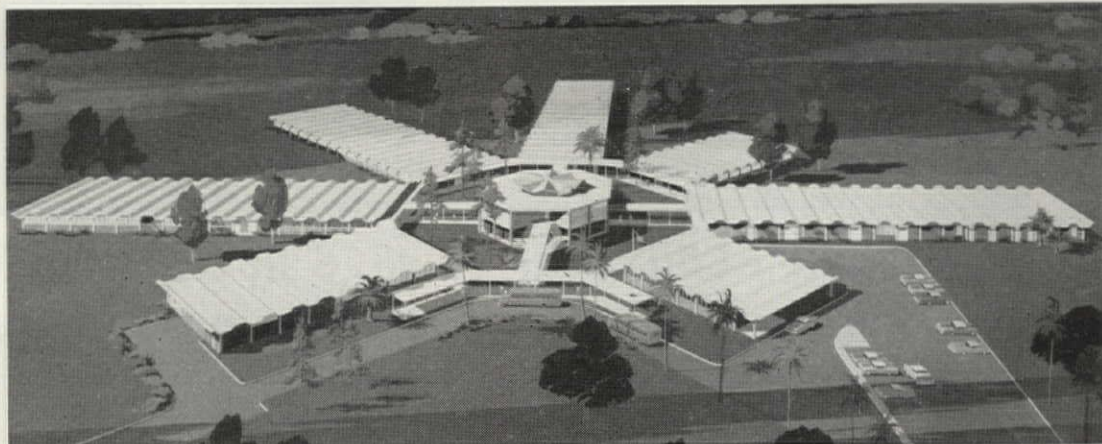
Year-round, moderately priced living facilities on Biscayne Bay in Miami Beach will be provided by the \$7-million Southgate, a combination apartment house and hotel now being erected by Builder-Developer Nathan S. Gumenick of

Richmond, Virginia. The project, composed of two L-shaped, 14-story towers, will have a total of 442 apartment units (rent: about \$160 for four rooms), as well as 107 hotel rooms. The architect is Melvin Grossman.



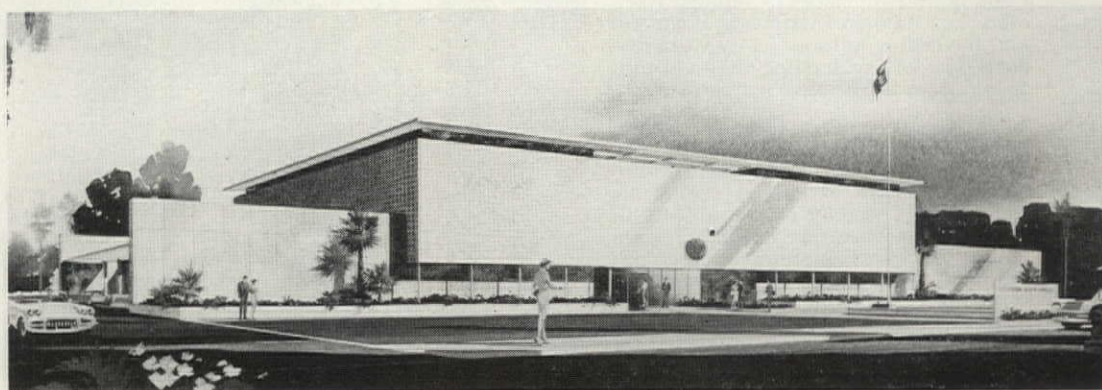
FLORIDA HIGH SCHOOL

For the Duval County High School (right) now being built near Jacksonville, Florida, Architects Hardwick & Lee have planned seven one-story wings radiating out from a landscaped court and a two-story hub, which will house a library and locker rooms. Forty-eight classrooms, a cafeteria, and offices will be located in the wings. The school's pleated concrete roof, only 3 inches thick, will be poured in place. Cost: about \$900,000.



CITY HALL IN CALIFORNIA

A precast concrete grille supported by aluminum-skinned columns will screen off the entire second floor of the Alhambra City Hall Building to be built in Alhambra, California at a cost of about \$850,000. The structure, designed by Los Angeles Architect William Allen, will be two stories tall and will have 42,520 square feet of floor space for approximately 150 city employees.



SMALL HOSPITAL IN CALIFORNIA

The Los Angeles firm of Pereira & Luckman, before its recently announced dissolution (page 37), designed the tiny (11,000-square-foot) hospital pictured above. To be erected on a 2.5-acre site in Fallbrook, California, the one-

story structure will have ten patient rooms (20 beds) opening directly onto the central courtyard. Construction: wood frame, concrete block, and stucco. The building will be started in October, finished in one year. Cost: \$442,000.



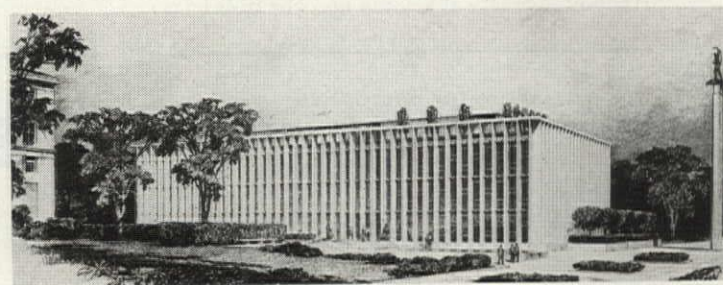
LITTLE ROCK OFFICE BUILDING

Construction has begun on the first large general office building to be built in the heart of Little Rock since the twenties. Shown at left, the glass-and-masonry-clad tower will be 18 stories tall and will overlook a landscaped plaza. It will be financed by Arkansas Promoter Winthrop Rockefeller and Builder-Developer Trammell Crow of Dallas. Cost is expected to be about \$4.5 million; completion is scheduled for early 1960. Harold Berry of Dallas is the architect for the project.

LIBRARY FOR CARNEGIE TECH

An aluminum-and-glass-faced library, with space for roughly half a million books, will be built at Pittsburgh's Carnegie Institute of Technology with funds donated by Roy A. Hunt, chairman of the Executive Committee of the Aluminum

Company of America. The four-story building is the design of Architects Lawrie & Green of Harrisburg, Pennsylvania. Construction will start early in 1960; completion is due for September 1961. Cost: about \$2 million.



Radiant Ceiling News

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

Radiant Acoustical Ceilings in New Porter Building Provide Uniform Year-Round Temperature

One of the most attractive of the many outstanding features of the new Porter Building, located in the heart of Pittsburgh's "Golden Triangle," is the uniform, year-round temperatures maintained throughout the building by the Burgess-Manning Radiant Heating, Cooling and Acoustical Ceilings. Each office has its own thermostatic control and the ceiling automatically warms or cools the room, depending on the season, to maintain the desired temperature.

The radiant energy from the ceiling heats only the occupants, floor and objects in the room. It does not raise the air temperature except as the air is warmed by the floor or the objects in the room, so there are no air currents or drafts; the room temperatures are uniform from floor to ceiling and throughout the room. The down-drafts in front of a window, or the up-drafts above a radiator, common in convection heated rooms, are not found in radiant heated rooms.

In the warm weather, chilled water is circulated through the coils of the ceiling, and the panels will absorb excessive heat from occupants and furniture in the room. Again there are no drafts such as the chilled air currents emitted from conventional air conditioners.

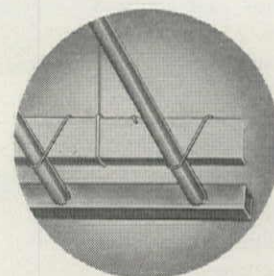
The architects, Harrison and Abramovitz, and engineers, Jaros, Baum and Bolles, made the most of the possibilities offered by the Burgess-Manning Radiant Acoustical Ceiling. The floor area of the Porter Building is uncluttered by radiators—the walls contain a minimum of ducts required with the more conventional comfort conditioning devices. Less ceiling thickness, because only ventilating ducts are required—mean lower building height and lower cost for the same number of stories.

The modern Porter Building, in addition to radiant heating and cooling, has an electronic precipitator that will remove dust, pollen and smoke from the ventilating air. Half inch solar glass windows absorb solar heat and reduce outside noise. The Burgess-Manning Radiant Acoustical Ceiling absorbs interior noises.

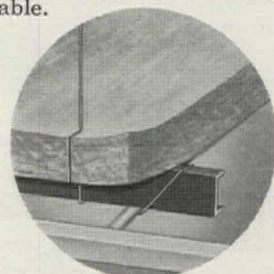


Radiant Acoustical Ceiling Cuts Down Building Weight

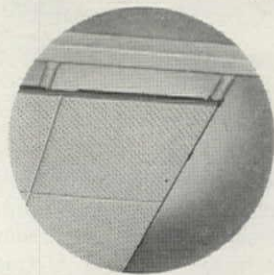
In addition to other economies in first cost, the Burgess-Manning Radiant Acoustical Ceiling, because of its reduction in weight over a plaster ceiling, permits the use of lighter structures. The weight of the aluminum panels of the radiant heating and acoustical ceiling, plus the water filled grid, is only 25% of the weight of a plaster ceiling.



The illustration above shows the construction of the Burgess-Manning Radiant Acoustical Ceiling. A conventional 1 1/2" channel suspension grid supports a water circulating coil which consists of 1/2" laterals welded into square headers. A sinuous type coil can be used where conditions make it desirable.



The sound absorbing insulating blanket is laid on top of the suspension.



Perforated aluminum radiating panels are attached directly to the water circulating coil.

The distance from the face of the aluminum panel to the top of the suspension member is 3/8", a substantial saving in space over the ventilating ducts, etc., required for some other systems.

Write for descriptive
Burgess-Manning Catalog
No. 138-2F



BURGESS-MANNING COMPANY

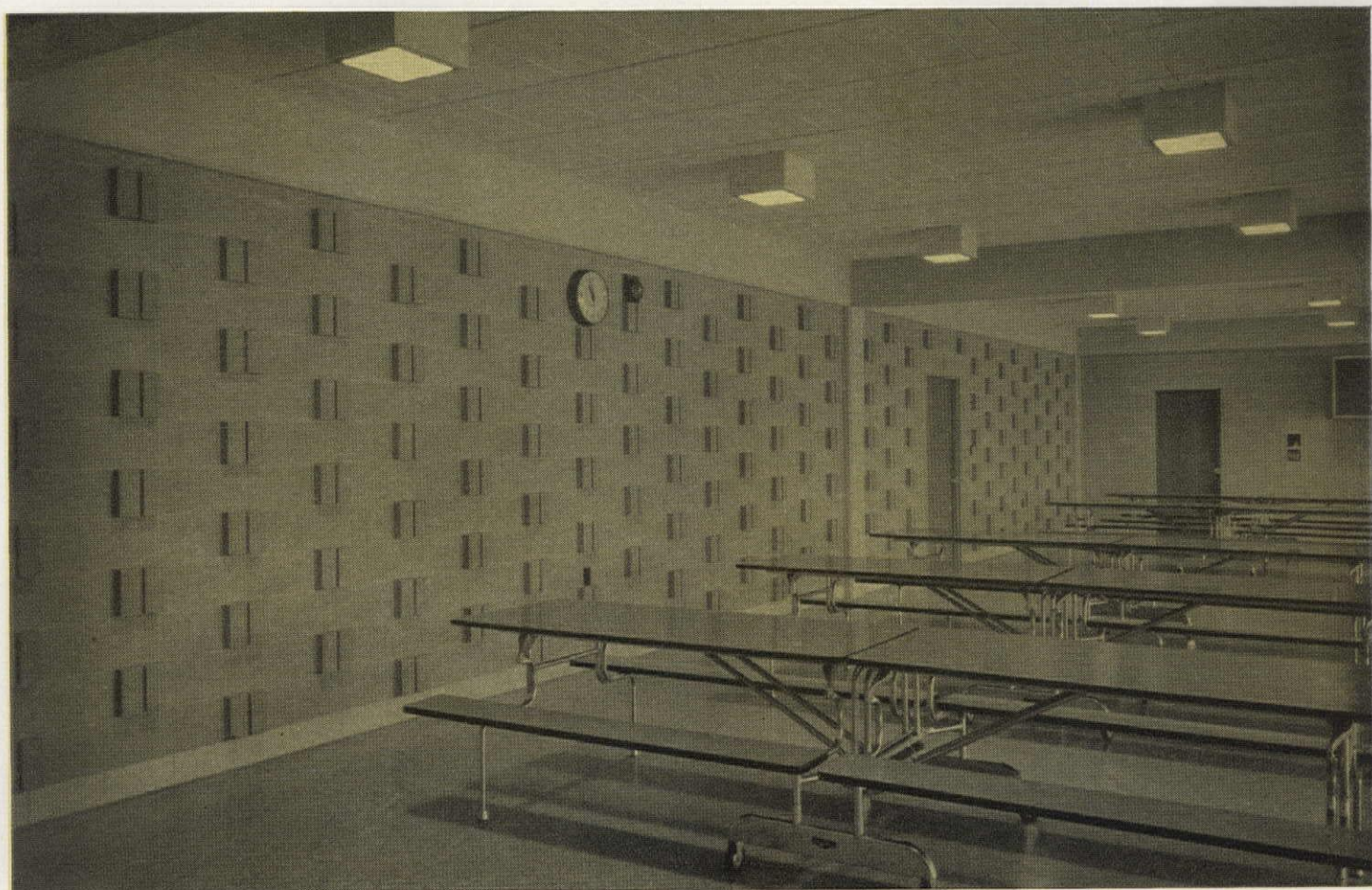
Architectural Products Division

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DUR-O-WAL[®] SAFEGUARDS THE BEAUTY OF MASONRY CONSTRUCTION

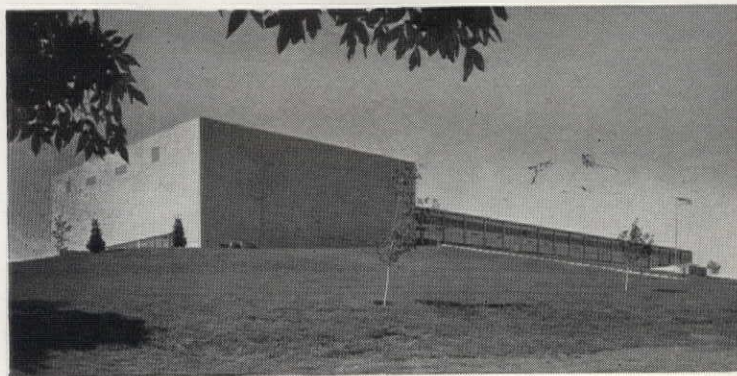
Throughout the United States genuine Dur-O-wal Steel Reinforcing is being used in the mortar bed to provide lasting protection for the classic beauty of masonry construction



You can provide timeless protection for the flawless beauty of masonry with time-tested Dur-O-wal. This high-

tensile steel re-inforcing is trussed designed and custom fabricated to give masonry walls a backbone of steel.

Specifications and Research data available on request.



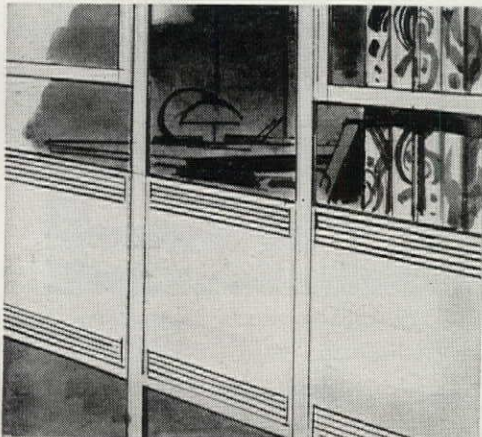
DUR-O-WAL[®]

Rigid Backbone of Steel For Every Masonry Wall

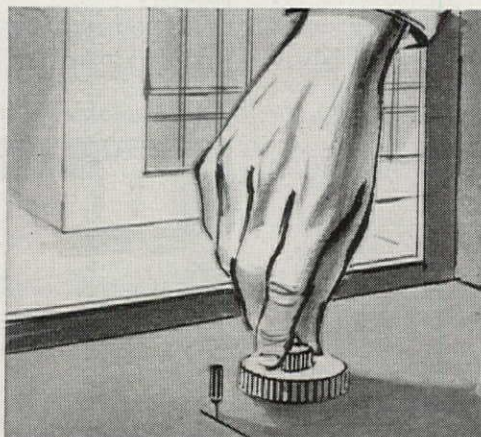
Dur-O-wal Div., Cedar Rapids Block Co., **CEDAR RAPIDS, IA.** Dur-O-wal Prod., Inc., Box 628, **SYRACUSE, N. Y.** Dur-O-wal Div., Frontier Mfg. Co., Box 49, **PHOENIX, ARIZ.** Dur-O-wal Prod., Inc., 4500 E. Lombard St., **BALTIMORE, MD.** Dur-O-wal of Ill., 119 N. River St., **AURORA, ILL.** Dur-O-wal Prod. of Ala., Inc., Box 5446, **BIRMINGHAM, ALA.** Dur-O-wal of Colorado, 29th and Court St., **PUEBLO, COLORADO** Dur-O-wal Inc., 165 Utah Street, **TOLEDO, OHIO**



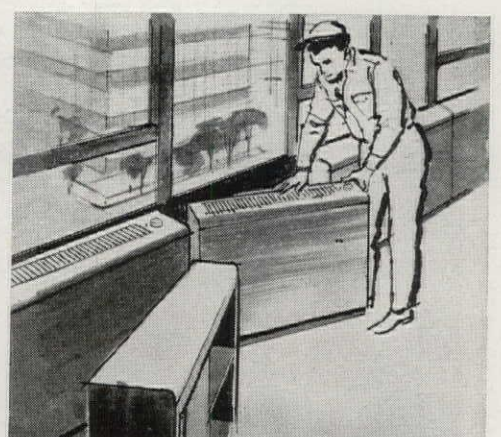
New LUPTON Curtain Wall combines comfort conditioning with your choice of matching cabinets and bookcases.



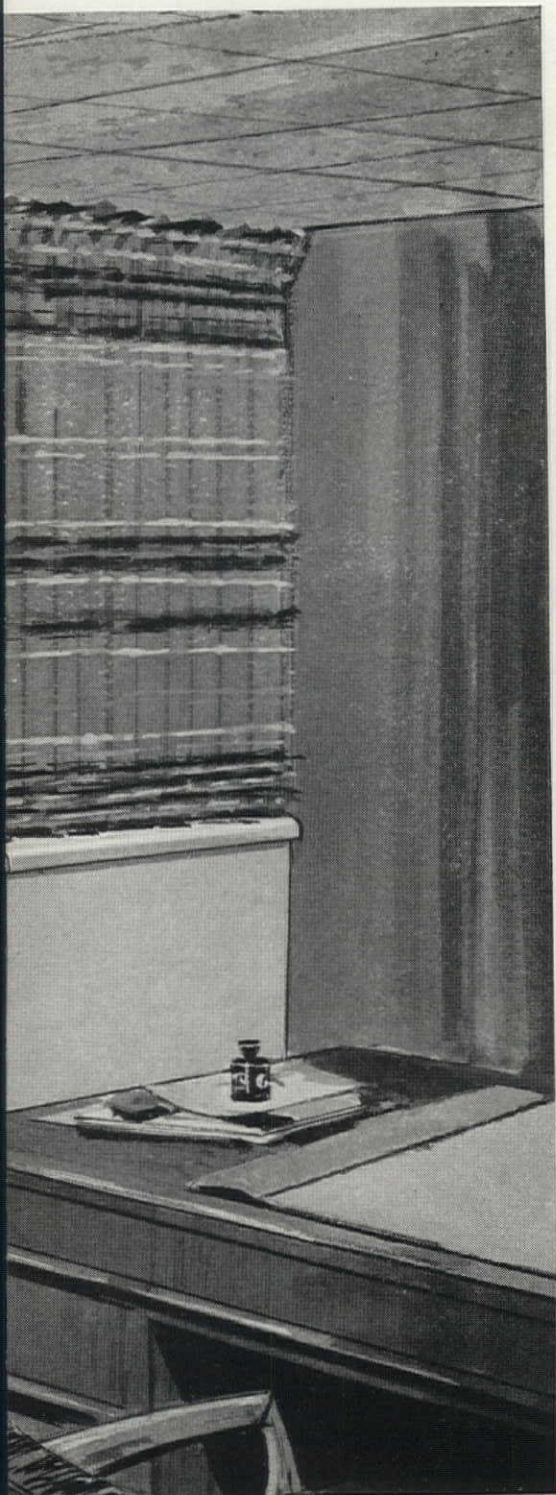
Outside—wide separation between air intake and discharge! This gives faster, more efficient heat dissipation on outside by preventing recirculation of heated air. Nothing protrudes outside.



Comfort at the twist of a dial! Each occupant regulates the exact amount of comfort conditioning he wants . . . regardless of conditions in other parts of the building. This lowers air-conditioning costs.



Costs 40-60% less to install! There's no bulky, space-consuming ductwork, plumbing connections, water towers, or condenser units needed. Trained LUPTON crews install the units.



New concept integrates personalized comfort conditioning with LUPTON Curtain Walls!

Offers you many advantages over usual air-conditioning methods for buildings of true "perimeter" type.

Now, LUPTON Curtain Walls and LUPTON Comfort Conditioning are unified. They're installed together to form a complete exterior-interior wall. You get one-source responsibility for detailing and coordinating outside wall and inside cabinets, shelves, and air-conditioning equipment. A simple electrical connection puts the LUPTON Comfort Conditioner in operation.

System Easily Expandable

Wide flexibility is another advantage of LUPTON Comfort Conditioning. Advance planning makes your system easily expandable. Just treat all exterior panels in a uniform manner to provide for comfort conditioning. Then, you can make changes in the number and location of comfort-conditioning units with ease and speed . . . at relatively small cost.

You can install as many LUPTON Comfort-Conditioning Curtain-Wall Units as you need at first. In each office, you can combine the unit with shelving, bookcases, or storage cabinets. You can replace these latter units with additional LUPTON Comfort Conditioners if required.

You have endless opportunities for variations in spandrel proportions and surface treatment.

Building-Owner Advantages

The building owner gets more income-producing space.

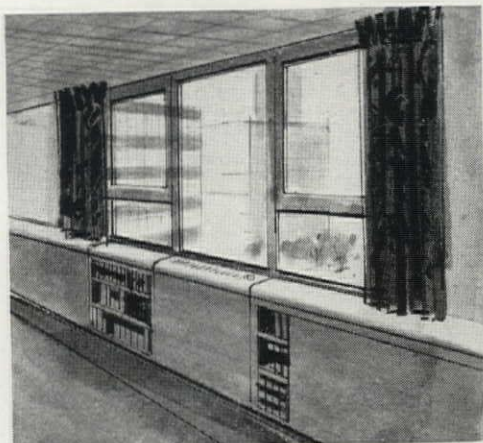
He gets a major rental feature, because his clients enjoy healthful ventilation as well as odor and smoke removal through the LUPTON Comfort Conditioner's exhaust system.

Air-conditioning costs go down, too. Like ventilation and exhaust, temperature is regulated from each unit by the occupant of each room. This prevents costly over-air-conditioning. Allows full room-by-room variation.

Two Interchangeable Units

LUPTON offers two comfort-conditioning units: heavy-duty for areas with a particularly heavy cooling load, and lighter-duty for average loads. Both units have the same dimensions, and can be interchanged as loads decrease or increase. LUPTON's durably-made, precision-balanced components assure you efficient, low-maintenance operation.

Write today for more information about Comfort Conditioning—LUPTON's far-reaching advance in aluminum curtain-wall design and function.



Compact, attractive appearance! On the inside, a sill of normal depth—on the outside, air circulating function may be concealed or revealed as desired. There are no projecting parts.

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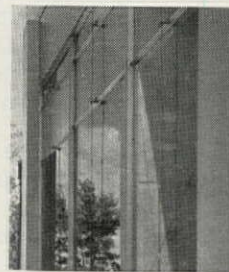
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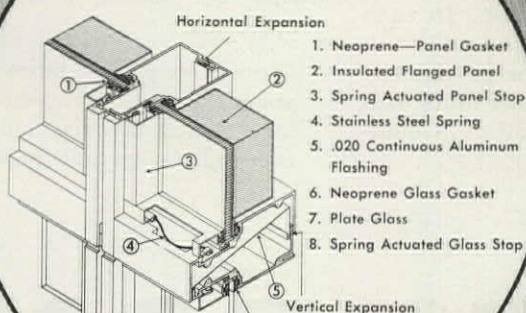


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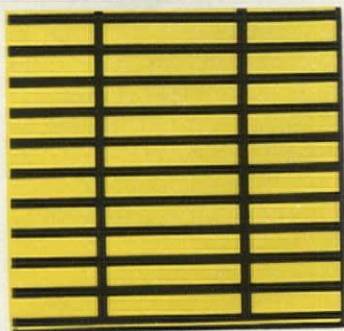
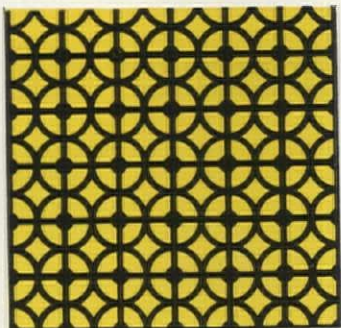
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Pereira and Luckman split; Bunshaft and Saarinen join team of Lincoln Center architects

CAMERA/BILL EARLY



LUCKMAN AND PEREIRA

In divorce, a certain sadness.

William L. Pereira and Charles Luckman have for the past eight years been one of the most glamorous and successful architectural partnerships in the country. In many ways, they seemed the perfect combination: Bill Pereira, a notably gifted designer with an international reputation, and Chuck Luckman, the entrepreneurial "wunderkind" who had headed the mammoth Lever Brothers Company at the age of 37. The two are the same age (49), graduated within a year of each other from the University of Illinois School of Architecture, and both have eye-catching professional personalities.

Last month, however, the perfect team came apart. Luckman announced that he had bought Pereira's share of the business (for an unnamed price, but not so high as the \$1 million rumored around Los Angeles architectural offices), and that the firm would hereafter be known as Charles Luckman Associates. Pereira has set up his own Los Angeles office, William L. Pereira & Associates (he agreed not to hire away any of P & L's present staff, except for former P & L Vice President Gin Wong, who has joined Pereira by common consent). A formal announcement said simply that Pereira was leaving to "resume a practice devoted exclusively to planning and architecture."

This presumably indicated that Pereira, with his strong interest in design, would seek a practice more directly under personal control and possibly smaller, while Luckman, who had specialized in the managerial and business-getting side of the large firm, getting many a big account, would seek to continue in the range of \$100 million or more annual volume to which the P & L operation had grown from \$25 million annually in its eight years.

There is a certain sadness in contemplating the divorce of Pereira & Luckman. It was Pereira who, when Luckman left Lever Brothers in 1950, sent his old schoolmate a package containing a rendering of Luckman's last work project at Illinois. Included was this note: "For 20 years I've had my eye on this guy. He was my classmate at Illinois. I think he's mature enough to return to the fold. How about it?"

Luckman returned, because as he said, "I didn't have to stay in business in order to prove anything to my friends and I didn't care about my enemies so I went back to my first love, architecture."

But what each partner loved about

architecture was apparently different enough to persuade both, ultimately, to pursue it each in his own fashion.

LINCOLN CENTER'S STRONG TEAM

One of the more powerful architectural teams recently assembled was rounded out a few weeks ago with the announcement that Eero Saarinen and Gordon Bunshaft would join Wallace Harrison, Max Abramovitz, Philip Johnson and Pietro Belluschi as designers of New York's ambitious Lincoln Center for the Performing Arts (FORUM, August 1958). Saarinen has been commissioned to design a \$3 million theater for repertory drama, in collaboration with Stage Designer Jo Mielziner, who has won many awards for his stage settings and scenery design for many Broadway theatrical productions. Bunshaft will design a library-museum building, the cast of which has not yet been firmly established. Lincoln Center contracted with Skidmore, Owings & Merrill to have SOM Partner Bunshaft handle the design work. Another SOM partner, Edward J. Mathews, will be in charge of administration for this phase of project.

In announcing the addition of Saarinen and Bunshaft to Lincoln Center's design team, John D. Rockefeller 3rd said: "The directors of Lincoln Center wish the center to symbolize America's recognition of the importance of the arts in the lives of our people. . . . We have tried to select architects who can give the buildings the individuality they deserve. But of equal importance is our desire that the completed center be a dynamic, exciting and beautiful whole—greater than the sum of its parts."

Coordinating six designs by six individualist master architects into a "beautiful whole" will be largely the job of Harrison, who is also the designer for the largest building in the center, the new Metropolitan Opera House (FORUM, June 1958).

Bunshaft may be the last member of the team to get his project into the design stage. Lincoln Center is awaiting a decision by the New York Public Library whether to take over the library as part of its system, rather than have it be a private building. If the city does decide to operate the library, its requirements will have to be reconsidered before Bunshaft's final design is made.

The biggest problem for the Lincoln

continued on page 38

DAN WEINER



THE LINCOLN CENTER TEAM

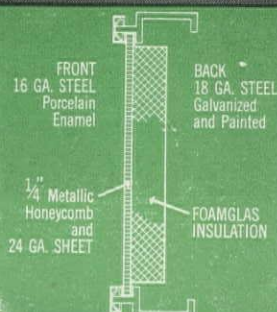
Left to right: Harrison, Johnson, Belluschi, Saarinen, Abramovitz, and Bunshaft.

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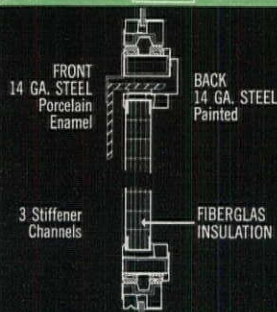
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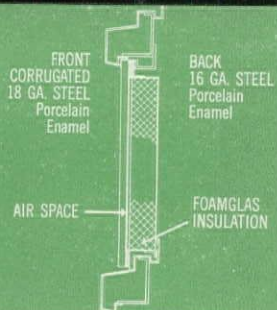
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Center design team, once all the architects begin developing plans, may well be how to live within budgets set for each building, and within the over-all estimated \$75 million provided for construction of all six structures. It has already been rumored that the design for the ballet theater (by Philip Johnson) would cost considerably more than the \$6 million that was budgeted for it. As other designs are evolved, the same problem will undoubtedly have to be met again.

MOSES SHUNS RETIREMENT

For two and a half decades, **Robert Moses** has been a power in New York State and New York City building. In that period, even his bitterest enemies grudgingly admit, he has made many a contribution to New York's park and highway programs and in the building of many other public facilities.

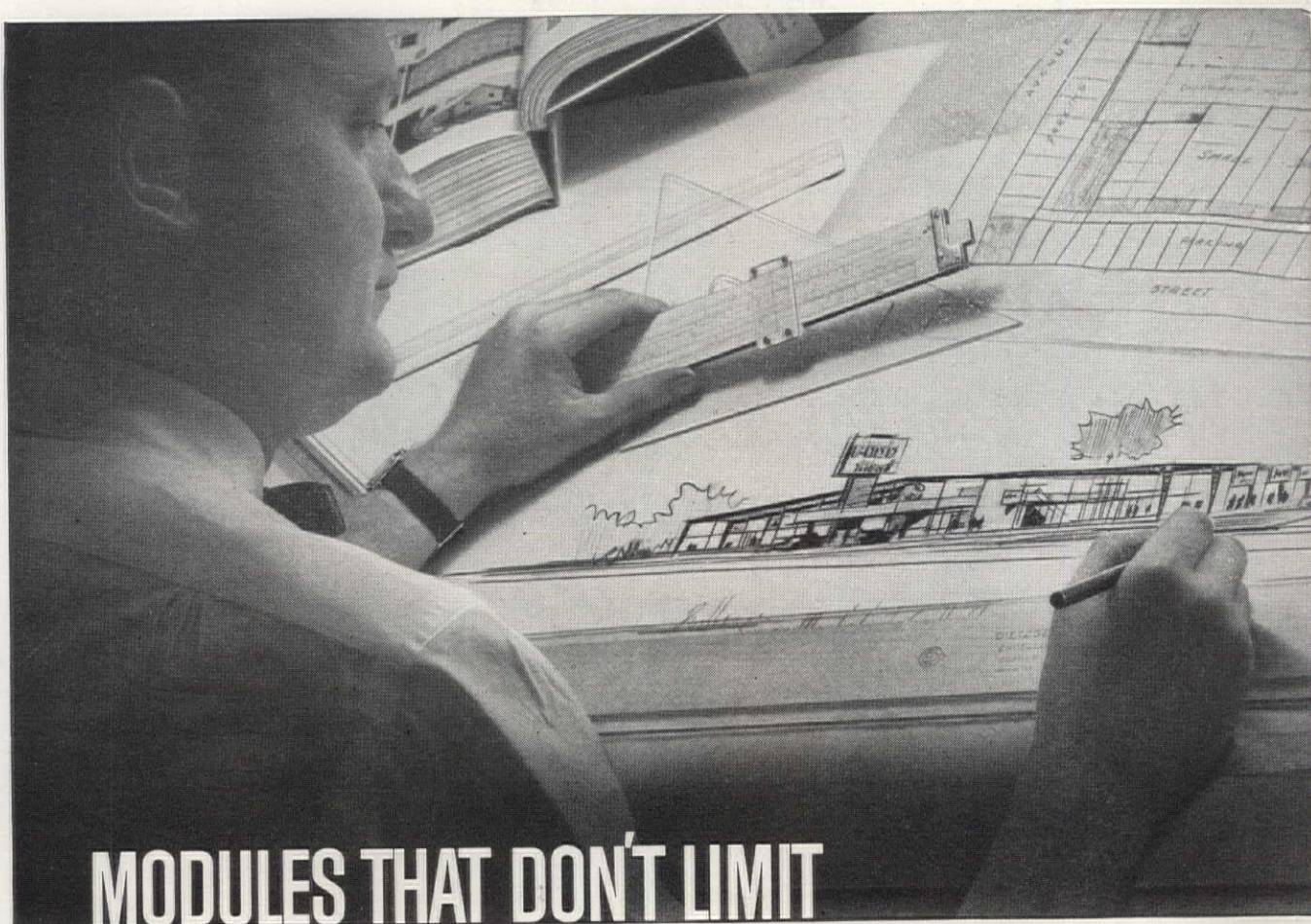
Last month, Moses reached the mandatory retirement age of 70, but there was no question about his being asked to step



MOSES

down from any of his posts, either state or city.* Mayor Robert F. Wagner quickly approved Moses' request for a two-year extension in his city jobs, and this was in turn passed by the Board of Estimate. Moses can ask for further two-year extensions until he is 80, at which time he will have to retire. Governor Averell Harriman also moved to keep Moses in his state jobs last month, and a two-year extension was approved by state officials. Moses can continue in his state posts until he is 78, by asking for two-year extensions. All in all, it appears that Moses will continue to wield a strong hand in New York building—at least for another decade. END

*Moses is New York City's Parks Commissioner, a \$25,000-a-year job, and serves without pay as City Construction Coordinator, chairman of the Triborough Bridge and Tunnel Authority, chairman of the Mayor's Committee on Slum Clearance, and as a member of both the City Planning Commission and the Youth Board. Moses also heads the State Power Authority, a \$10,000-a-year job, and is chairman of the State Council of Parks.



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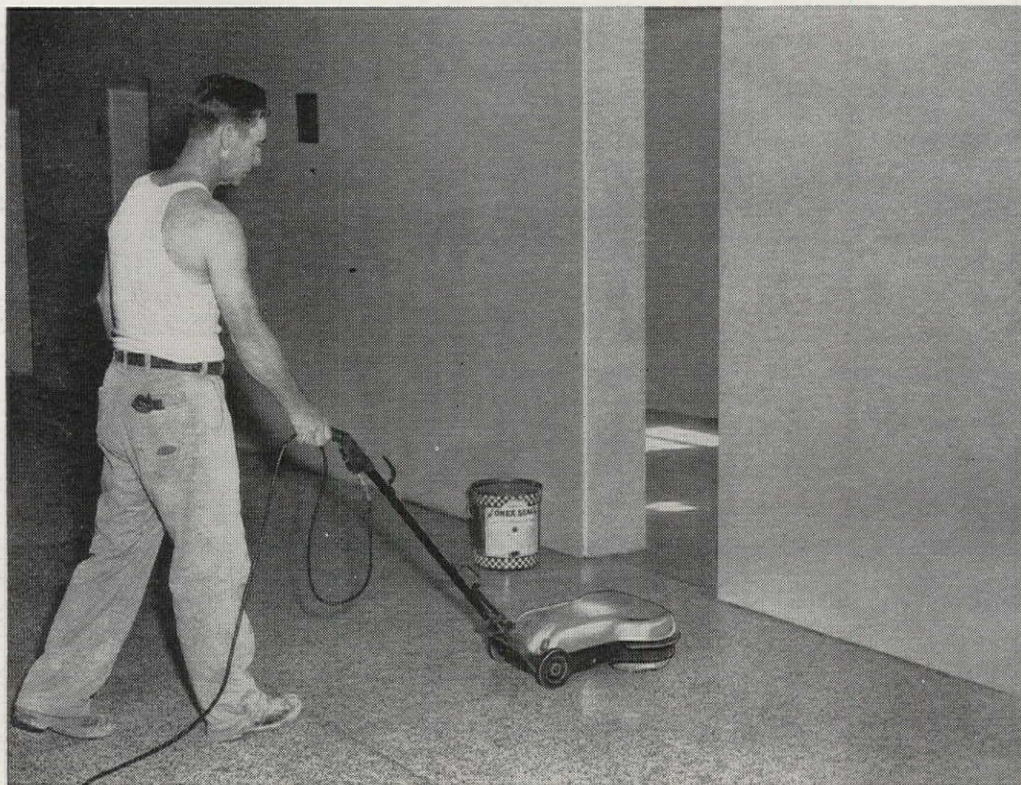
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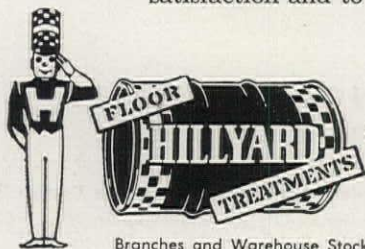


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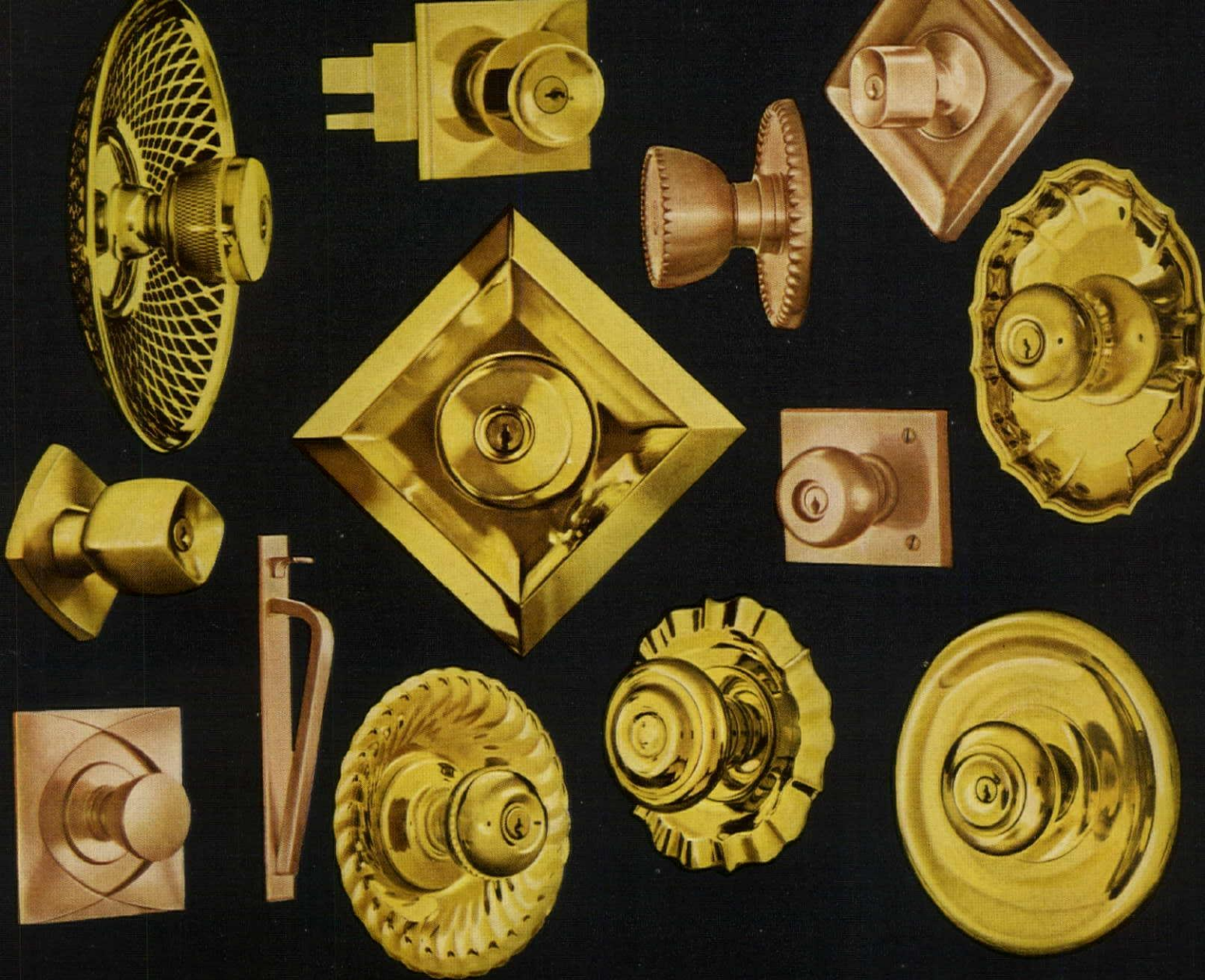
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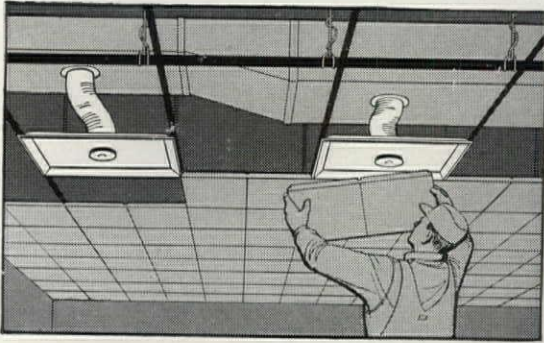
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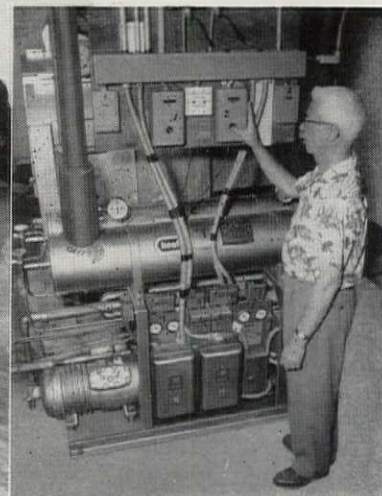


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Penguin Pavilion at San Diego Zoo. The pool is 55 feet long and 6 feet wide with depth varying from two feet to five feet. Here visitors may view the colony of penguins swimming or watch them in natural surroundings on the upper level.



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How an architect

can make a lot of kids feel a little better about school for a long time



What with school boards, budgets, contractors and heaven knows what all, sometimes it's a little difficult for a man to remember who he's designing a school for. A school is for kids. Big, little, with skirts, with pants, muddy ones (that's practically all of them), snuffly ones, grinning ones and nyah-nyah kids.

If you're nice to them, they love you. If you're not, they hate your in-nards. That's the one thing to keep in mind when you design a school . . . design it as if you like them (even if you personally think they're little monsters) and they'll like it.

For instance, kids like colors. No rule says schools have to be drab.*

For instance, kids are experimenters. Bend things to see when they'll break. Gouge things to see if they'll give. Then when the thing is broken or gouged, they think it's no good.**

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Kawneer school products are designed for kids—to please them, and to withstand their onslaughts.

They're designed for architects who like to design schools so that kids feel a little better about going.

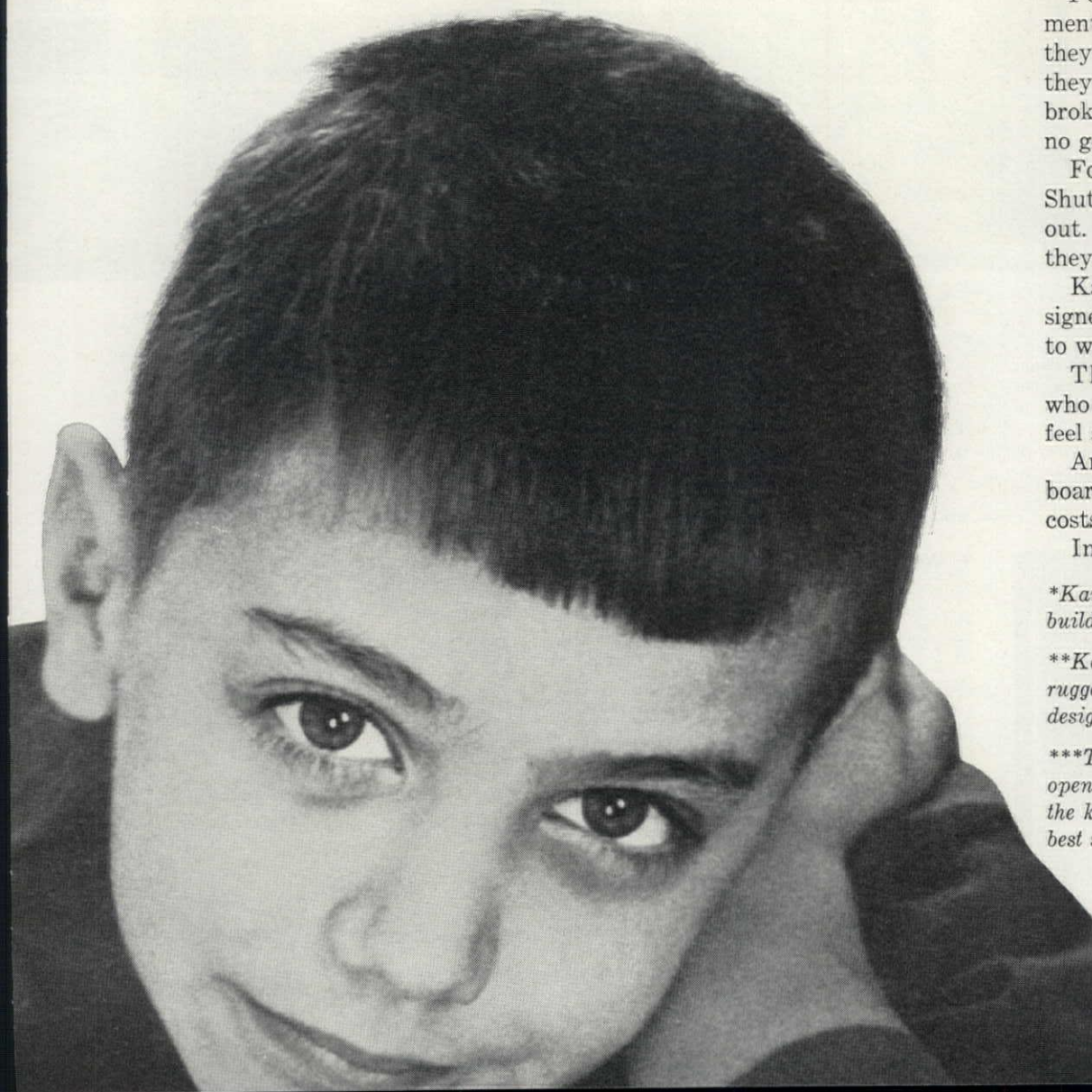
And they're designed for school boards who want to keep maintenance costs down and building life up.

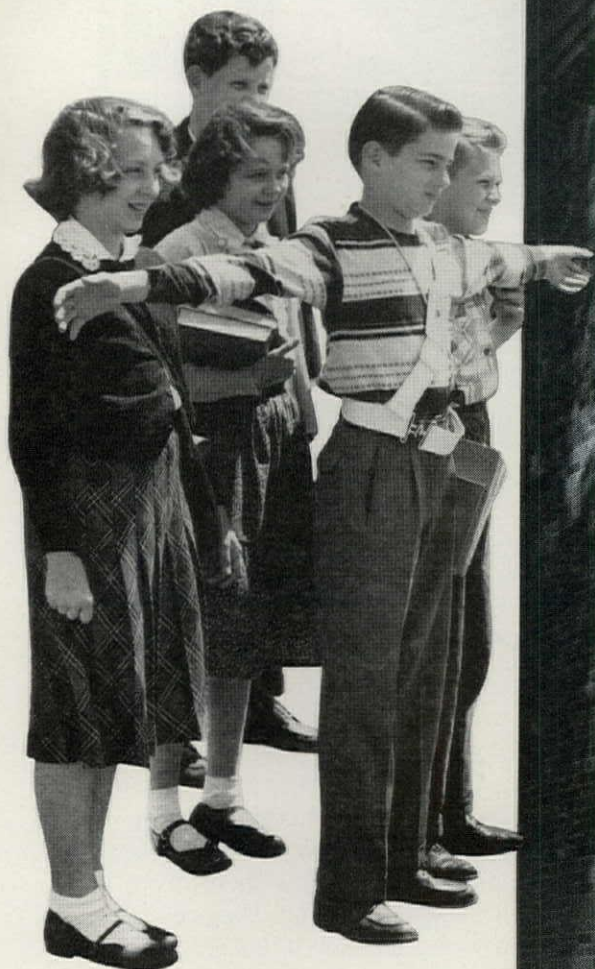
Inside, we have some examples.

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***Kawneer school building products are rugged . . . after all, our engineers and designers have kids, too.*

****This is a good argument for the bright, open atmosphere of modern design . . . the kind of design Kawneer products are best suited for.*





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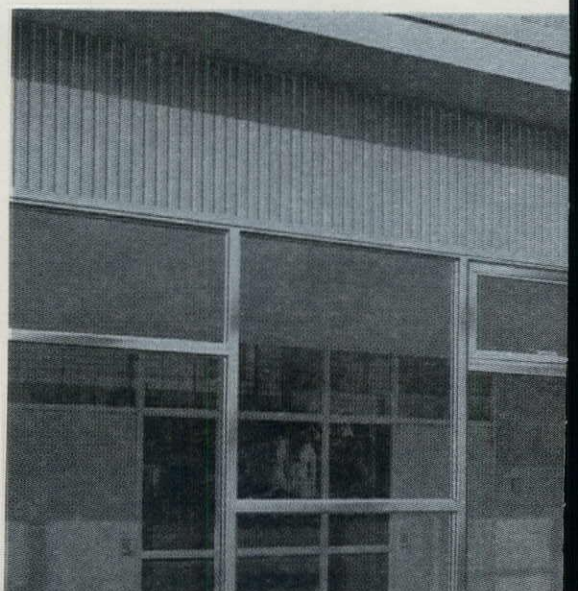
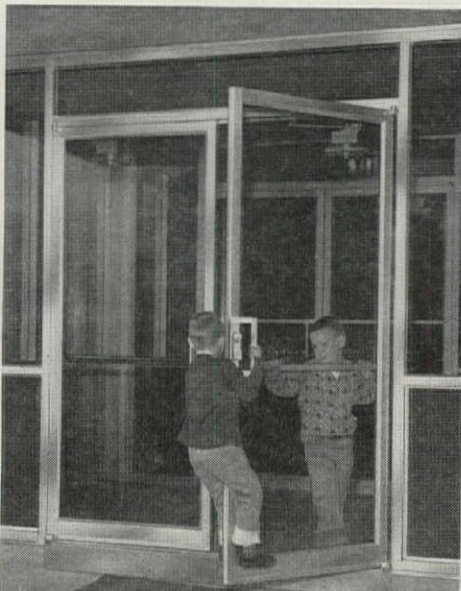
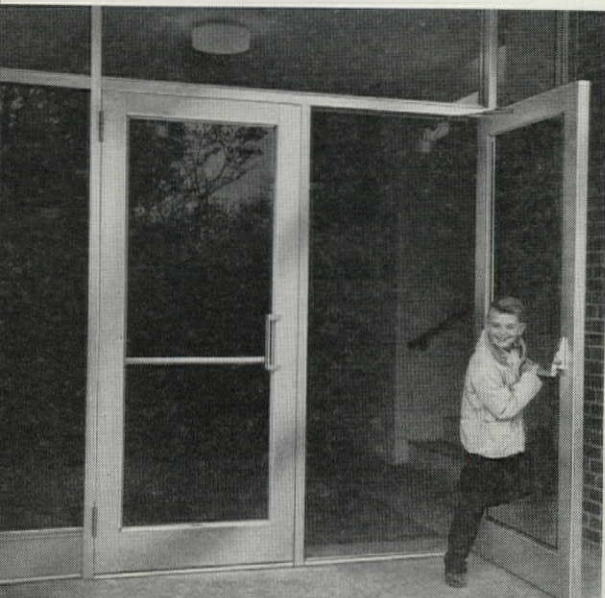


East Side School, Niles, Mich. Edward R. Duffield, A. I. A., Niles, Mich.

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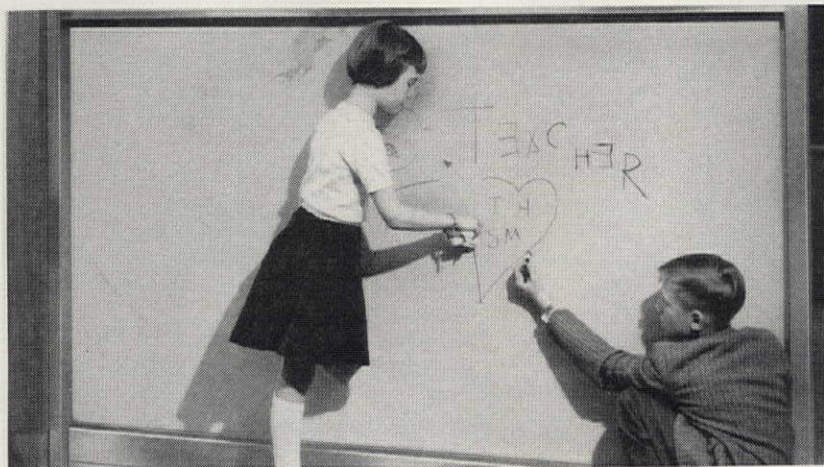
Inside Doors Can Have Kawneer Quality, Too. Kawneer Narrow Stile Doors can be used as exterior or interior doors. Kawneer also makes Triple Strength flush doors, available to suit your design.

Colorful Kawneer Zourite Wall Facing Brightens Up a School . . . Inexpensively. Zourite comes in nine different colors—each one compatible with the others—and all are keyed to the Container Corporation Color Harmony manual. Easily attachable accent strips offer you the opportunity to mix or match, complement or contrast colors for only a few dollars more.

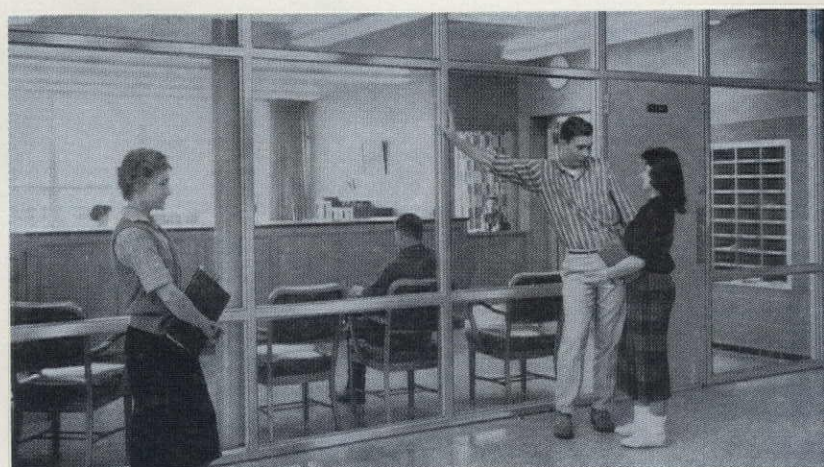




It's Always Dry Under a Kawneer Walk Cover. For campus type layouts, bus loading points, bicycle parking, Kawneer puts walk covers in packages. A variety of widths are available; can be spliced to obtain desired length.



It's Tough for Them to Torture Kawneer Color Wall. Does the same protective job in laboratories, lavatories, wash-rooms, cafeterias and shower rooms that tile does . . . yet it costs much less to buy, much less to install. These porcelainized metal panels come in a wide range of colors. Some are insulated. One type is for exteriors, the other for interiors.



Colorful, Inexpensive Partitions of Kawneer Narrow Line and Porcelain Panels. The Kawneer Narrow Line Glazing System is as useful for interior partitions as it is for exterior walls. It accepts either glass or colorful porcelain panels—or both—in the same application.

Designed with kids in mind...Kawneer School Products

FREE! TEMPLATE TO REDUCE DRAFTING TIME

THE KAWNEER COMPANY

Department AF-19
Niles, Michigan

Please send me:

- ☐ **FREE template to reduce drafting time**
- ☐ Please send me complete details on all Kawneer Products for Schools. They're free, too, of course.

Name _____

Firm Name _____

Address _____

City _____ State _____

Meet two of Kawneer's foremost lint-pickers

You know what a lint-picker does . . . if there's any fault to be found, he'll zero in on it. Terrible fellows to have fussing over your plans, but we like to have them poking around our products. Because they're so darned careful, you can specify Kawneer with confidence.



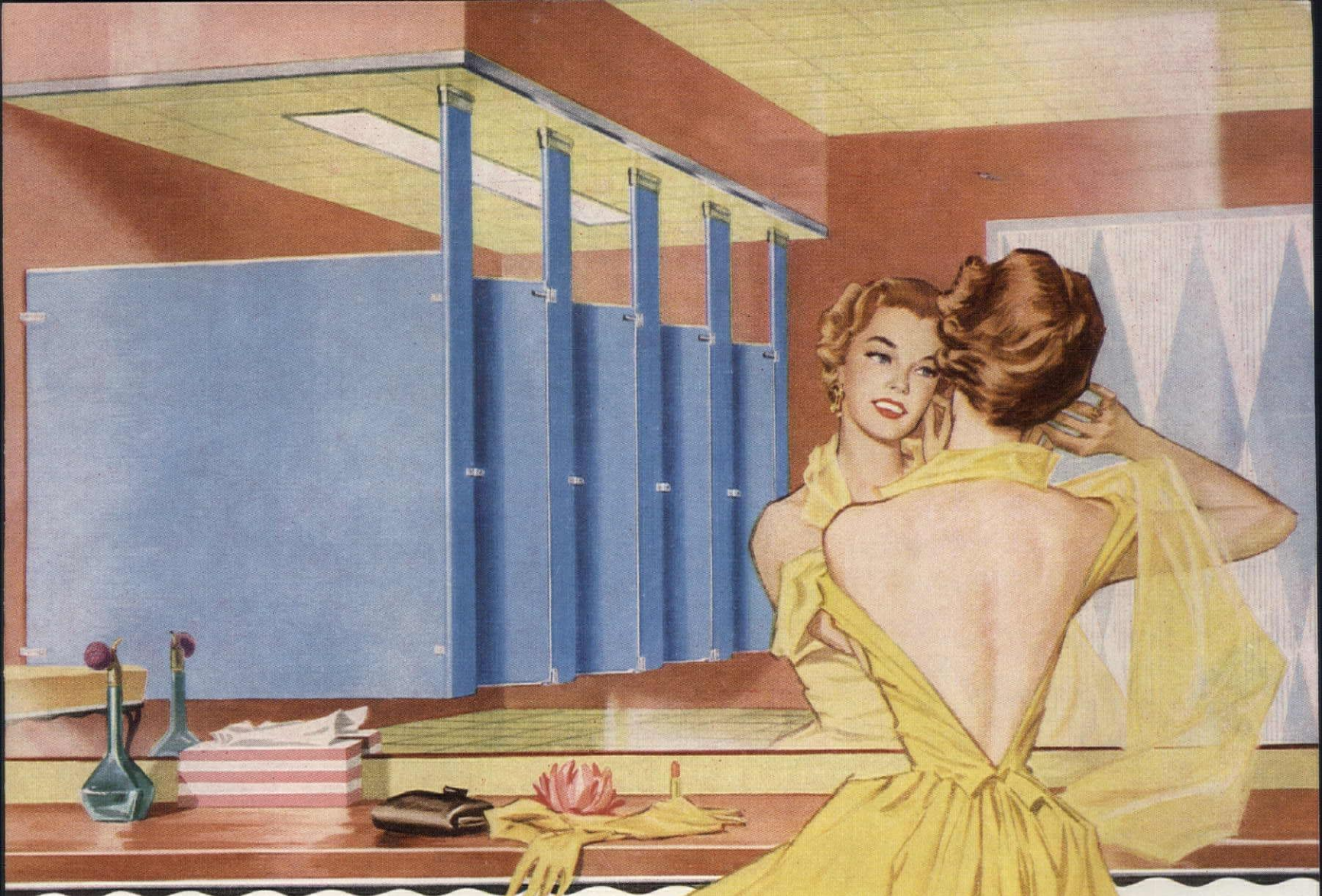
Dentist's drill helps maintain dies . . . we allow a tolerance of no more than 5/1000" in our extruded shapes, which is why they fit together so well. To keep the tolerance so intolerant, extreme care is used in maintaining the dies. This craftsman works with dentist's drills and other tiny tools to keep them exact.



There's a reason for the gleam . . . the untreated surfaces of extrusions must have a clean, mirror-like finish, even though we anodize or porcelainize the members afterward. The flaw-free surface is necessary so that the finish will "take" and remain undisturbed by weathering.

another example of the
Kawneer Touch





*Mirror...
Mirror...
on the wall*

The choice of toilet compartments reflects the good judgment of architect and builder, as well as the owner's concern for the opinion of building occupants.

When Sanymetal compartments are specified, there is no question that the installation will be attractive, that it will last the life of the building, and that maintenance costs will be at a minimum. Whether you are looking for design and beauty, or engineering and quality construction for savings, Sanymetal is fairest to all.

*See Sweet's, or write for Sanymetal Catalog 95
(For Sanymetal representatives in most cities,
look in the Yellow Pages under PARTITIONS).*

LOOK FOR THIS



NAMEPLATE
WHICH IDENTIFIES EVERY
SANYMETAL INSTALLATION.



Sanymetal®

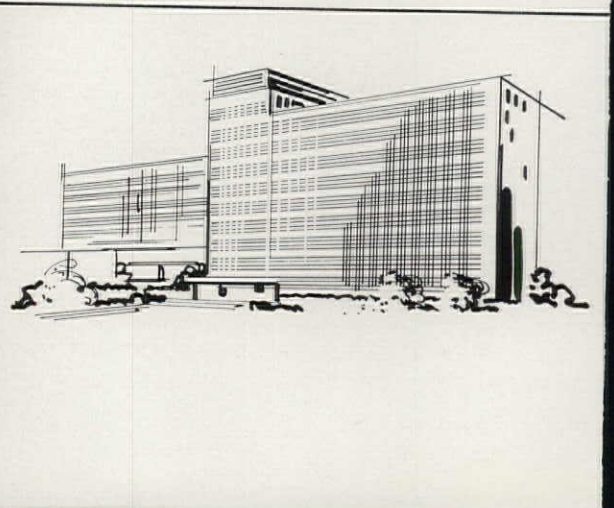
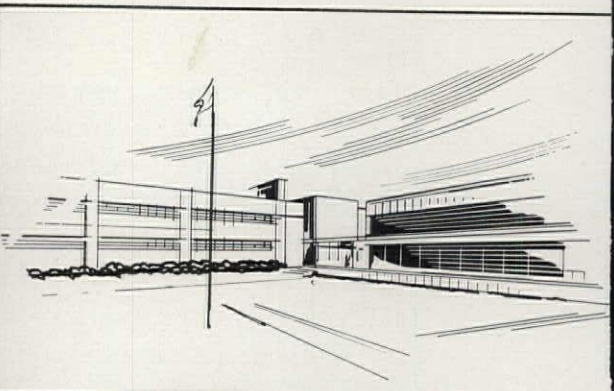
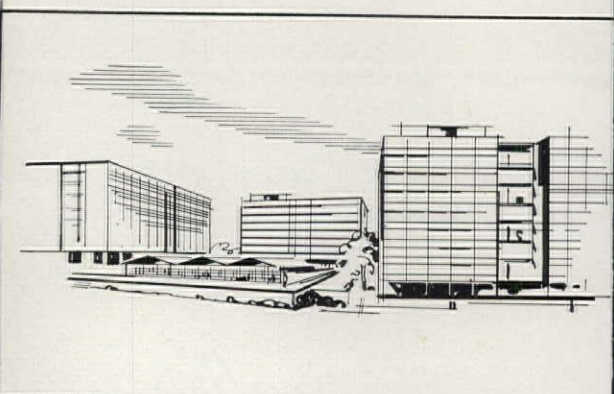
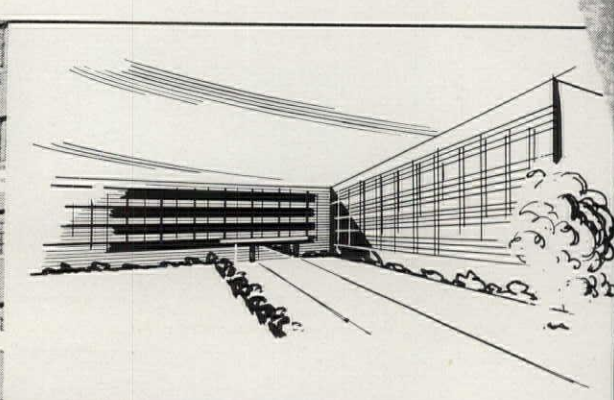
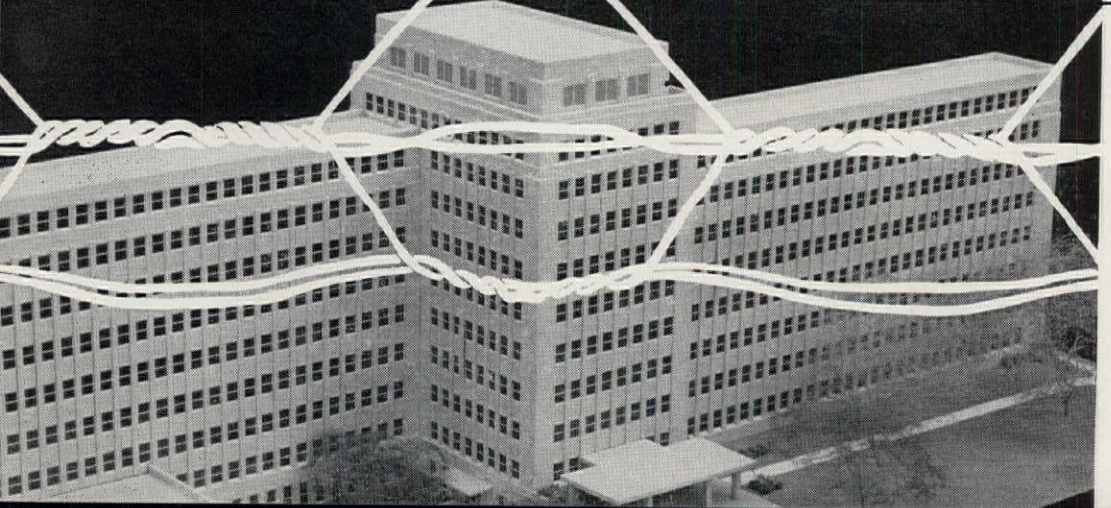
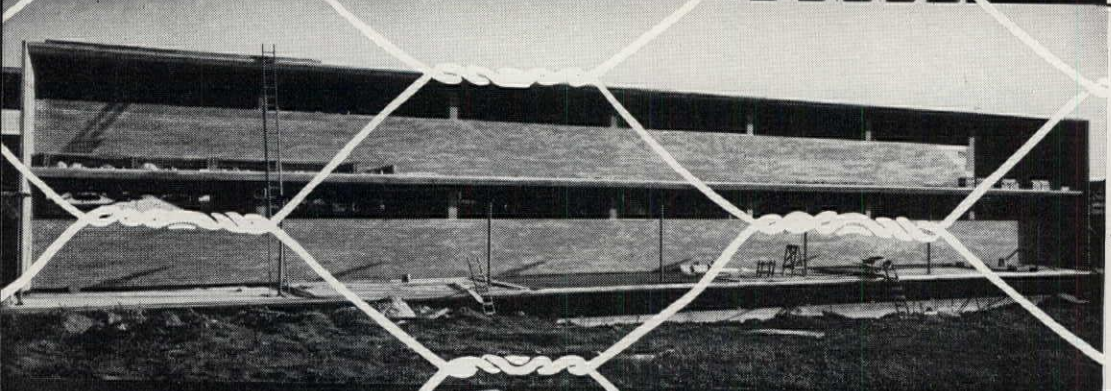
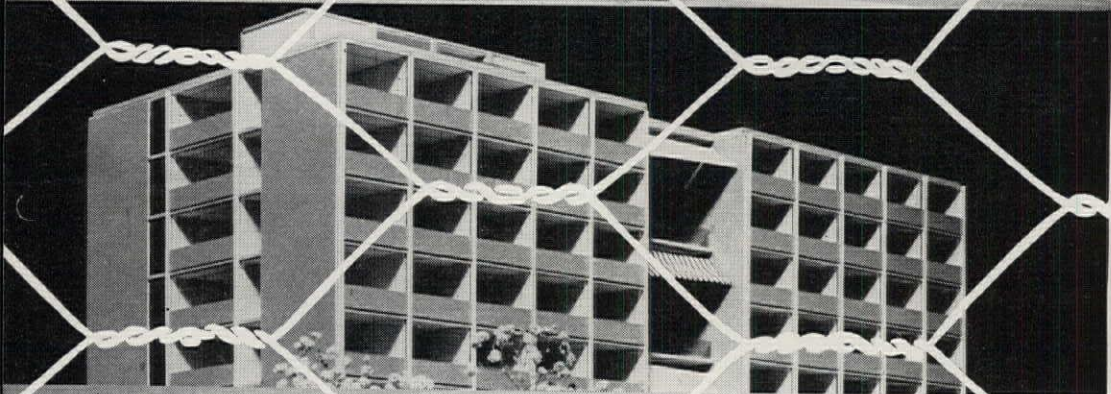
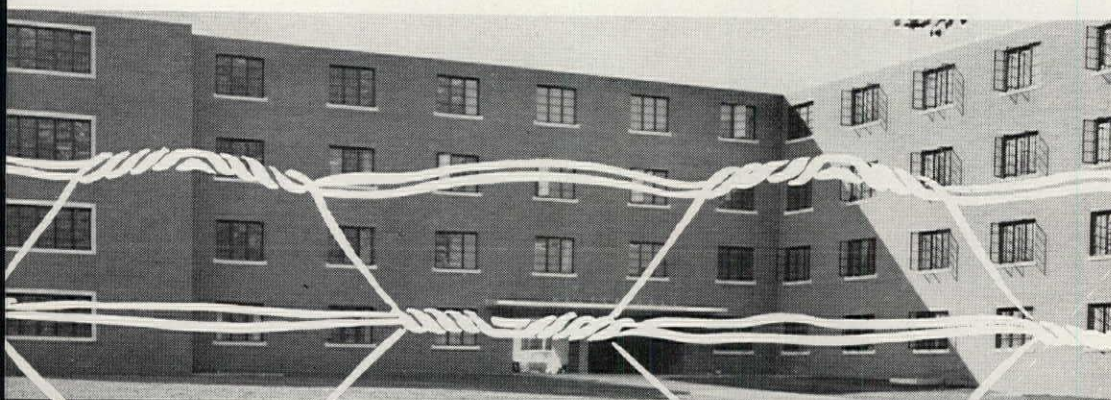
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keywall

GALVANIZED MASONRY REINFORCEMENT





goes to college

Iowa

Iowa State College: Keywall masonry reinforcement approved for Helser Hall, a new men's dormitory at Iowa State College, Ames, Iowa. Architect: Brooks-Borg, Des Moines, Iowa; General Contractor: W. A. Klinger Construction Co., Sioux City, Iowa.

Missouri

University of Missouri: Three 9-story residence halls and a single cafeteria unit for women students being constructed at the University of Missouri, Columbia, Missouri. Keywall is being used in this vast project. Architect: Hellmuth, Obata and Kassabaum, St. Louis, Missouri. General Contractor: D. C. Bass & Sons, Enid, Oklahoma.

Kansas

University of Wichita: Keywall used in masonry curtain walls in the new Mathematics and Physics Building at the University of Wichita, Wichita, Kansas. Architect: W. I. Fisher & Company, Wichita, Kansas. General Contractor: Hahner & Foreman Inc., Wichita, Kan.

Indiana

Indiana University: The Elisha Ballantine Hall, a basic course classroom building at Indiana University, Bloomington, Indiana. Masonry walls are being reinforced with Keywall. Architect: A. M. Strauss Inc., Fort Wayne, Indiana. General Contractor: Huber, Hunt and Nichols Inc., Indianapolis, Indiana.

Campus buildings are getting greater reinforcement at lower cost

Architects accept Keywall masonry joint reinforcement for building projects at colleges and universities. Look at these new classroom buildings and residence halls at four leading universities. Masonry joints on these buildings are being reinforced with Keywall for added strength, greater crack resistance.

The ability of Keywall to increase lateral strength and reduce shrinkage cracks in masonry has been demonstrated on job after job. Recent tests confirm this superior quality. Architects know they're getting effective reinforcement at a savings.

Masons like Keywall... they use it as specified. They find it easy to handle and easy to adapt to a wide range of applications. Keywall can be lapped at corners without adding thickness to joints. Full embedment and a complete bond are assured.

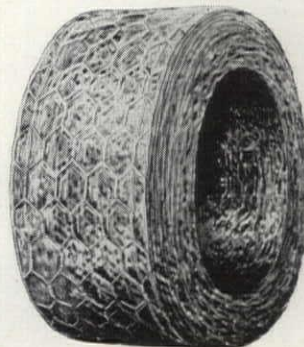
Galvanized Keywall can be stored any place without rusting. No wonder Keywall wins wide acceptance among builders and architects!

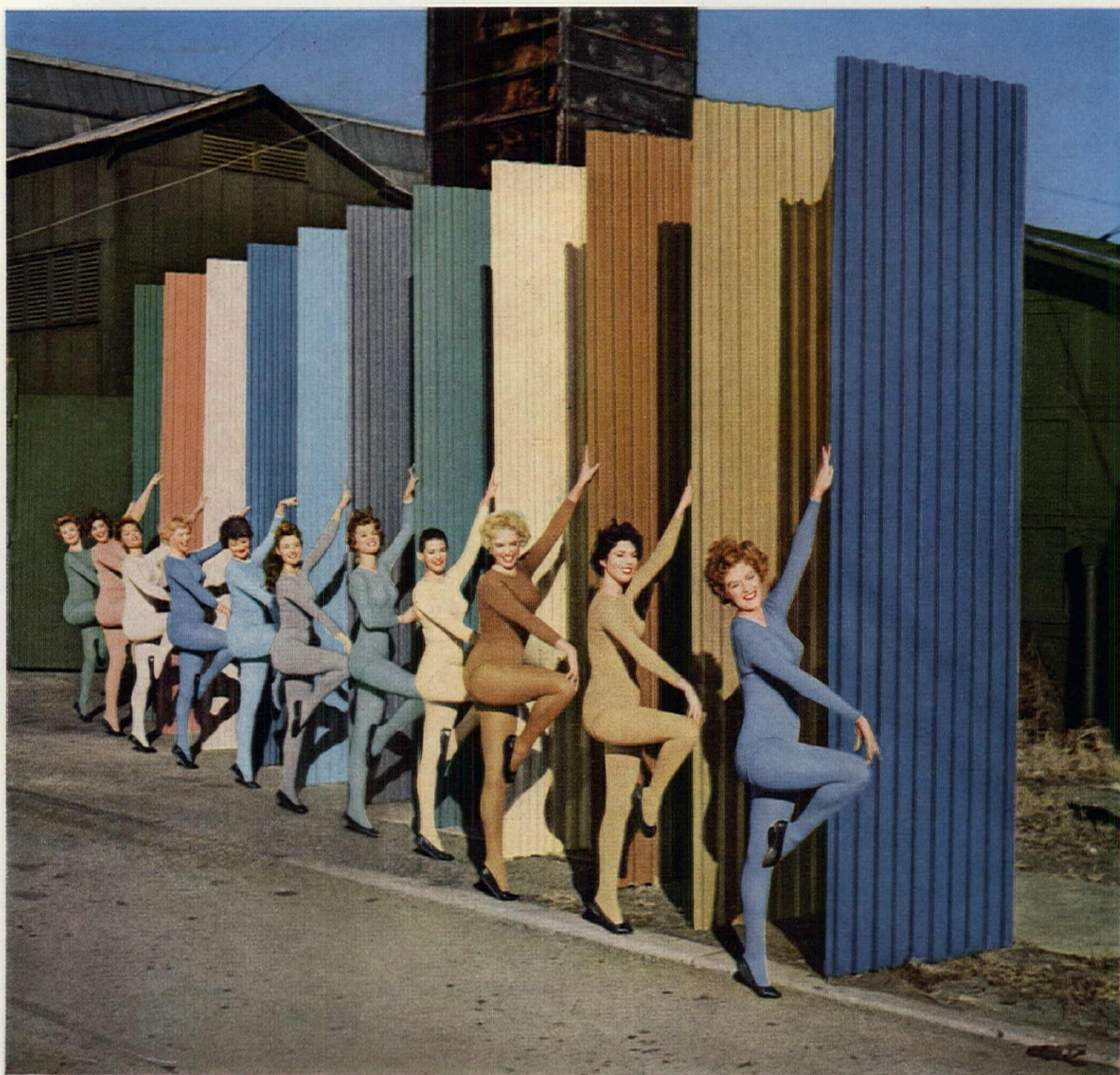
Keywall is made for the following wall thicknesses: 4", 6", 8", 10" and 12".

KEYSTONE STEEL & WIRE CO.

PEORIA 7, ILLINOIS

Keywall • Keycorner • Keymesh®
Keystrip • Welded Wire Fabric





Copacabana Chorus introduces Alcoa Alumalure

New Alcoa "Alumalure" ... exciting beauty for buildings at low cost!

No more drab buildings now that new Alcoa® Alumalure is here. Alumalure* introduces color for aluminum-clad buildings at remarkably low cost! Alumalure adds the showplace appeal of 11 standard baked enamel colors to all the traditional advantages of building with aluminum—light weight, corrosion resistance, economy. It has endless possibilities. You can specify Alcoa Alumalure now for plants, schools, shopping centers and many other building types. Build a showplace at low

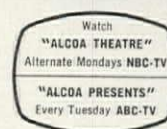
cost. Contact your nearest Alcoa sales office today for complete information!

SEND FOR COLOR-SWATCH FOLDER!

See all 11 exciting colors in the color-swatch folder that's yours for the asking. Call your nearest Alcoa sales office or write on your company letter-head to: Aluminum Company of America, 2066-A Alcoa Building, Pittsburgh 19, Pennsylvania.



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to the Best
in Aluminum
Value*



**Specify
Alumalure!**

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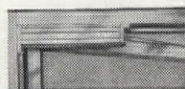
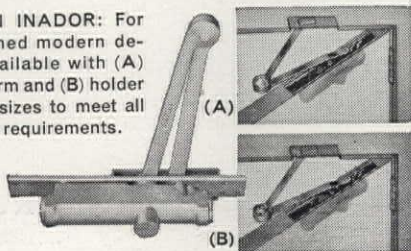
DOOR CLOSERS THAT DON'T SHOW USED THROUGHOUT MIAMI'S NEW DUPONT PLAZA CENTER



ARCHITECTS—PETERSEN & SHUFLIN, MIAMI

Complete Norton Line Meets Every Door Closer Need

NORTON INADOR: For streamlined modern design; available with (A) regular arm and (B) holder arm...4 sizes to meet all standard requirements.



NORTON 750: New corner design with concealed arms, for all types of doors, particularly narrow-rail doors.



NORTON SURFACE-TYPE: For all installations where concealment is not essential.



NORTON 703E: Compact surface-mounted type...first closer with extruded aluminum alloy shell.

Norton INADOR® concealed door closers enhance beauty of clean-lined modern doors

There's no compromise on beauty of doors in this distinguished modern structure. Every one of its 250 interior doors is equipped with a *Norton Inador*, nearest thing to an invisible door closer now available. Inador's entire mechanism is fully concealed inside the top rail so that it cannot detract in any way from the smooth modern lines of door and trim.

The Inador mechanism is the ultimate of compactness, can be mortised into the top rail of any standard 1 $\frac{3}{4}$ " door. It's the ultimate in sturdiness, too...all the rugged, dependable power that only true liquid door closers can provide, plus the reliability, low maintenance and precision workmanship common to all Norton Door Closers. Current catalog gives complete data. Write for it today.

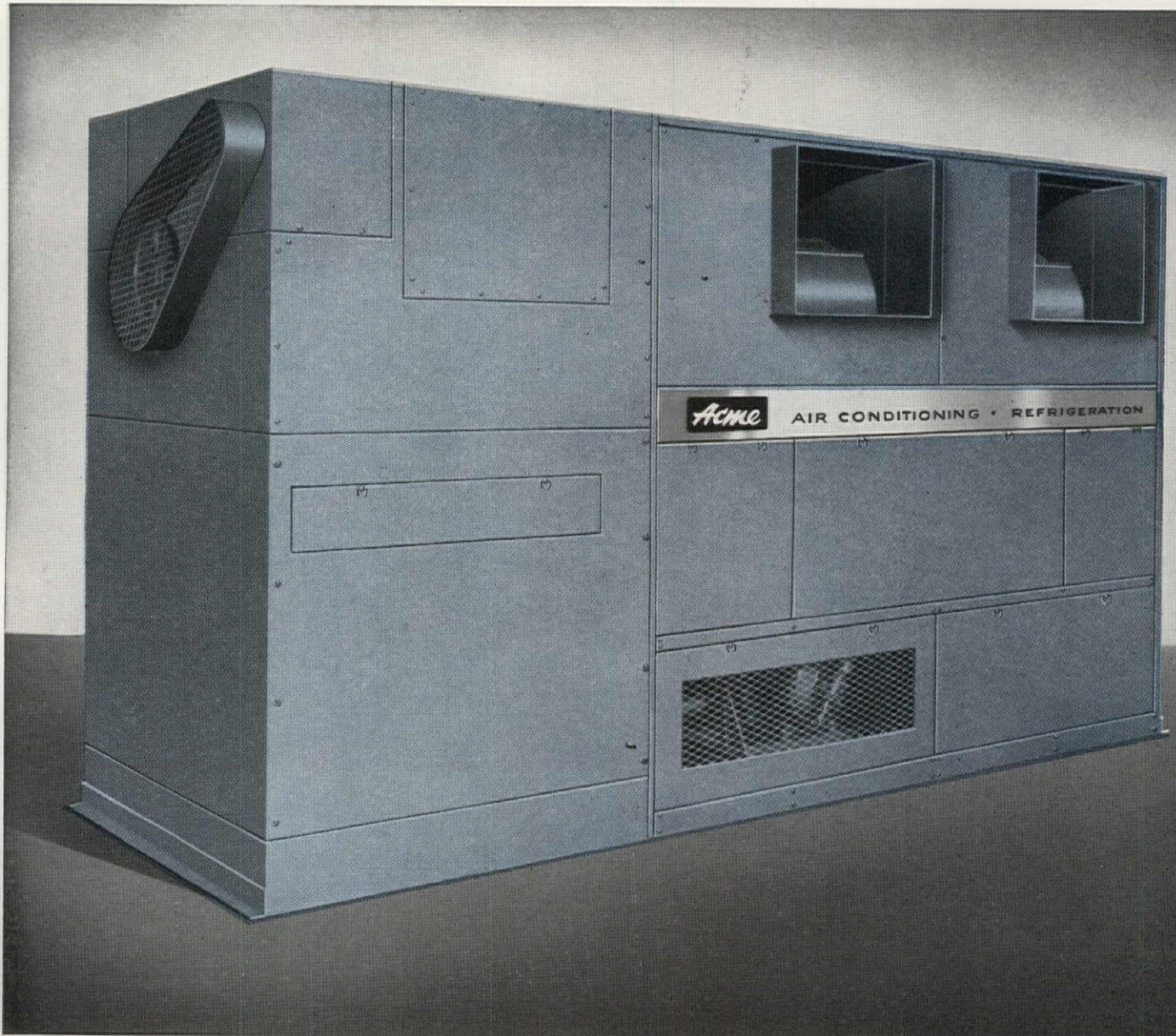
NORTON® DOOR CLOSERS

Dept. AF-19, Berrien Springs, Michigan

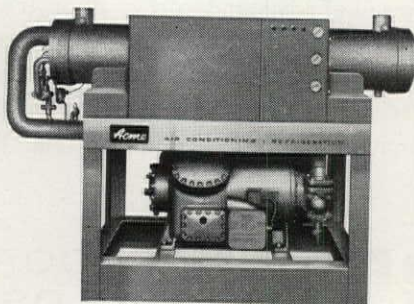
A continuing series of outstanding office buildings, hospitals, schools, churches and industrial structures using NORTON DOOR CLOSERS

Acme

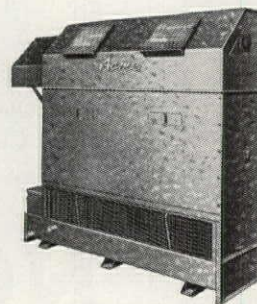
... the **practical** approach to air



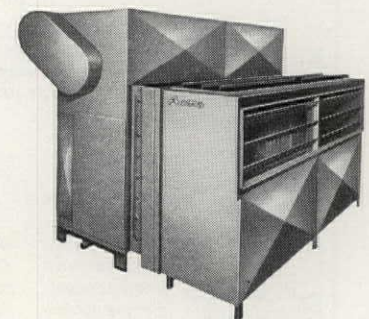
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Packaged water chillers from
1 $\frac{3}{4}$ through 125 tons



Cooling towers, evaporative
condensers and air cooled
condensers through 200 tons



Remote room conditioners,
air handlers and multi zone
units from 200 to 19,200 cfm

conditioning

NEW

Acme Packaged Air Conditioners



- ★ Complete air conditioning system in one factory-assembled package
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- ★ All maintenance from one side—cuts maintenance cost and saves space
- ★ Wide choice of condensing arrangements
- ★ Capacities from 20 through 60 tons

Here is a versatile, compact, self-contained packaged air conditioning unit that will give you complete climate control summer and winter . . . and it is famous Acme quality all the way through. It comes to you completely factory wired, piped, assembled and tested, ready to run as soon as it is connected to power source, ductwork and piping. Yet this new Acme air conditioner is extremely versatile and can be adapted to meet your requirements

exactly. For instance, the unit illustrated is equipped with an integral evaporative condenser. This condenser has adjustable fan discharge direction and may be placed at either end of the unit, or it can be installed in a remote location. Water cooled models for use with cooling towers are also available.

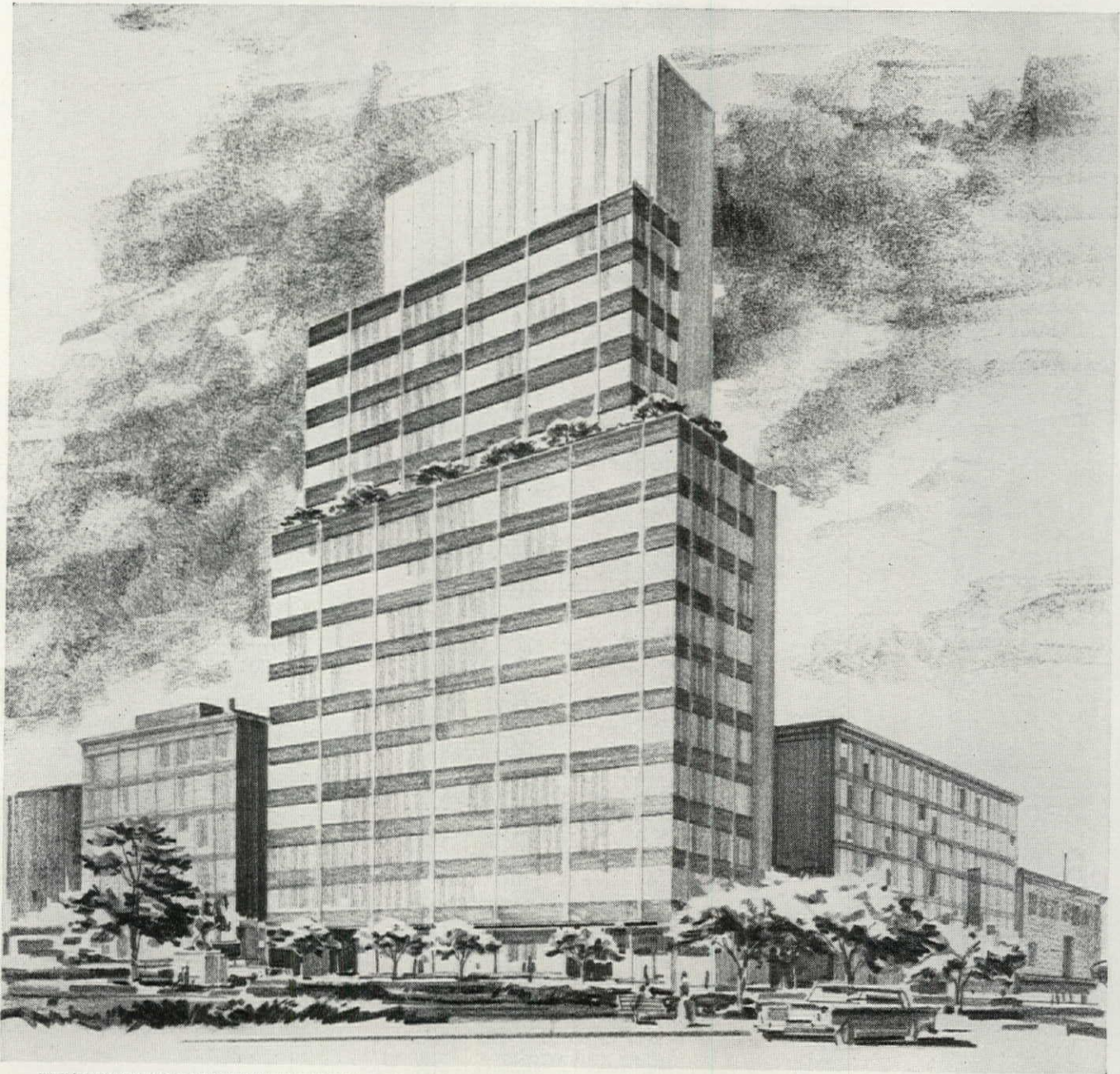
For complete information on the new Acme Packaged Air Conditioner, call your local Acme sales engineer or write to the factory.

Acme

INDUSTRIES, INC.

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Manufacturers of quality air conditioning and refrigeration equipment since 1919.



OWNER/GENERAL CONTRACTOR: BROOKTOWN BUILDING CORPORATION, WHITE PLAINS, NEW YORK; ARCHITECTS: MORRIS LAPIDUS, KORNBLATH & O'MARA, NEW YORK; ALUMINUM MATERIALS: ALUMINUM COMPANY OF AMERICA

Downtown Brooklyn gets a new landmark

...with Curtain Wall by NAA Architectural Metals

The 18-story America Fore Loyalty Insurance Group Building at 141 Livingston Street is the first building of a major rehabilitation project in downtown Brooklyn.

Its gray curtain wall panels and gold vertical columns are being made of anodized aluminum by the Columbus Division of North American Aviation, which has full responsibility for fabrication, anodizing, and erection.

Years of meeting military aircraft specifications have given North American workable answers to the major problems of curtain wall construction. That is why North American Architectural Metals have already been chosen to sheathe major buildings like New York's United Air

Lines Terminal, Chicago's Borg-Warner Building, Hollywood's First Federal Savings and Loan Building, Ohio State University's College of Arts Building.

North American has also built the giant geodesic dome—250 feet in diameter and 103 feet high—that is the dramatic architectural highlight of the new headquarters of the American Society for Metals near Cleveland.

North American's centrally located Columbus plant is ready to handle every phase of your next curtain wall structure—research, engineering, manufacturing, erection. For information, please write to Architectural Metals, North American Aviation, Inc., Columbus 16, Ohio.

ARCHITECTURAL METALS

THE COLUMBUS DIVISION OF NORTH AMERICAN AVIATION, INC.



Open criticism . . . Grand Central . . . big builders

CRITICISM

Forum:

Your article "What makes one school 'better'?" (FORUM, November 1958) is the sort of information that this country needs more of.

WARREN H. ASHLEY, *architect*
West Hartford, Connecticut

Forum:

Objective reporting and intelligent criticism of this caliber—particularly if it eventually reaches a wider public—will do more to promote the basic advantages of sound architectural design than could conceivably stem from any amount of educational effort on the part of individual architects.

J. STANLEY SHARP
Ketchum & Sharp, *architects*
New York, New York

Forum:

Your program of all-out criticism is refreshing and greatly stimulating—the greatest thing you've ever done.

This should do more to keep American architects on their toes than anything I can think of.

WILLIAM F. R. BALLARD, *architect*
Ballard, Todd & Snibbe
New York, New York

Forum:

The November FORUM was really an imaginative and amazing number, when compared with the usual humdrum architectural reporting. I do not wish to discredit the latter since it is also important. But it is valuable to stop occasionally to evaluate our progress so we can proceed with vigor and confidence toward a more glorious future.

OLAF FJELDE, *professor of architecture*
University of Illinois
Urbana, Illinois

Forum:

Criticism like this will stimulate clients to look to imaginative solutions from their architects, and it will stimulate architects to use their imagination.

LESTER W. SMITH
Sherwood, Mills & Smith, *architects*
Stamford, Connecticut

Forum:

I am delighted to know that you have the guts (and the blessings of your legal

department) to establish some critical judgments in school architecture, and name names and locations.

Your magazine ought not to be a mere public-relations handout, for it can serve its purpose best in the architectural profession and the building industry, by both criticism and acclaim, when fairly done. Lay on, MacDuff.

STANLEY JAMES GOLDSTEIN,
architect and engineer
East Orange, New Jersey

Forum:

Congratulations on the critical essay about Guarantee Mutual Life Company's new building (FORUM, October 1958). I admire your courage.

This type of criticism will make those who build more aware of good architecture and, consequently, more discriminating. It will force architects to provide better buildings. It will bring more understanding of architecture to students and public, and will heighten the desire to improve our environment.

I hope FORUM will extend this type of criticism to cover controversial and better buildings as well.

MINORU YAMASAKI, *architect*
Yamasaki, Leinweber & Associates
Birmingham, Michigan

GROPIUS AT GRAND CENTRAL

Forum:

Your article on "Grand Central's Wolfson" (FORUM, November 1958) tells the story of a successful financier and his business plans for a 50-story mammoth building on top of the Grand Central railway station. [Pietro Belluschi and Walter Gropius are the consulting architects.—ED.]

In his collection of articles and lectures "Scope of Total Architecture," Walter Gropius points out "that the sickness of our chaotic environments . . . has resulted from our failure to put basic human needs above economical requirements." Further on, he says: "The key for a successful rebuilding of our environments—which is the architect's great task—will be our determination to let the human element be the dominant factor."

We believe that Gropius is too great a man to have doubts on the meaning of his words. Never discouraged, he has always adhered to his ideas and convictions, and has followed, all his long life, the

continued on page 58

CONDITIONS DUSTY... NEW KANSAS COURT HOUSE SPECIFIES DUST-PROOF McKINNEY OILITE HINGES

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

Architects: Thomas Harris Calvin & Associates.

General Contractor: Martin K. Eby Construction Company.

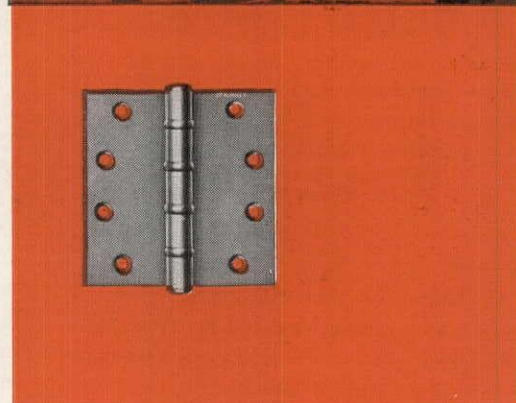
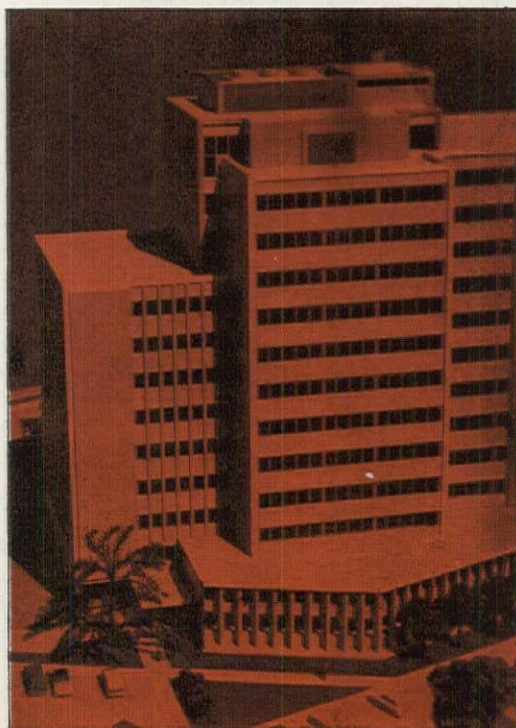
Hardware Consultant: P. K. Lewis, Lewis Brothers Hardware, Wichita.

Hinges: 760 pair McKinney $4\frac{1}{2} \times 4\frac{1}{2}$ TA2714 $\frac{1}{2}$ CD dull chrome with oilite bearings. 278 pair McKinney T4A 3786 $\frac{1}{2}$ CD extra heavy highly polished dull chrome finish with oilite bearings.

The McKinney Oilite Bearing Hinge never requires lubrication because it literally oils itself. On your next important job... especially if atmospheric conditions are apt to be dusty... specify McKinney Oilite Hinges.

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call of his social consciousness.

However, what result, what kind of value or improvement, what new idea, what kind of lesson or experience can we expect from his collaboration on this "biggest office building in the world," a \$100-million colossus for 25,000 office workers, on top of Grand Central?

Is it possible that the eminent and noble strength of a great architect, teacher, and humanist may become a fatal weakness in the commercial slum of business opportunities?

WALTER C. REIS, *associate professor of architecture*
Pennsylvania State University
University Park, Pennsylvania

BUILDING'S BIGGEST

Forum:

We have been much interested in the article "Building's biggest contractors" (FORUM, November 1958) and in the series which this article completes, listing the nation's largest building clients, architects, and contractors. This interest is shared by the various Associated Companies of the Bell System scattered across the nation, whose building engineers and architects habitually see FORUM. We would like to see this sort of material kept up to date and reissued at such intervals as you feel would reflect significant changes. It is background information that is helpful to all of us who are deeply involved in the business of building buildings.

HOWARD E. PHILLIPS, *building engineer*
American Telephone & Telegraph Company
New York, New York

■ FORUM plans to publish its directories of the largest architects, clients, and contractors annually.—ED. END

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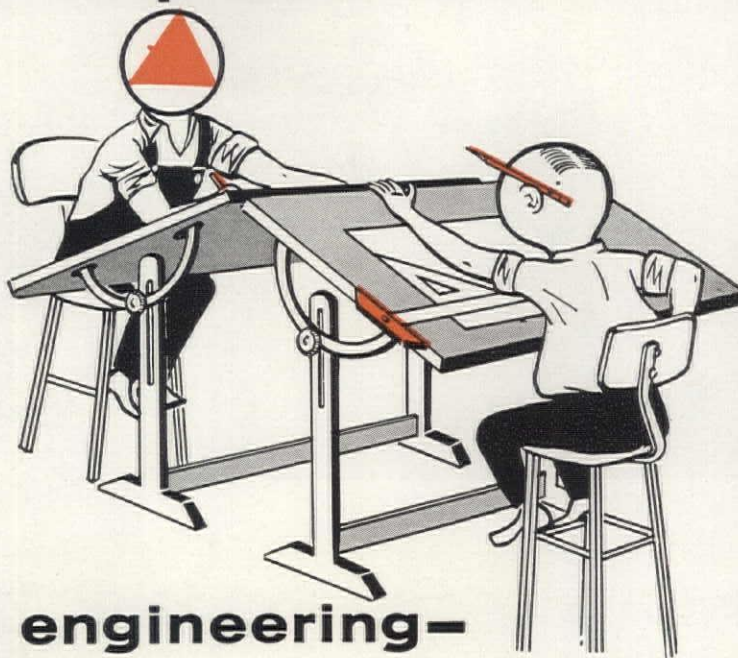
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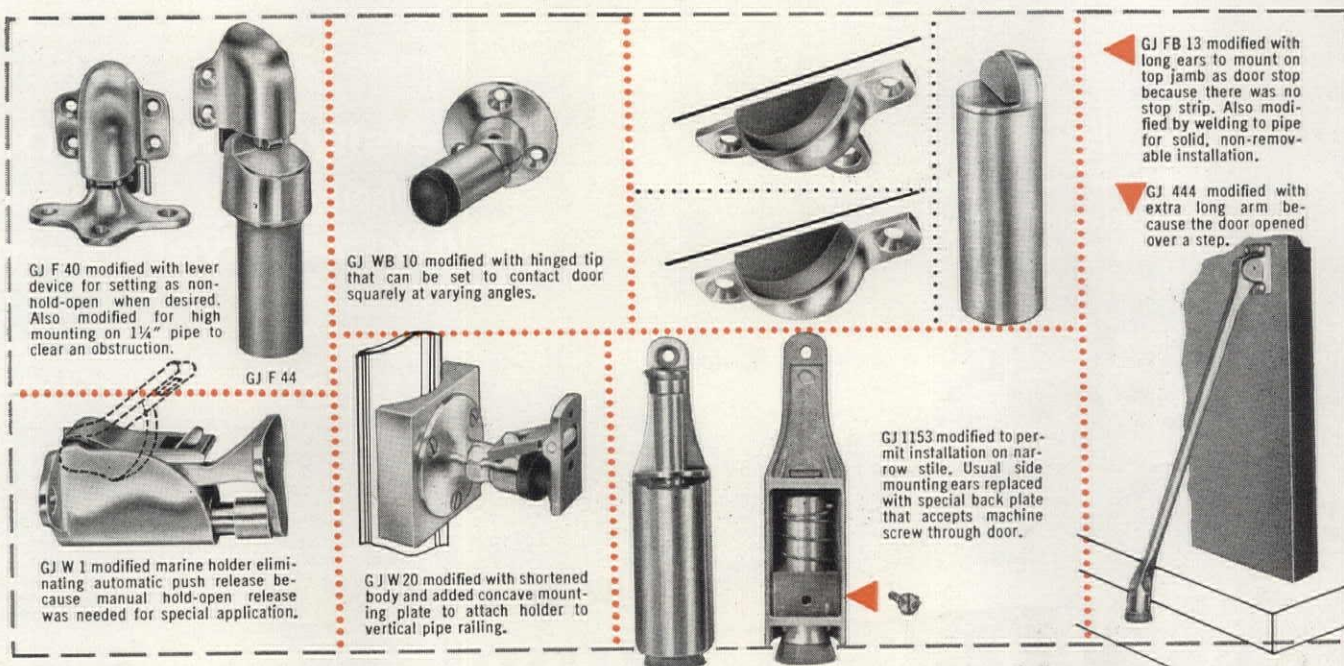
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a part of GJ engineering—

Answers to door control problems are not always found in the "book" of standard control hardware. Unusual requirements in function or installation often create "never before heard of" problems. The solution may require but a slight modification. Then again, a radical innovation may be necessary.

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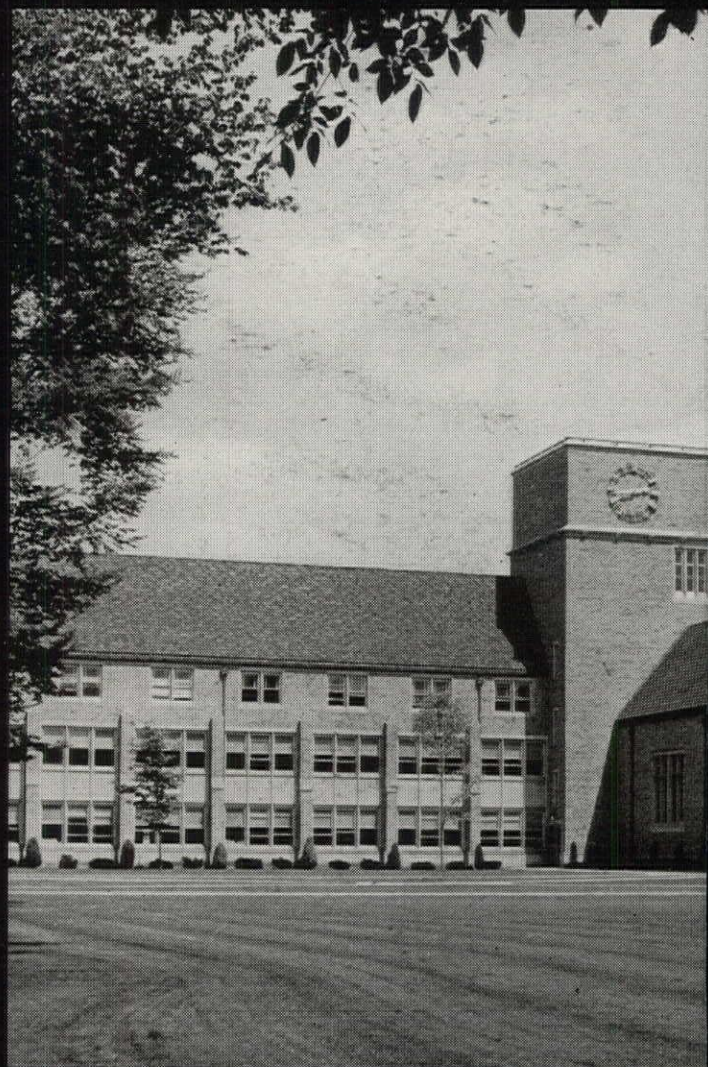
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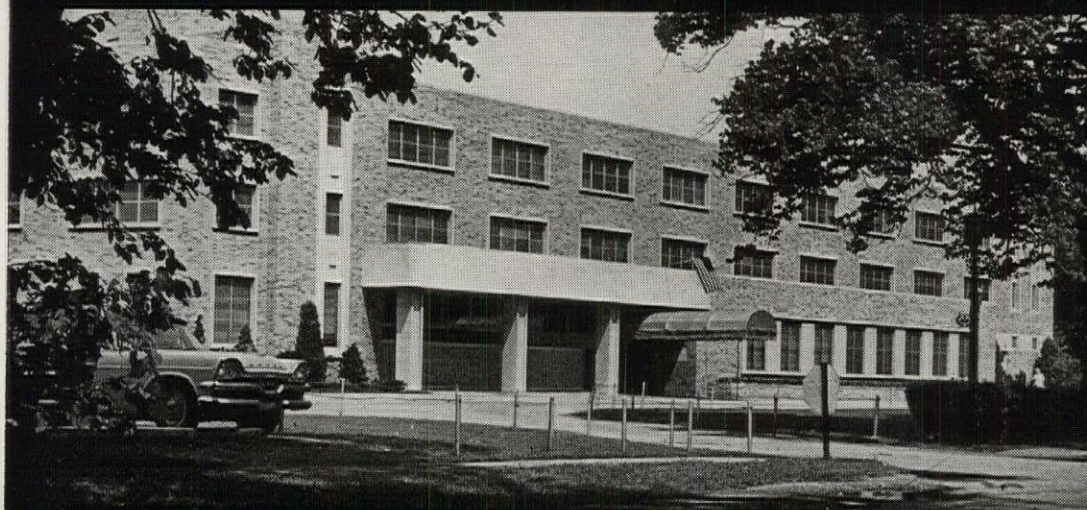


One 25-ton water chiller cools chapel
at Keenan & Stanford Halls

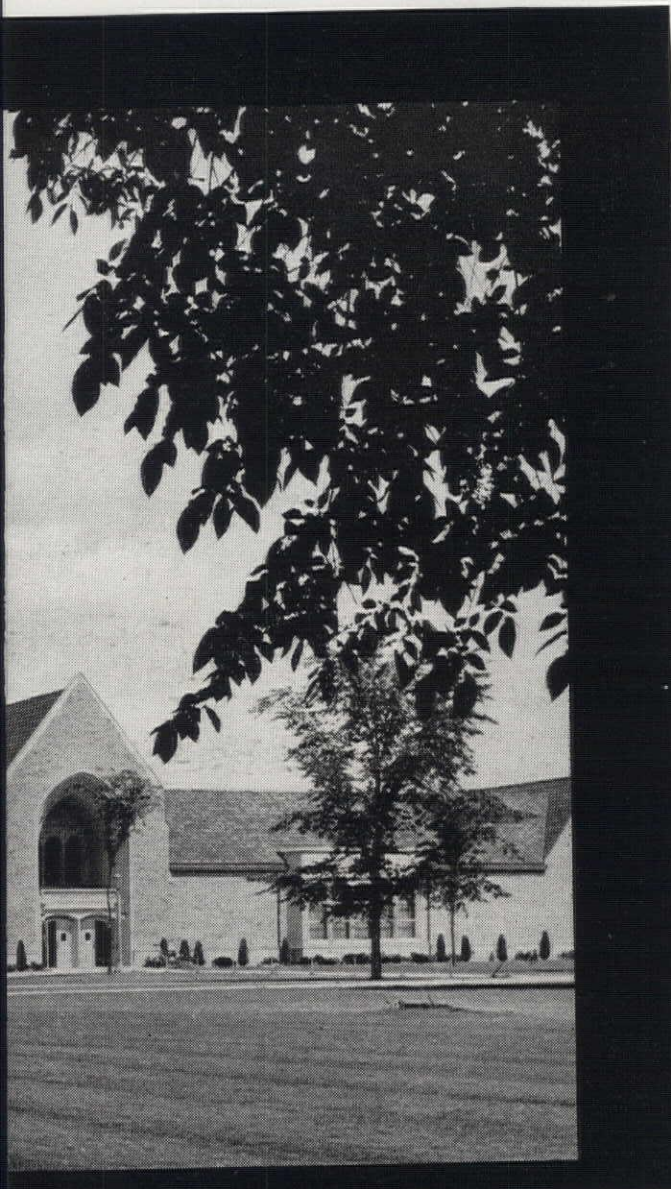


I. A. O'Shaughnessy Hall

University of Notre Dame
Gets Economical Air Conditioning
with **Arkla-Servel** Water Chillers



Morris Inn cooled by
three 25-ton units

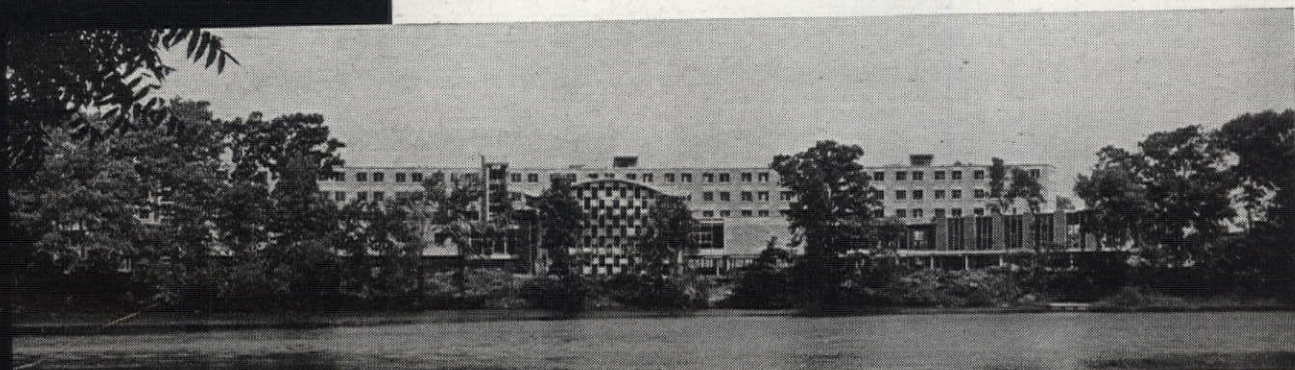


Now we're cooling with **GAS!**

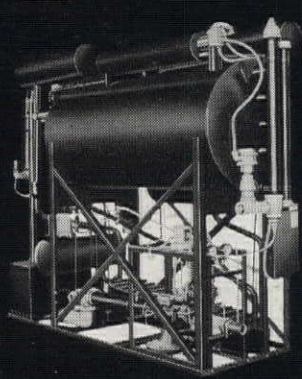
The famed home of the "Fighting Irish", University of Notre Dame recently embarked on a long-term modernization and expansion program. Up-to-date, economical air conditioning is provided by Arkla-Servel GAS-operated units.

The Arkla-Servel absorption-type water chiller guarantees long service-free life because it has no moving parts. Water is the refrigerant, and the energy source is low-pressure steam obtained from a direct-connected gas boiler which is also used for heating. During hot weather, low pressure steam applied to the chiller produces all the comfort cooling needed. Seasonally idle or excess boiler capacity is thus put to use on a year 'round basis, cutting operating costs to a minimum.

Because of its light floor loading and freedom from vibration, single or multiple Arkla-Servel units can be installed on any floor from basement to roof. Find out how you too can put your present heating system on a year 'round paying basis. Just call your local gas company for details, or write to the Arkla Air Conditioning Corporation, General Sales Offices, 812 Main Street, Little Rock, Ark. *American Gas Association.*



New Moreau Seminary

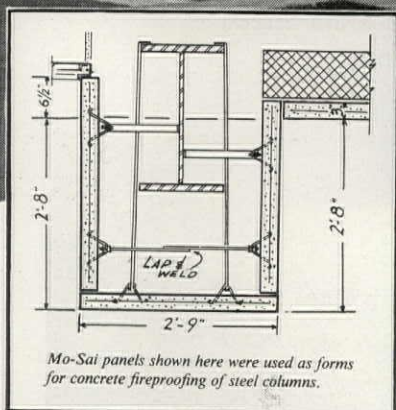
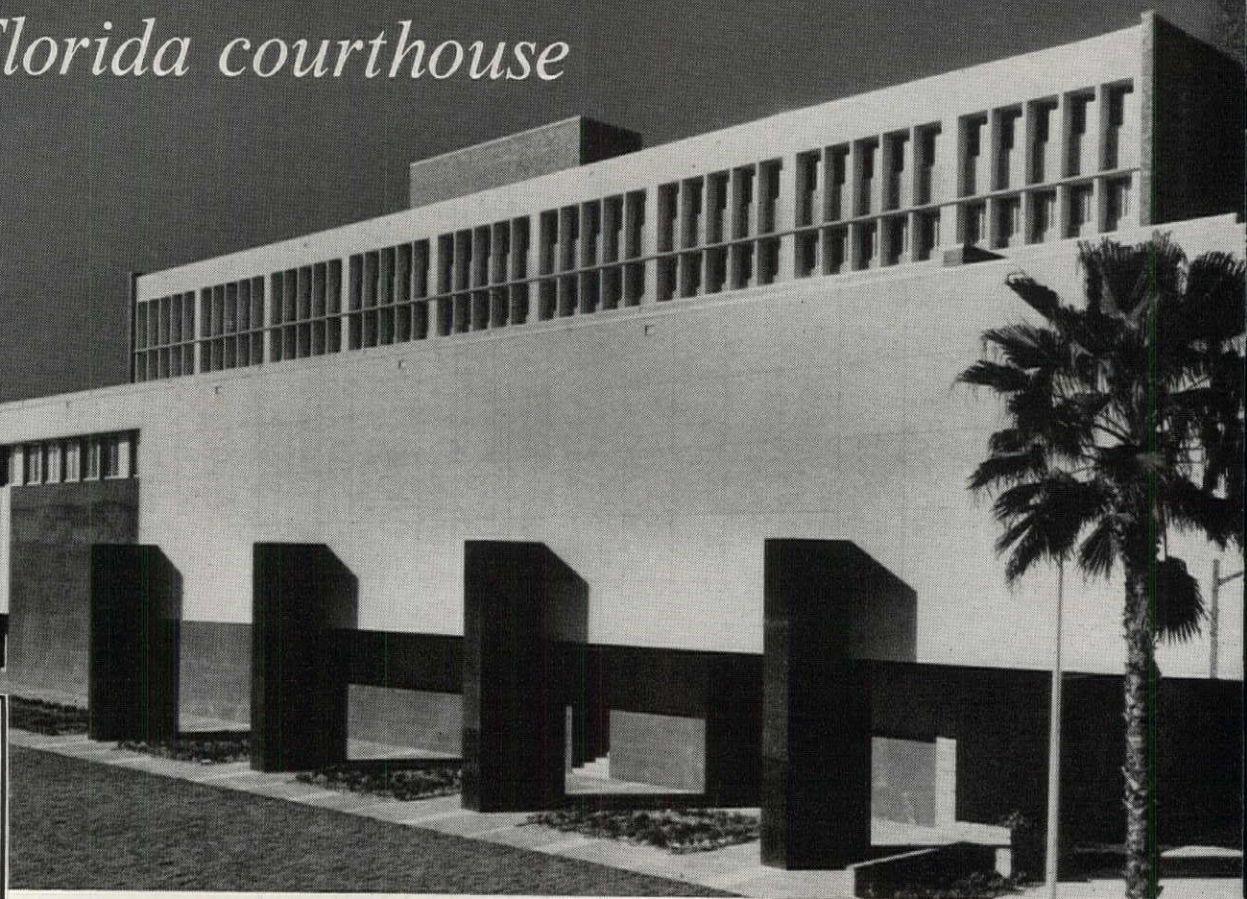


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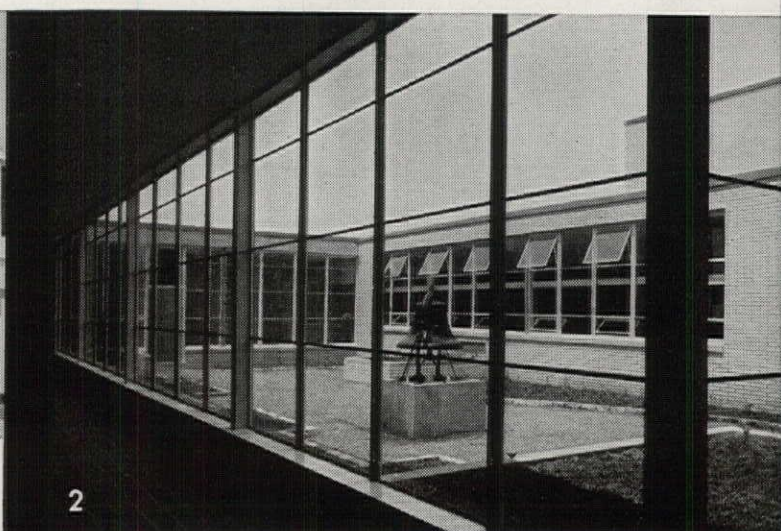
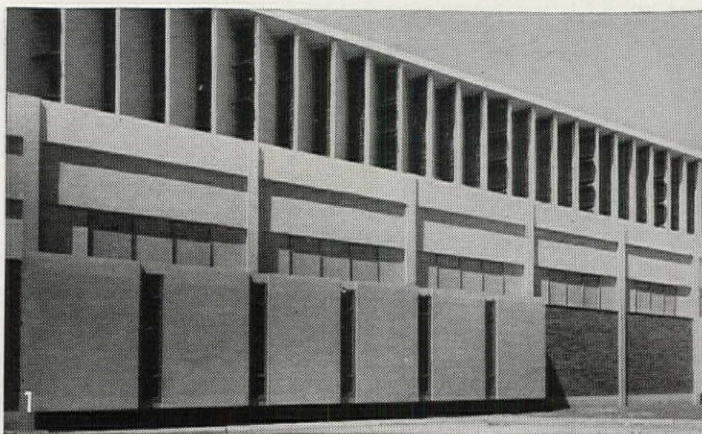
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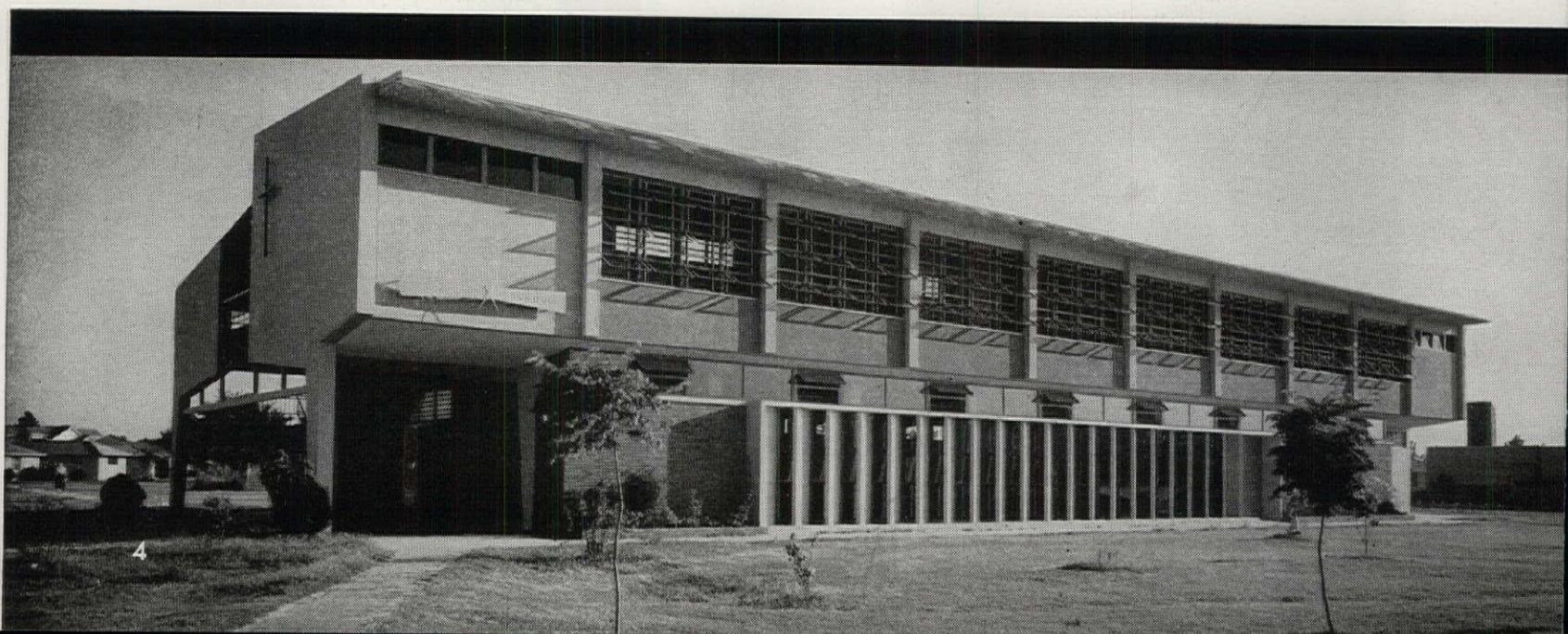


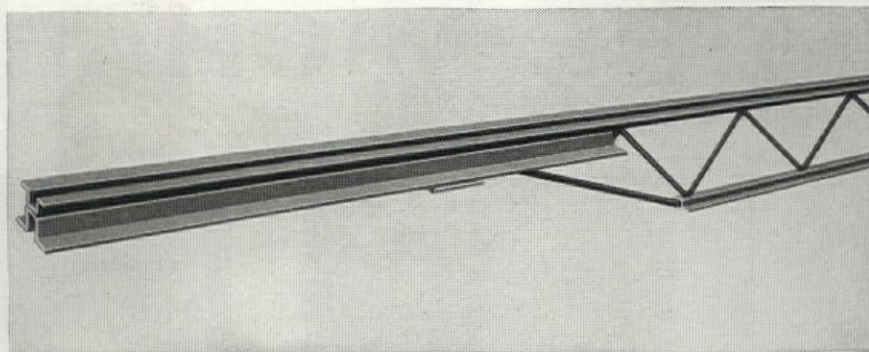
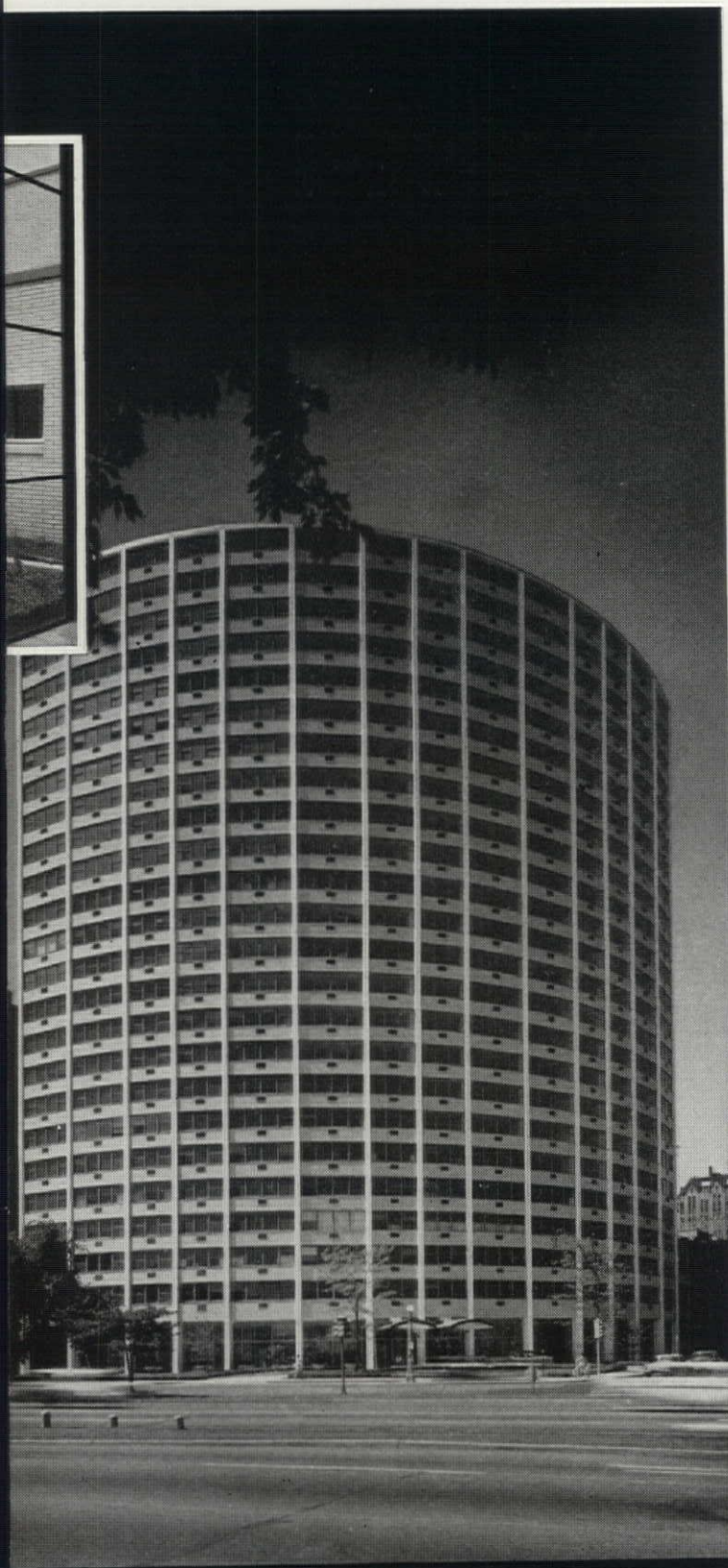
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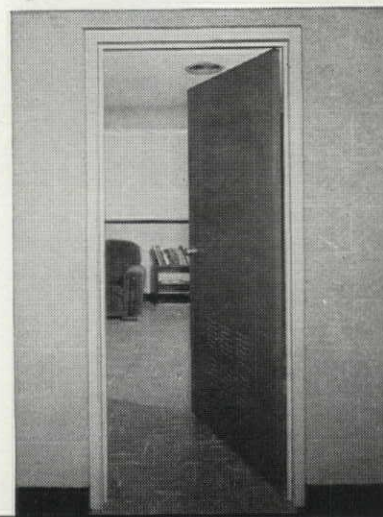
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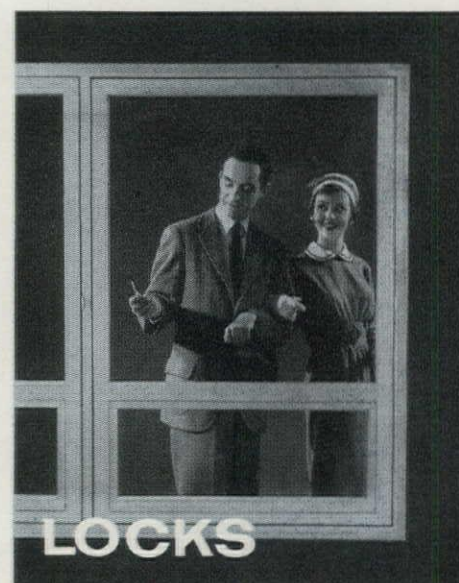
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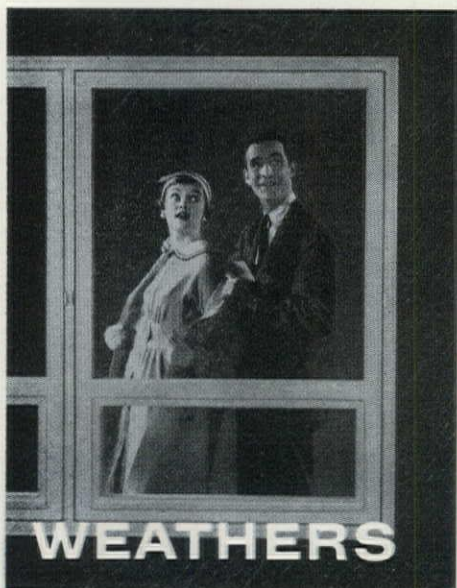
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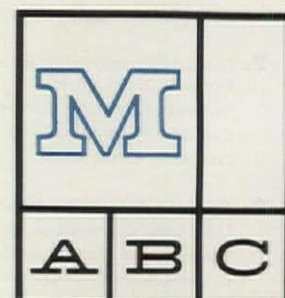
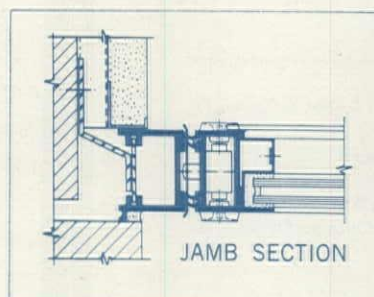


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Editorial

Building a civilized society

The U.S. is embarked on the most exciting and ambitious project that it has ever undertaken: the creation of a more agreeable and attractive society, which is to say, the creation of a new civilization. This lofty enterprise, neglected during the past century of booming, freewheeling industrial growth in America, will entail a prodigious amount of civic and community building and planning. Indeed the building has already begun. There has been, for example, a 96-per-cent increase in the share of national output devoted to civic building since World War II. A very good start has been made at whittling down the much-discussed deficit of schools (no fewer than 540,000 classrooms have been built since 1946). An ambitious—perhaps overly ambitious—road-building program is getting under way. And there have been other good beginnings.

Not since the turn of the century, for example, has there been such a broad and introspective interest in American cities as focal points of a society that is basically, and increasingly, urban. After World War I, the mobility of the automobile and truck temporarily turned all eyes outward from the cramped cities to the open countryside, and Daniel Burham's turn-of-the-century "City Beautiful" movement was all but forgotten by an America on wheels. But after World War II, with the exodus from the cities creating serious metropolitan problems, with many cities facing economic and social bankruptcy, with disenchantment with suburbia spreading, interest in the city, and particularly in the central city, revived. And a start has been made at restoring the cultural vigor of the cities, as well as assuring their physical survival.

This issue of FORUM is devoted to this challenge of building a better society. Such building involves, fundamentally: 1) civic building, and 2) building for the community; that is, all "public-use" building, or building devoted neither to winning a livelihood nor to living in. Such construction accounts for roughly 40 per cent of all U.S. building outlays today, a \$22-billion segment (see page 70). In this issue, however, FORUM focuses primarily on the areas which provide the greatest leverage for building a more amenable society.

The time has come for a re-examination of what is meant by "civic character" and of what the U.S. can hope to accomplish through better planning and architecture. The U.S., today, certainly, cannot be considered a land of universal grace and beauty. There is much too much roadtown and blight, much too little civic amenity and private restraint. There are too few pleasant parks and city plazas of the kind discussed on page 100. There is, in fact, a generally shoddy, unkempt look about much of America, and a lack of dignity and character in public places and avenues and

Editorial *continued*

buildings. Indeed public architecture, as the article on page 76 shows, has deteriorated almost steadily in America ever since the Jeffersonian era.

The question arises: can a democratic, middle-class, capitalist country like the U.S. hope to create a great civilization? Can it exercise the necessary wisdom and cultivate the necessary taste? Will it accept the implicit restraint and inevitable infringements of property rights that such a civilization implies? One hopeful augury may be the relatively wide acceptance of the concept of urban renewal in recent years—a concept which radically extends the right of eminent domain. The condemnation of private property for public good is, after all, the extreme form of social intervention in economic matters, and it should be used sparingly, whether for urban renewal, for highways, or for any other civic purpose. Still it augurs well for the cause of civic betterment that urban renewal has won such a strong foothold in hundreds of American cities.

The biggest billion

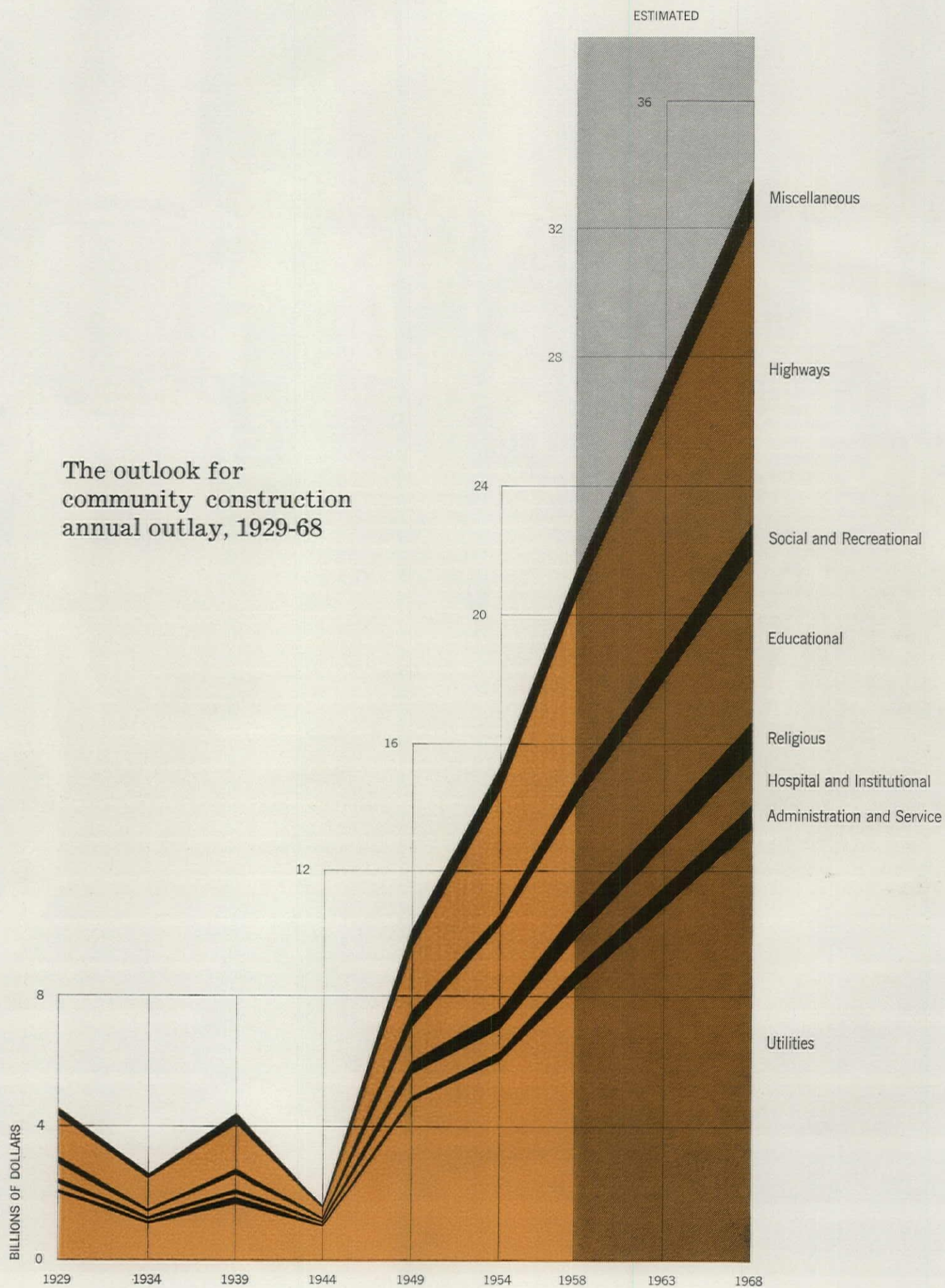
What about cost, then? Can the U.S., already spending \$45 billion a year for defense and some \$80 billion more for nondefense outlays (at all levels of government) afford to spend even *more* for community assets? The answer is that the U.S. investment in the key areas of public-use construction is surprisingly low and such outlays could be vastly expanded at relatively little cost. If the outlays for utilities (electric, gas, etc., which are mostly private anyway) and for highways (which are already disproportionately high) are excluded, the total bill for all other community facilities this year—for schools, churches, government buildings, parks, hospitals, and all other community buildings—will only come to \$7.2 billion, less than the U.S. spends annually on foreign aid and the support of farm prices. Indeed, all such spending consumes less than 2 per cent of the nation's gross output today, and for less than \$1 billion the U.S. could expand its investment in the bricks and mortar of civilized society by nearly 15 per cent.

Nor would such a step-up necessarily mean more federal spending. Only about one-quarter of all public-use building is now paid for by the federal government, and the article on page 112 examines some of the alternatives to more federal financing. To be sure, all of these alternatives would require shifts, if not increases, in taxation, which Oliver Wendell Holmes rightly defined as "what we pay for civilized society." But after the claims of defense are satisfied, the claims of a better society would seem to merit the highest priority consideration. If they are accorded that priority, the prediction made by the principal speaker at the centennial celebration of the A.I.A. in 1957 may yet be realized. In an address entitled "Good architecture is good government," he said: "We will succeed in creating the first modern, technological, humane, prosperous, and reverent civilization." And he added, "... this creative response to challenge will be most vividly expressed in and by architecture." END





The outlook for community construction annual outlay, 1929-68



Source: U. S. Departments of Commerce and Labor; FORUM estimates.
Note: All figures are in current dollars except 1963 and 1968 estimates
which are in constant 1958 dollars.

The \$285 billion challenge

Just to maintain the past rate of growth, the U.S. will need to spend more than a quarter of a trillion dollars on community building in the next decade.

The next decade, by all indications, is going to present U.S. communities with the most prodigious set of building needs that they have ever encountered. So explosive will be the growth and urbanization of the U.S. population that the nation will have to spend at least \$285 billion (in 1958 dollars) for the construction of community facilities—hospitals and schools, churches and social centers, highways and public utilities, and the myriad other structures, both privately and publicly financed, whose common denominator is public use. This prodigious outlay, forecast by FORUM's Economic Consultant Miles Colean on the basis of past trends and future needs (see page 72), indicates that there will be 62 per cent more spent on communal building in the next decade than the \$176 billion that was spent in the ten years, 1949-1958. Actually, much more than \$285 billion may be spent—if the American people decide that they want a higher "public" standard of living to go with their prodigious private living standard.

But consider, for a moment, what even \$285 billion of spending for community building would mean:

- ▶ Yearly outlays for new community facilities of all kinds will go up from \$21.6 billion last year to an annual rate of \$33.5 billion by 1968, a rise of more than 55 per cent.

- ▶ The "community building" share of construction will edge up from 43.8 per cent to 44.6 per cent. And this seemingly small percentage increase will mean an extra \$600 million of community building in 1968.

- ▶ Spending for all community facilities except utilities and highways—i.e., for hospitals, schools, civic centers, and all the other structures which be-

speak America's social and cultural achievements—will increase 45 per cent to an annual rate of \$10.5 billion.

- ▶ Spending for highways and public utilities will climb even more—nearly 61 per cent, to a 1968 rate of \$23 billion—unless the U.S. decides that it is devoting too much of its substance to road building.

A modest assumption

These prospects, while they portend an era of unsurpassed opportunity for communal building, are thoroughly conservative. Indeed, there are several reasons for believing they will prove understatements, providing the next decade is free of war and serious depression.

To begin with, FORUM's forecast is based on moderate statistical assumptions. The actual figures derive from an estimate of future gross national product (GNP: the total value of all goods and services produced in the U.S.) per capita, multiplied by future population estimates and by a percentage representing community building's estimated share of GNP. FORUM's calculations are conservative in that they assume that GNP per capita will rise no faster during the next decade than during the past ten years when the compound rate of gain was about 1.75 per cent per year (in constant dollars). Further, the forecast supposes that the U.S. population in 1968 will reach no more than 206,585,000, a figure based not on the highest, but on the second highest Census Bureau projection of births (in the past, even the *highest* census estimates have been exceeded by the actual population gains). Finally, in gauging community building's share of total output

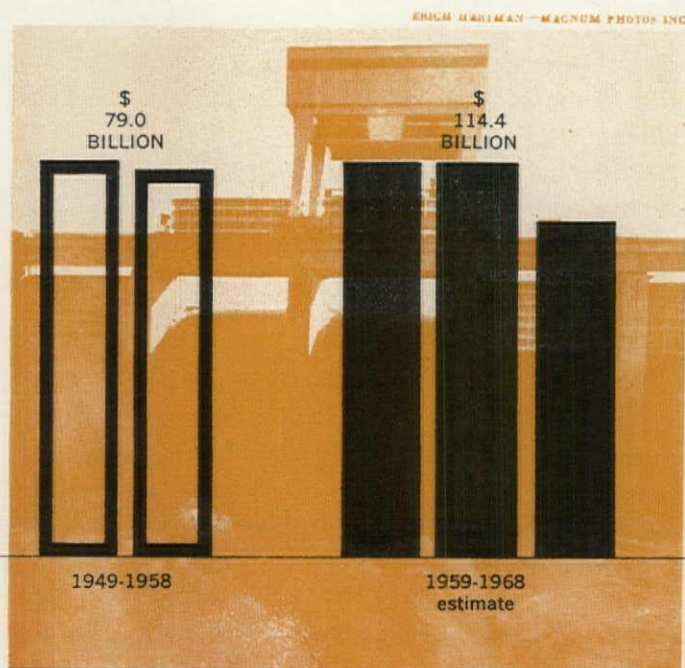
(assuming a GNP of \$650 billion in 1968, compared with \$440 billion last year) the forecast assumes that the share of total output going into civic facilities will rise only one-quarter of one percentage point, from 4.9 per cent of GNP to 5.2 per cent. This, especially, is a modest assumption in view of the tremendous backlog of existing needs for all types of community facilities.

Actually, since the World War II years, when there was almost no civilian construction of any kind, community building's share of national output has nearly doubled, soaring from 2.5 per cent of GNP in 1947 to 4.9 per cent in 1958. And in the last

five years, the volume of community building has expanded 18 per cent, from \$18.3 billion to \$21.6 billion, as the nation has made significant progress in meeting its deficits of school highways, and utilities. These strides, of course, have been primarily the product of necessity; the postwar baby boom and the migration to the suburbs have created community demands unlike any in history. But the gains have also reflected a more subtle demand, indicative of the growing recognition by Americans of an all-too-visible gap between their public and private standards of living.

In a model economy, if there were such a thing,

Where \$285 billion of community spending will go . . .



Utilities: \$114 billion

Utilities construction, under heavy pressure from urban growth, industrial expansion, and an enormous backlog of needs (particularly for water and sewer facilities), will expand 45 per cent in the next decade, and will account, in the aggregate, for more spending (\$114 billion) than any other type of community construction. Roughly two-fifths of all community building expenditures will be channeled into "utilities," which include privately financed public utilities, i.e., telephone, light and power, railroads, and transit; and publicly financed sewer and water facilities, public service enterprises (government-owned power systems and transit), and conservation and development. Spending by private public utilities, which account for about two-thirds of total utilities outlays, will rise 57 per cent over the 1958 level at \$5.6 billion by the end of the decade, mainly because of the nation's increased light and power demands.



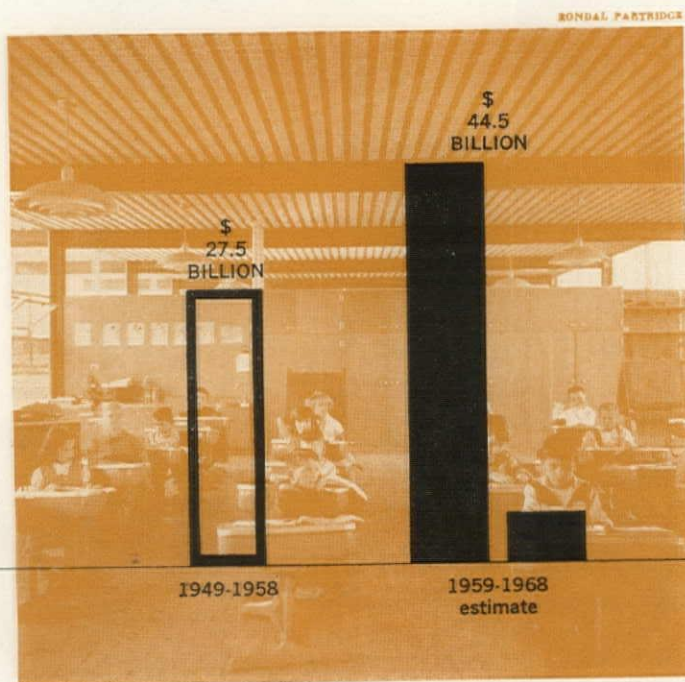
Highways: \$81 billion

Highway construction, already absorbing nearly \$6 billion a year as a result of the federal highway program, stands alone in its growth prospects. No other type of community construction comes close to its potential of a 110-per-cent rise in spending for the next decade. The big, perhaps too big, federal plan calls for some \$40 billion of spending to complete a 41,000-mile superhighway network. By the early 1960's, with the program running at full speed, total highway expenditures by the federal government, states, counties, and localities will be racing along at an \$8-billion-a-year clip. And by 1968, unless there is some reappraisal of the program, spending will hit \$9.5 billion. The precise effects of the road-building boom are incalculable, but virtually every metropolitan area, all forms of transportation, and practically every kind of construction—industrial, commercial, and civic—will feel its impact.

any increase in total wealth would automatically be distributed so as to maintain a balance between private and public standards of living. Forward strides in individual material well-being would be matched, step by step, by improvements in public well-being—there would be more amenities in cities, better health facilities, finer schools, parks, zoos, libraries, and museums. In reality such a balance rarely exists, and it certainly does not prevail in the U.S. today.

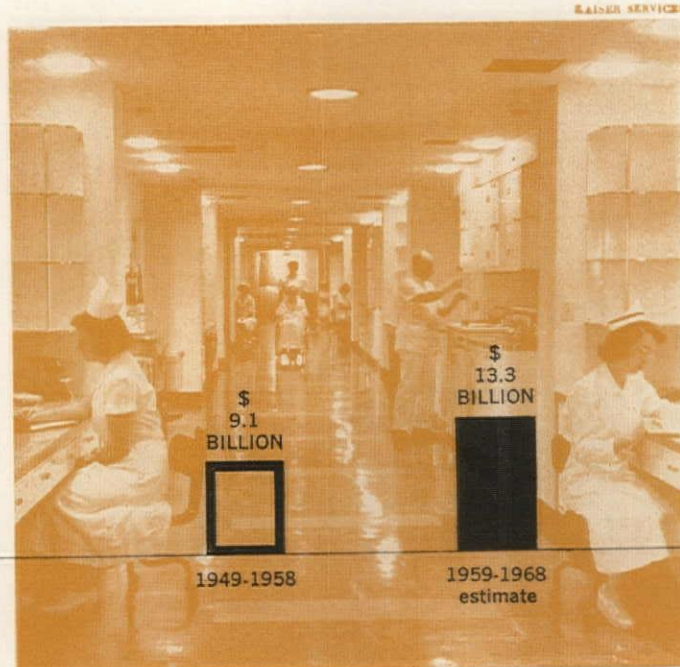
John Kenneth Galbraith in his book, *The Affluent Society*, has perhaps exaggerated the gap between America's two standards of living, but he has never-

theless portrayed it vividly. Says Galbraith: "The family which takes its mauve and cerise, air-conditioned, power-steered and power-braked automobile out for a tour, passes through cities that are badly paved, made hideous by litter, blighted buildings, billboards, and posts for wires. . . . They picnic on exquisitely packaged food from a portable icebox by a polluted stream and go on to spend the night at a park which is a menace to public health and morals. Just before dozing off on an air mattress, beneath a nylon tent, amid the stench of decaying refuse, they may reflect vaguely on the curious unevenness of their blessings."



Schools: \$45 billion

Throughout the 1960's, and beyond, spending for school building, now at an all-time high of \$3.5 billion a year, will continue to rise. The continuing classroom shortage (still estimated at 128,000 rooms by the U.S. Office of Education) plus the pressure of new enrollments, mainly at the secondary-school and college levels, will push aggregate outlays for school building in the decade 1959-1968 up some 62 per cent above spending in the past decade. By 1968, school building's share of the gross national product will reach 0.82 per cent. In this surge, private construction will make the greatest percentage gain—73 per cent—with much of the boost tracing to college building. By the end of the decade, there should be some respite from secondary and college demands. But by then a second baby boom will be in full swing, and the pressure will be on all over again in the lower grades.



Hospitals: \$13 billion

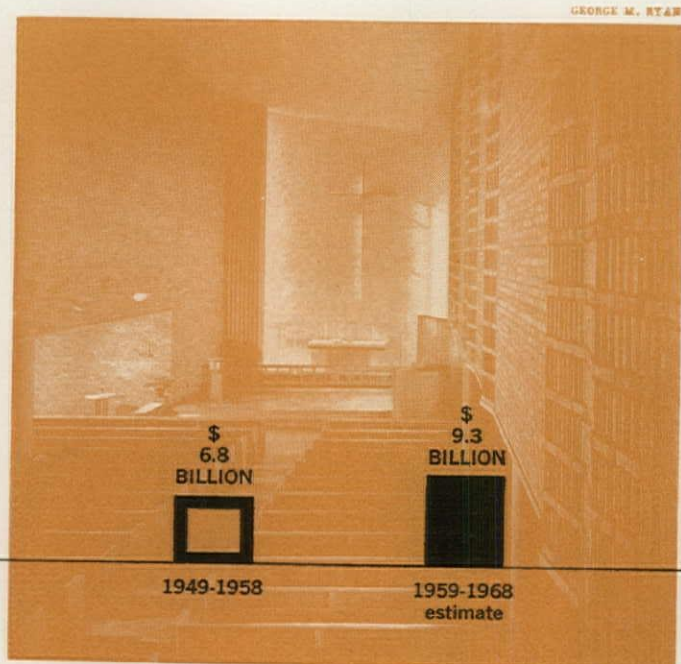
Even if the U.S. population were to stop rising tomorrow, the nation would almost certainly increase its hospital building over the next ten years. There are two reasons for this: the construction of hospital and institutional facilities—i.e., clinics, sanatoriums, homes for the aged—has been lagging behind estimated needs for years (e.g., U.S. Public Health Service figures indicate that right now the country should have an additional 1,116,000 hospital beds); many existing hospitals, particularly in big cities, are rapidly becoming, or have already become, obsolete. Moreover, medical advances in areas such as mental health alone will create vast new demands for facilities. Thus FORUM anticipates that hospital outlays for the coming decade will be up at least 45 per cent over 1949-1958, and that by 1968 outlays will be 60 per cent higher than the \$1 billion spent last year.

Americans however, are not, by nature, skinflints. They do not take comfort in their blighted civic centers, outmoded transportation, crowded hospitals and schools and the rest. Once they become fully aware of community inadequacies and shoddiness they are apt to do something about them. Such an awareness is unquestionably spreading throughout the country today, and its most encouraging manifestation, so far, has been the urban renewal movement.

In the next decade, it seems likely that a striving for civic improvement and genuine excellence in community facilities may well impose an added

demand for building above and beyond that created by the mere growth of the country's urban population. If such is the case, then the U.S. will undoubtedly devote more than 5.2 per cent of its national output to community facilities, and this could have a startling effect on the anticipated construction totals. If, for instance, community building were to take one percentage point more of GNP in 1968, the dollar outlay for community building that year would rise from \$33.5 billion to almost \$40 billion, or almost a fifth. And if the added dollars were channeled into community facilities other than highways (on which perhaps too much

Where \$285 billion of community spending will go . . .



Churches: \$9 billion

Church building will rise only moderately in the next decade, 37 per cent over 1949-1958, largely because religious building rose so fast (70 per cent) in the past decade. Since World War II, religious construction has been spurred by the climb in church membership (which reached an all-time high of 62 per cent of the U.S. population in 1956) and by a staggering backlog of needs. Much catching up has now been done, and future construction is likely to follow the curve of population more closely. This will still mean a vast demand for new churches (e.g., the Methodist Church estimates that it will have to build at least one church a day over the next decade just to keep pace with suburban growth). And despite the tapering off in the upswing, FORUM predicts that church construction will touch the \$1 billion mark by 1968 (last year's outlay: \$850 million).



Recreation: \$8 billion

The market for social and recreational facilities, both public and private, seems over the years to move in only one direction—up. The next decade will be no exception. Outlays for social and recreational buildings—e.g., publicly financed auditoriums, community houses, indoor sports centers; privately financed theaters, stadiums, and exhibit buildings—will be nearly 77 per cent higher than in the 1949-1958 period (the aggregate expenditure of \$7.5 billion will be split roughly 50-50 between public and private facilities). Biggest element in the rise will be the fact that the population will be growing fastest at its two extremities, youth and old age, where the demands for recreational facilities are the heaviest. (In 1968, there will be 25 per cent more people over 65 than there are today and 26 per cent more under 18, as against a total increase of 19 per cent.)

is already being spent) and utilities (largely a private area), the investment in civic bricks and mortar would climb a staggering 62 per cent above the total \$10.5 billion that FORUM has here projected.

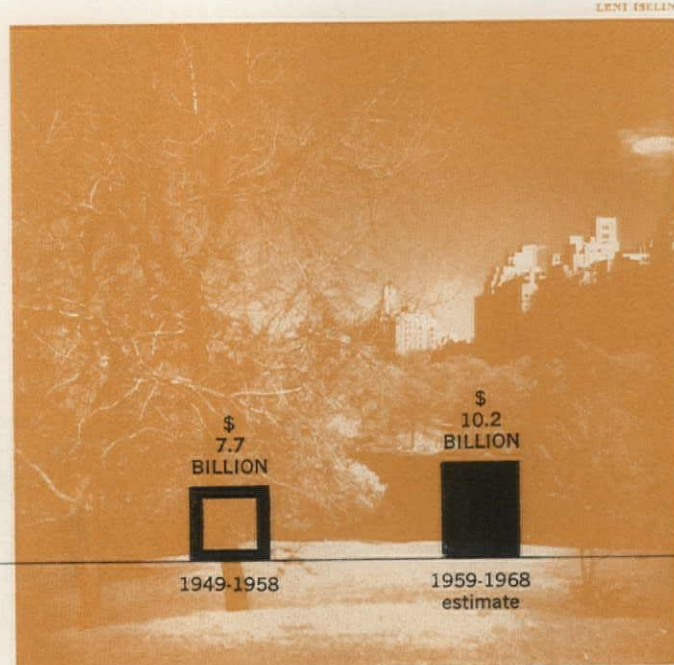
That the nation can well afford to spend much more on community building than FORUM's conservative projections is documented in another article in this issue (see page 112). By 1968, Americans will be spending only \$38 more per capita on community facilities than they are spending now, while GNP per capita will have increased a whopping \$624. Thus the time would seem to be at hand for the U.S. to make a break-through from an eco-

nomy of mere abundance to an economy of abundant beauty. The country's seats of government, its civic centers, its cultural buildings are important out of all proportion to their volume in the total construction economy. For these buildings can say, by their numbers and appearance, that America begrudges social and cultural progress and has scant regard for anything but its material well-being. Or they can say, as they should, that the goal of American striving is a finer civilization for all. This is the choice that must be made in the next decade. Fortunately, the U.S. seems to be leaning toward a generous decision.



Government buildings: \$6 billion

The nonmilitary buildings that government creates to house its activities—i.e., courthouses, office buildings, post offices, city halls, and the rest—are of great importance to the civic face, even though they constitute a surprisingly small part of total community outlays (about 2.3 per cent). In the coming decade almost 80 per cent more than the \$3.2 billion that was spent in the last decade will have to be spent on such structures, for many government buildings are notoriously run-down and crowded, and the expanding population will force government to expand, too. The federal government alone figures that it will have to spend \$3 billion on new buildings in the next 17 years. And this will not even clean up the federal government's present backlog of building needs, now estimated at about \$3.5 billion, or 33 years at the present rate of spending (about \$105 million a year).



Miscellaneous: \$10 billion

Spending for what the Commerce Department calls "miscellaneous and other" community building will rise nearly a third in the next decade. Miscellaneous and other is the five-and-dime of community building, and what cannot be found in any other category can be found here: e.g., aircraft hangars and terminals, hot-dog stands, water-front improvements (wharves, docks, yacht basins), animal hospitals, private streets and bridges, bus terminals (except for local transit), parks and playgrounds, crematoriums, and grain elevators. This wondrous assortment of communal bits and ends, both public and private, will, by 1968, account for more than \$1.1 billion of construction a year. This amount will be more than one-third greater than last year's rate of spending—and will be almost as big as hospital and institutional building at the end of the decade.

END

Building for the community

Modern government buildings need not resemble temples or factories. Here is the case for a new civic architecture that will symbolize democracy.

What is "government character"?

BY PETER BLAKE

DAN S. LEYER



The two areas in which modern architecture has been slowest to develop convincing symbols are religion and government. Yet these are precisely the areas in which architecture in the past was most prolific. Why have we lagged behind?

The reasons are plain enough: both the power of the church and the power of government have declined in most Western countries during the past 200 years. In their place has sprung up a third power—the power of business and industry—and it is in this area that modern architecture has created its most impressive buildings. As a result, both modern religious and modern governmental structures have shown the unmistakable imprint of the predominant commercial style. Now there is even a widespread

notion that religious buildings should be (and look like) centers of *social* service, that governmental buildings should be (and look like) centers of *civil* service, and that “servants of the people” belong in servants’ quarters.

This notion is not very convincing. Surely, our democratic society deserves architectural symbols at least as stirring as those developed in past civilizations. The question is, of course: “What spells ‘government character’ today?”

When the emperor was God

The Romans, from whom the Western World borrowed its governmental architecture over most of the past 2,000 years or so, had very little trouble

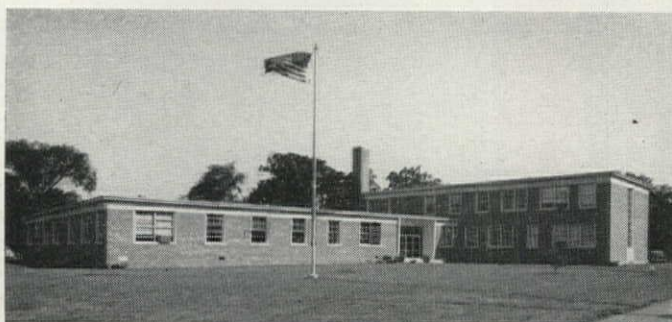
New Orleans’ city hall (opposite page), designed in 1850 by James Gallier, is an outstanding example of Greek Revival architecture in the U.S.—and an unmistakable symbol of government. Ottawa’s new city hall (below), by Rother, Bland & Trudeau, is an attempt at achieving similar “government character” by modern means.

HUGH ROBERTSON—FANDA

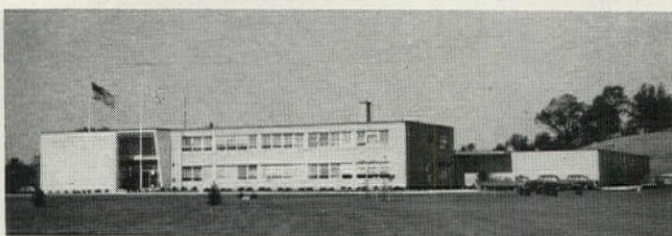




FRANK JONES



ROBERT STAHMAN



G. M. CUSHING



Poverty of spirit

The buildings above are depressingly typical of contemporary government architecture. They seem to have been designed on the theory that the most acceptable civic or governmental character is no character at all. If this were indeed true, it would be a terrible indictment of our democracy. Just for the record, the structures shown are (top to bottom): a community center in North Carolina described, by its press agents, as "a unique marriage of business, the arts and social services" (no reports on who won out in this triangle); a police station in Connecticut; a Department of Public Works building in Massachusetts; and a proposed county office building in New York.

with "government character." Since the emperor was also a God, his palace should, quite obviously, look like a temple. So the temple-palace became the accepted governmental building type—and created a physical image of government which persisted long after the separation of church and state had become an accomplished fact. (Even so passionate a believer in this separation as Thomas Jefferson felt compelled to accept this image in his state capitol at Richmond—see page 106).

There were, of course, periods in which church and state created separate architectural images for themselves; but even then, church and state buildings were tied to one another—whether by competition or by mutual security (the knights protecting the church on earth, and the church returning the compliment in heaven). The state represented power in the here-and-now; the church represented power in the hereafter.

Came the revolutions

The advent of popular middle-class democracy in the Western World toward the end of the eighteenth century did not produce a new governmental style for more than a hundred years. In a sense, no such clearly identifiable style exists even today. But certain important changes began to take place almost immediately, and the history of governmental architecture in New York City reflects those changes perfectly.

In 1812, when Mangin & McComb built their New York city hall (opposite), the problem of democratic self-government was still relatively simple: a small building, imposing only by virtue of its elegance and its location in a spacious park, could house all the required governmental functions. But 100 years later, in 1914, New York's city administration had become so vast, so complex an organism that McKim had to build a 40-story skyscraper next to the charming little city hall to house the day-to-day operations of civic government.

During this 100-year period, popular, democratic government in New York had grown from an assembly of leading citizens to a bureaucracy of 55,570 (today, the number is 195,942). The municipal building, therefore, became an elaborate office tower that dominates the site and the adjacent city hall by virtue of its sheer bulk. So the problem today is to make a government building symbolic of more than bureaucracy.

New York city hall still retains much of its symbolic quality because of its separateness and generous setting in a park. It is still the place where



OWEN MOORE—BLACK STAR

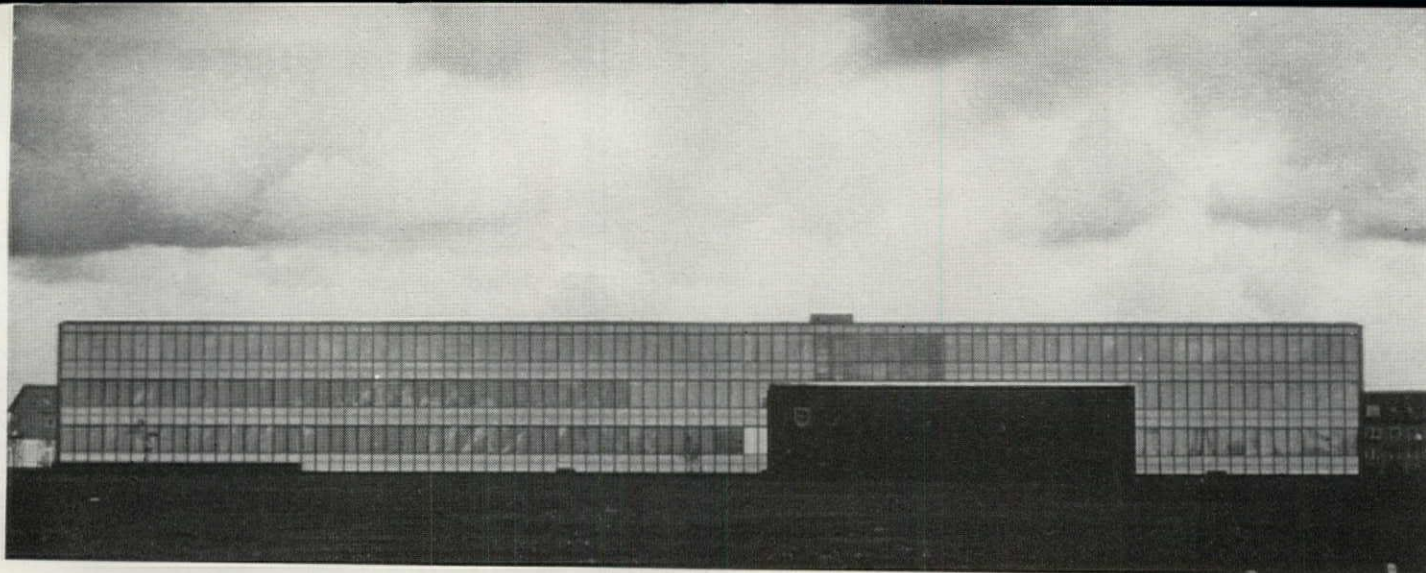
New York's gracious city hall (above left) was designed in 1812 by Mangin & McComb, still houses most of the legislative and executive spaces of the city's government. But by 1914 McKim, Mead & White had to build the dominating 40-story municipal building at right to accommodate a rapidly expanding bureaucracy.

the key processes of democratic government take place—the meetings of the city council (the parliament) and of the board of estimate (the cabinet). The city's highest elected official has his office there. Unfortunately, in the years following World War I, many a city in the U.S. and abroad has had to build new government “plants” in which the separate and potentially symbolic council chamber or courtroom has been swallowed up in the great office pile demanded by the bureaucracy; so that the element that makes democratic government inspiring (i.e., the parliamentary process and the council chamber in which it takes place) has often been blotted out, visually, by the element that makes democratic government function (i.e., the bureaucracy and the

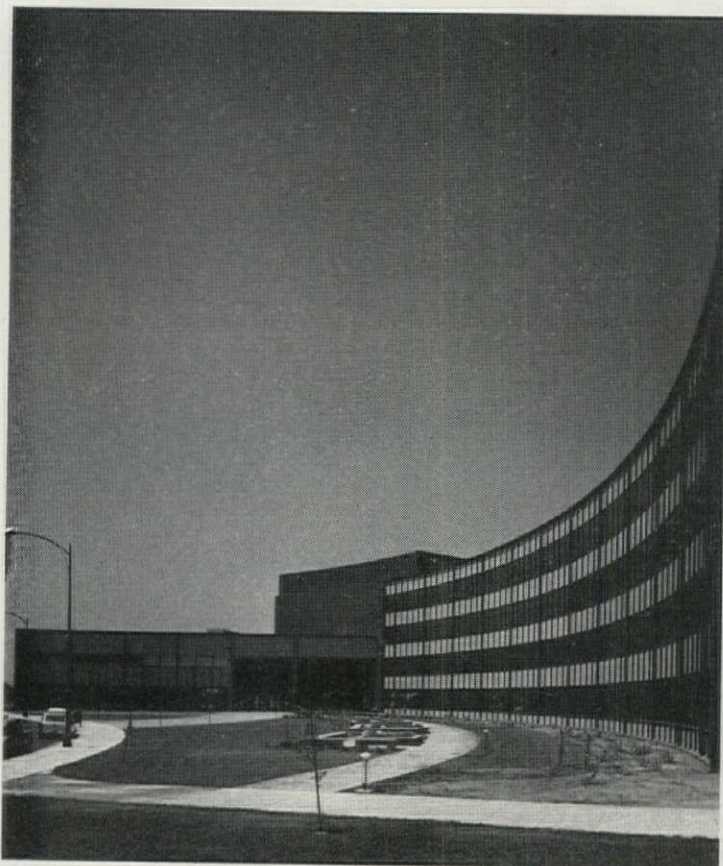
office building which must house it). In architectural terms, this duality has produced a crop of indifferent buildings that are neither an inspiring symbol nor a very efficient government center.

There are two other reasons for this decline of architectural quality: first, many people in the U.S. harbor the impression that politicians are spendthrifts at best, and crooks at worst, and therefore do not deserve to be housed in anything but a sort of modified penitentiary; and second, most politicians and bureaucrats lack the imagination and courage to commission government buildings of daring and quality (see facing page).

As a result, most governmental architecture put up since 1918 (on a local level, at least) is modest



C. E. KIDDER-SMITH



C. BARTHELS



ULRIC WEISEL

New symbols of government

These buildings all partially succeed in creating government character: the handsome city hall outside Copenhagen (top) has a good projecting council chamber—but, otherwise, looks like a modern office structure. The San Jose, California city hall (left), by Architect Donald Haines, has similar difficulties with the problem of symbolism. The Texas courthouse (above) by Caudill, Rowlett, Scott Associates emphasizes a tall courtroom block between low-slung subsidiary buildings. And Tokyo's new city hall (below), with its sculptural council chamber, is an attempt to make that symbolic building important far beyond its size.



F. MURASAWA

to the point of spiritual poverty. There may be a pretentious, pseudo-Colonial portico to denote that this is, indeed, a city hall; but the rest of it looks, more often than not, like the back of a reform school. As the French novelist, Romain Gary, put it recently: "It is a painful reflection on the state of our Western democracies that the very reference to any idea of greatness makes them shrink with fear and tremble with anger. One feels inclined to ask the Western World if it considers Man a study in smallness, and if democracy should be viewed as an enterprise in avoiding heights and as a jolly effort to have everyone wallow together in mediocrity."

Do we want symbols of government?

While many city and town halls may contain *all* the departments of local government, a great many government buildings tend to be more specialized in function. There will be, above all, the buildings that house the legislative, judicial, and executive process. These, of course, are the buildings that differentiate a democracy from an autocracy. And, second, there will be the *service* buildings of government—post offices, police stations, places where people go to pay their taxes. These buildings, though important to the functioning of government, do not necessarily hold any symbolic significance. (Other civic structures, built wholly or in part with government aid, occasionally present problems of symbolism; but these problems are not nearly so complex as those encountered in strictly governmental architecture.)

Should a modern city hall or state capitol be just another office structure, or should it possess a certain sense of dignity and nobility—even a certain monumentality—which sets it apart from buildings of commerce and industry? Should it, perhaps, symbolize that most exciting idea of popular democracy—the idea of a freely elected assembly?

Many Americans, fearful of creating a too-powerful bureaucracy, are reluctant to endow even their legislators (and staffs) with any glamour or nobility. This seems shortsighted at best; for ours has become a society of transients, of people who move their places of domicile as often as five times in a single generation; a society which badly needs a sense of civic belonging, of civic "togetherness" and civic responsibility; a society which needs symbols of democracy as reminders of these important civic rights and duties.

What is "government character"?

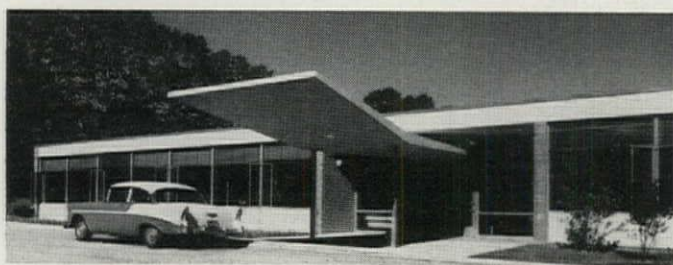
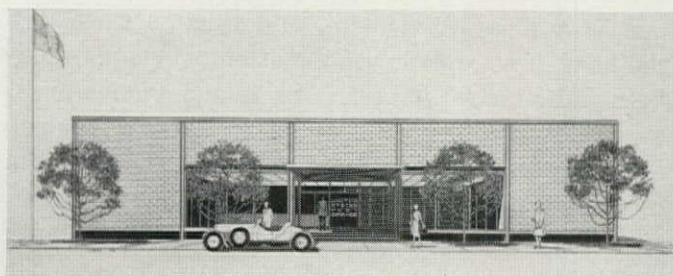
The pictures opposite show several modern civic buildings of high quality—each attempting to

achieve that elusive quality, "government character" or "democratic symbolism" in an entirely modern way—and, in various degrees, succeeding.

Arne Jacobsen's beautiful city hall in Roedovre-Copenhagen, Denmark, is a brilliant example of an efficient, sleek government plant. Comparisons with such industrial masterpieces as our own General Motors Technical Center suggest themselves immediately; indeed, without the little plaque on the blank end wall of the council chamber wing this might well be mistaken for a beautiful, modern laboratory. There has been an attempt to treat the council chamber as a separate element, and thus to raise it to the level of a symbol; yet the attempt seems to have been halfhearted at best. This is anonymous architecture done to perfection—but anonymity is hardly the language of expressive symbolism. The building remains a sensitive, handsomely detailed steel-and-glass structure that might, conceivably, symbolize industry or commerce—but not government. The same may be said, with fewer compliments, about the new city hall in San Jose, California.

Ottawa's new city hall, by Architects Rother, Bland & Trudeau (page 77), is less sensitive in its details than Jacobsen's structure outside Copenhagen. However, it appears more successful in scale, in siting, in finish, and in its massing. The council chamber is unmistakably a separate, distinct, and important element, raised on massive columns to emphasize its monumental character and thus given greater importance than the much larger office tower to its rear. By creating a park, and a raised and paved platform within the park on which to rest the city hall, the architects have used traditional devices familiar to every student of the Beaux-Arts Academy to suggest dignity and nobility. Although the character of this building is a little plain, it unmistakably spells "government"—and "government by assembly" at that.

Kenzo Tange's new city hall for Tokyo is much more sophisticated than the one in Ottawa, but the principle of its organization and the manner in which it is expressed, are the same. Tange made his assembly hall a very plastic entity, divorced in form as well as space from the two office towers that will house the necessary bureaucracy. Like Ottawa, whose facing material is limestone, the Tokyo building uses materials that suggest permanence—in this case brute concrete, left unfinished much in the manner of recent work by Le Corbusier. Again there is a platform on which the buildings rest, and this suggests monumentality in the traditional manner. And again there is an attempt to use the fine arts



ROBERT STAHLMAN



Dignity without pomp

The three government "service buildings" above were not meant to be symbolic of anything in particular—but they *were* meant to look dignified, and do. From top to bottom: Craig Ellwood's design for a new Los Angeles post office; Sherwood, Mills & Smith's rehabilitation center in Stamford, Connecticut; and Skidmore, Owings & Merrill's U.S. Consulate in Frankfurt, Germany. Compared with the dreary collection of "service buildings" shown on page 78, these have a refreshing and cheerful spirit, suggest that the U.S. has started to treat its public servants—and the public—a little more generously.

to embellish the building—though the arts are distinctly finer than some of those employed in the city hall at Ottawa.

These examples suggest three rules of thumb that are almost as old as architecture itself, and remain valid to this day: first, that a government building needs a generous site—and will gain in dignity if it is raised up on some sort of pedestal; second, that masonry materials spell permanence and monumentality; and, third, that painting and especially sculpture can make a decisive contribution to the creation of "government character." The acid test of whether or not an architect has succeeded in achieving this character is in the answer to a simple question: "Could this building be anything other than a city hall or a state capitol?"

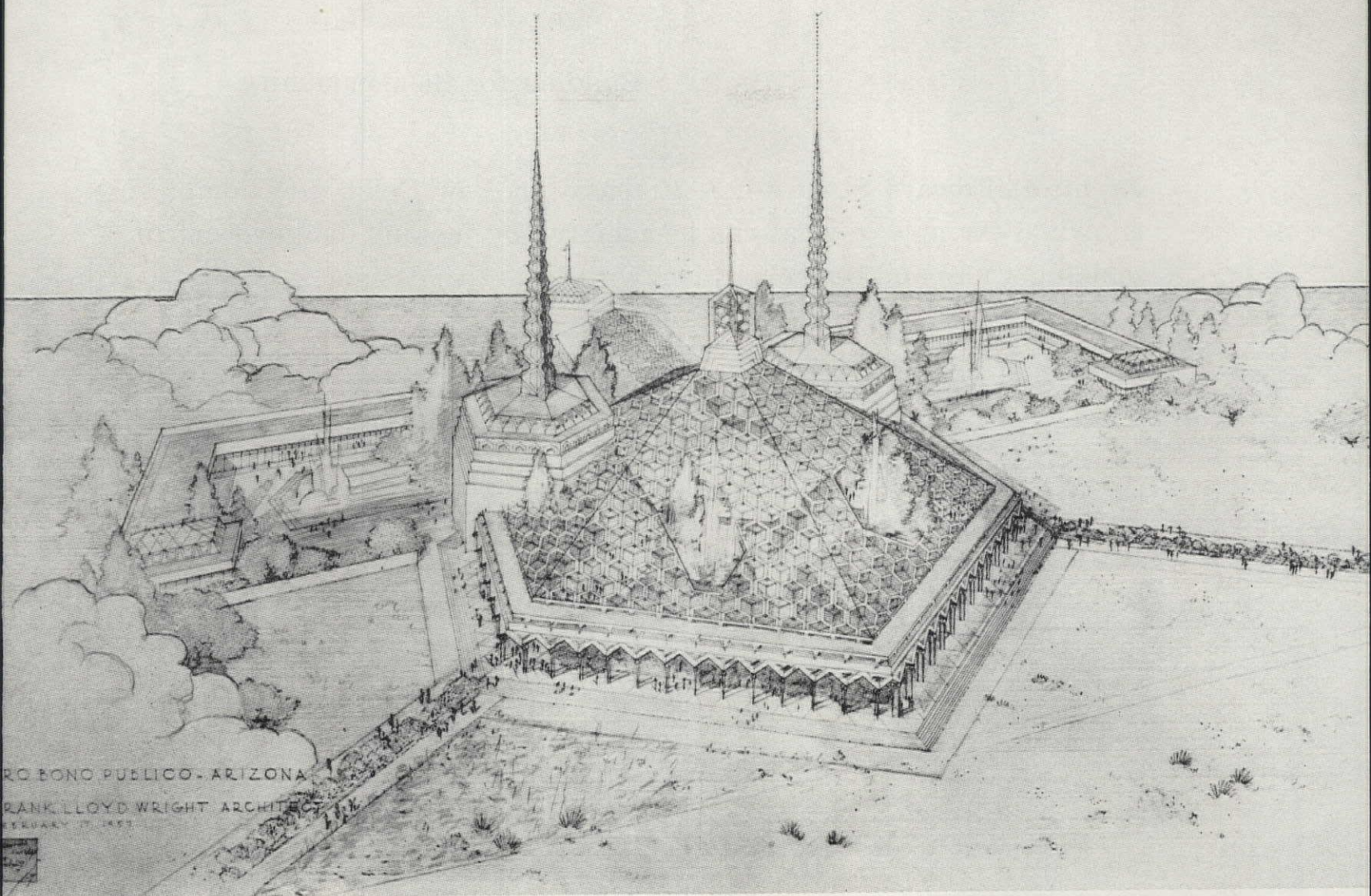
To a lesser degree, this test can be applied to the service buildings of government as well. There is no reason in the world why a post office or a police station should be monumental, symbolic, or grandiose; yet there is no reason why it should not have dignity and grace. All of the buildings at left have both; others, mercifully omitted from these pages, have mistaken ostentation and commercialism for dignity.

Can architecture come up with new symbols?

Still, serious architects have little reason to rest on the laurels of such buildings as Tange's city hall or Caudill, Rowlett, Scott's courthouse in Texas. For these buildings are not really so very different from the handsome and dignified headquarters put up by great corporations like Connecticut General or Reynolds Metals.

Obviously, the search for new symbols of the democratic governmental process is just beginning. Happily, the leading architects of our time are involved in that search: Frank Lloyd Wright in his proposed Arizona State Capitol (which says that democracy is splendid); Le Corbusier in his assembly building at Chandigarh, India (which says that representative government is a majestic thing); and the architects chosen by the State Department to create a friendly image of the U.S. through new embassies and consulates abroad (see page 84). All these are efforts to use architecture as a universal language with which to communicate a great ideal. The success of these efforts will depend upon the answers to these questions: Is the great ideal of democracy real enough in most people's minds to permit communication? Is the language of modern architecture widely understood? And, finally, are modern architects equal to the task?

END

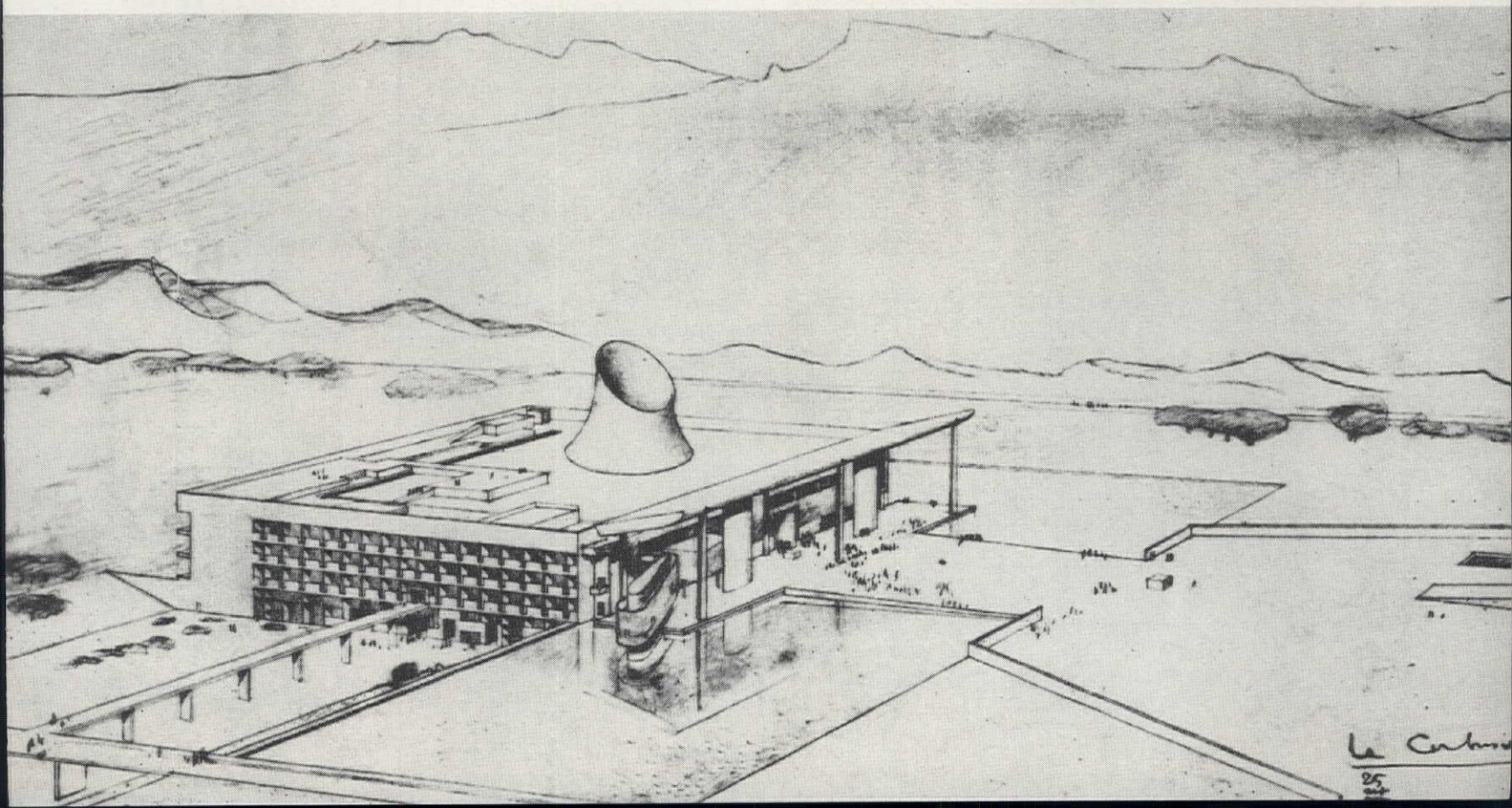


RO BONO PUBLICO - ARIZONA

FRANK LLOYD WRIGHT ARCHITECT
FEBRUARY 1957

Experiments in "government character"

Frank Lloyd Wright's daring 1957 proposal for the Arizona State Capitol (above) puts the Senate and the House into hexagonal structures topped by spires, and linked by a large, hexagonal garden covered by a concrete grille. Subsidiary offices are located in a low, U-shaped wing to the rear. Le Corbusier's proposed assembly hall for Chandigarh, India (below) is a single building, with offices grouped around an oval council chamber whose plastic form penetrates the roof.

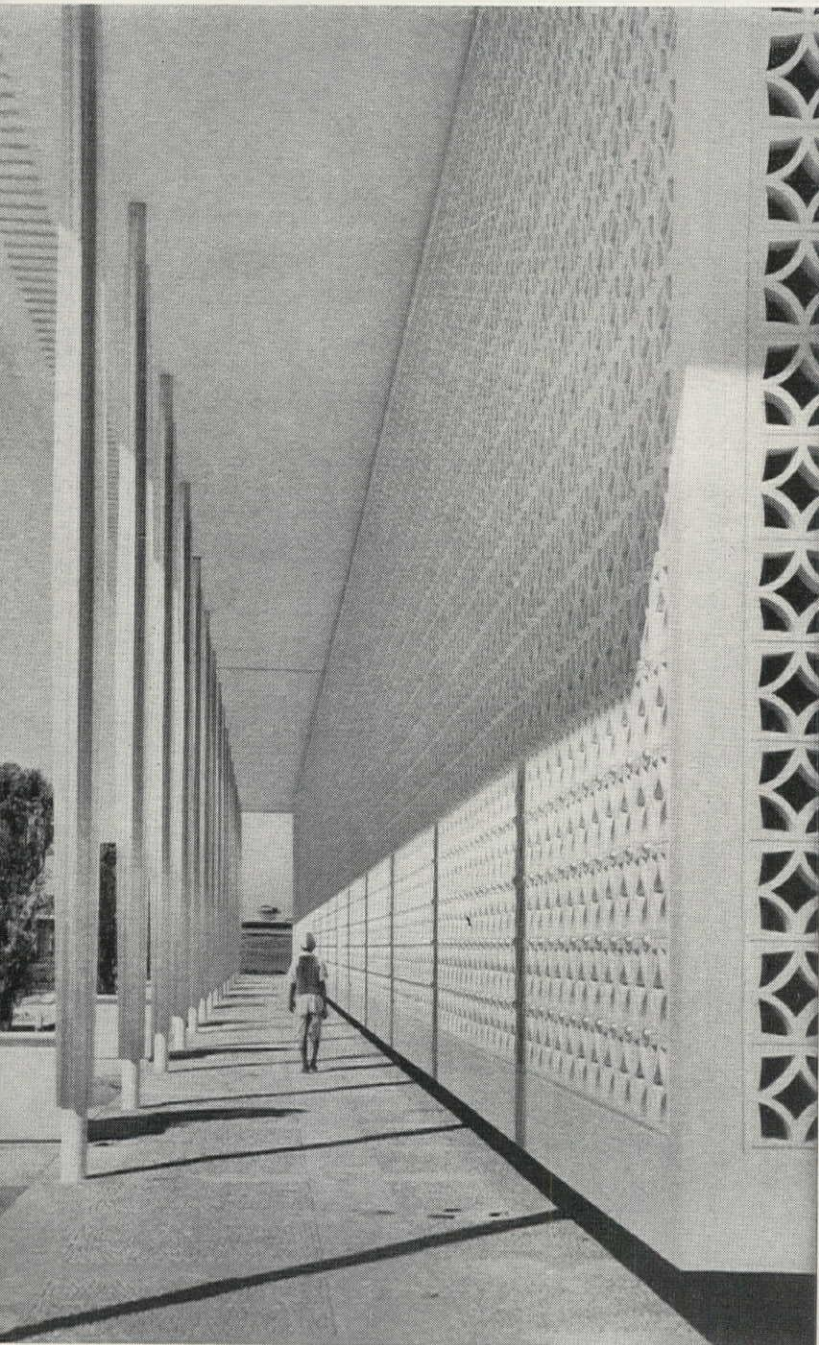


Le Corbusier

Building for the community

Architect Edward Stone's U.S. Embassy in New Delhi, now complete, is a vivid example of what can be achieved by junking old governmental building styles and replacing them with inventive design.

A new public architecture



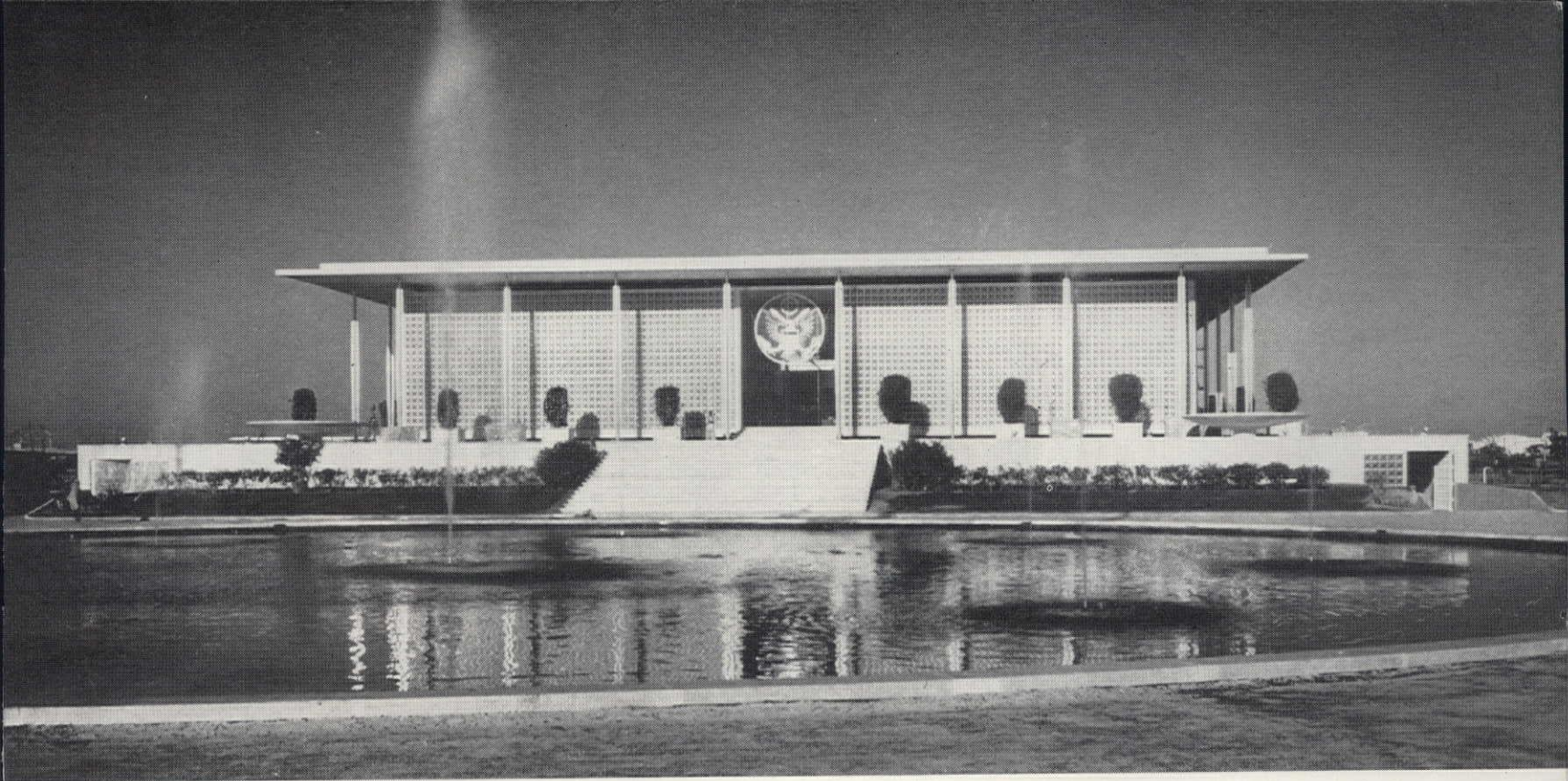
PHOTOS: T. S. SATYAN

Four years ago, when he was given one of the first U. S. embassies to design under an enlightened new program of the State Department's Foreign Buildings Office, Architect Edward Stone decided to substitute grace for a grandiose tradition. Until then the American Government—like most other governments—had housed itself abroad almost exclusively in muscular, monumental buildings designed in one or another of the heavy authoritarian stereotypes.

What Ed Stone sought to do was to design a building that would represent this country's democratic vitality and romance, its pleasures as well as its power, its strength, all *without* ponderous weight. Just completed, his graceful, glittering, eye-luring structure—to be dedicated January 5—fulfills most of the extravagant hopes aroused by first sketches three years ago, which awoke many people to the possibilities of a new government style. Functional demands called essentially for an office building capable of handling a working staff of 205, with spaces in the building for such diplomatic duties as entertaining and negotiating. The embassy was also to provide living quarters and service facilities (page 89) and the whole complex was to be sited with all other foreign representatives in New Delhi's new, inevitably competitive, diplomatic enclave.

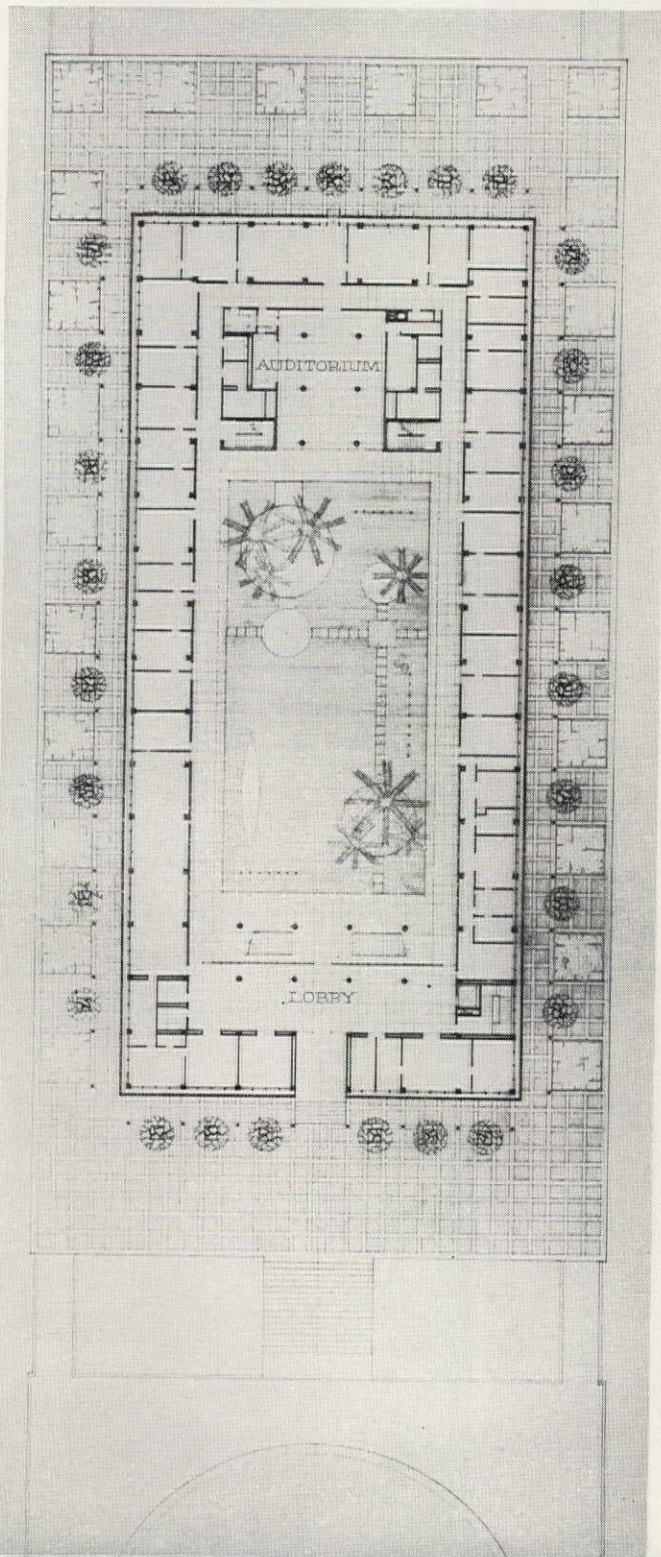
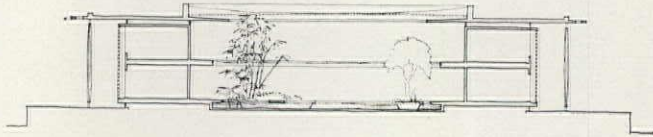
Stone's technique for adding the air of government to the prosaic utility of the building began gently. He shaped the building with serene simplicity to convey the feeling of confident, fair governmental

Sun-screen walls the entire New Delhi Embassy. Made of cast terrazzo, it is set 1 foot 6 inches from the glass walls of the offices inside. The principal façade of the building is shown on the facing page. The pebbles in the paving are from the Ganges; the cypress plants, gifts from a friendly maharajah.





Inner court of the embassy contains a large pool with fountains and islands of planting (facing page). The brassy glare of the tropical sun is dimmed by a lattice overhead; the interior hallways are actually outdoors. (When photos were taken the pool had not yet been completely filled.) The engineer for the building was Peter Bruder.

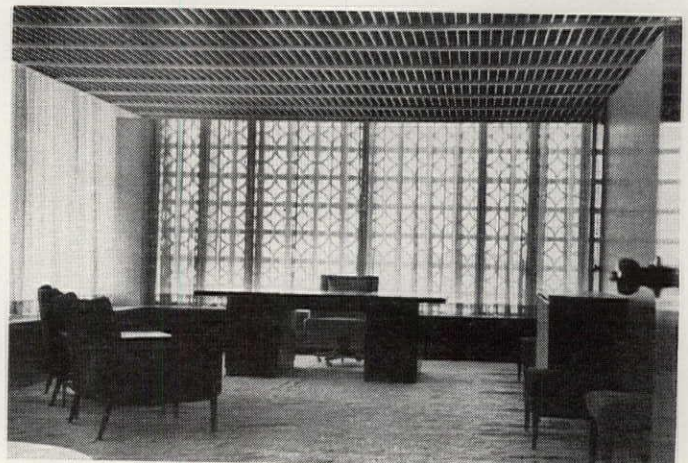


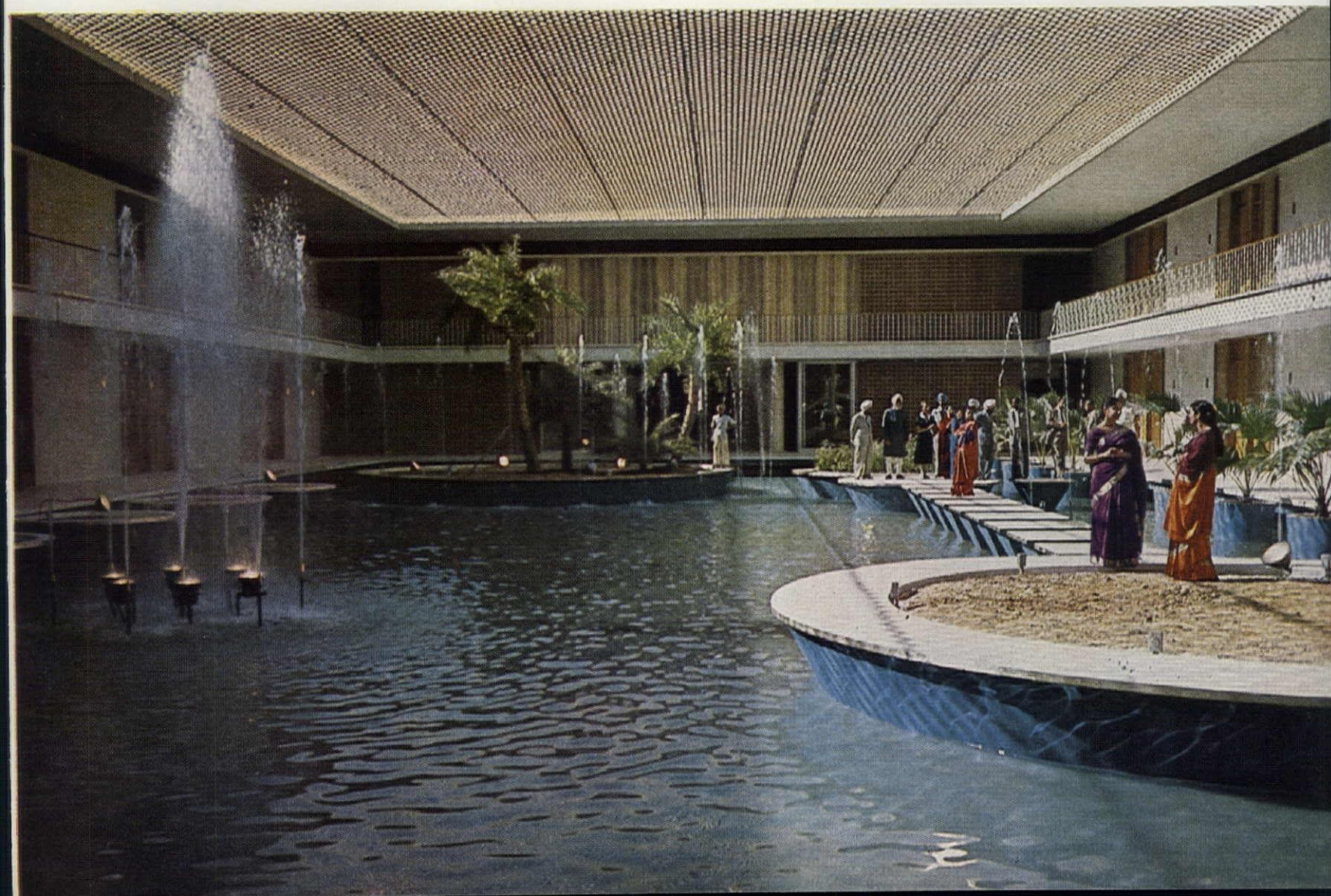
authority, presenting balanced elevations and a symmetrical plan. But then he added architectural pleasures—not only for architects but for everyone: pools, gardens, gilding and grilles to catch the sun and shade, an unofficial kind of liveliness that is gay and friendly. Ambassador Ellsworth Bunker has sounded one note of warning, however. He sees a resemblance between his headquarters and a subsequent Stone design for a pharmaceutical plant in the U. S., implying that this use of the New Delhi-type of pierced screen and other devices could debase the governmental character of this architectural currency.

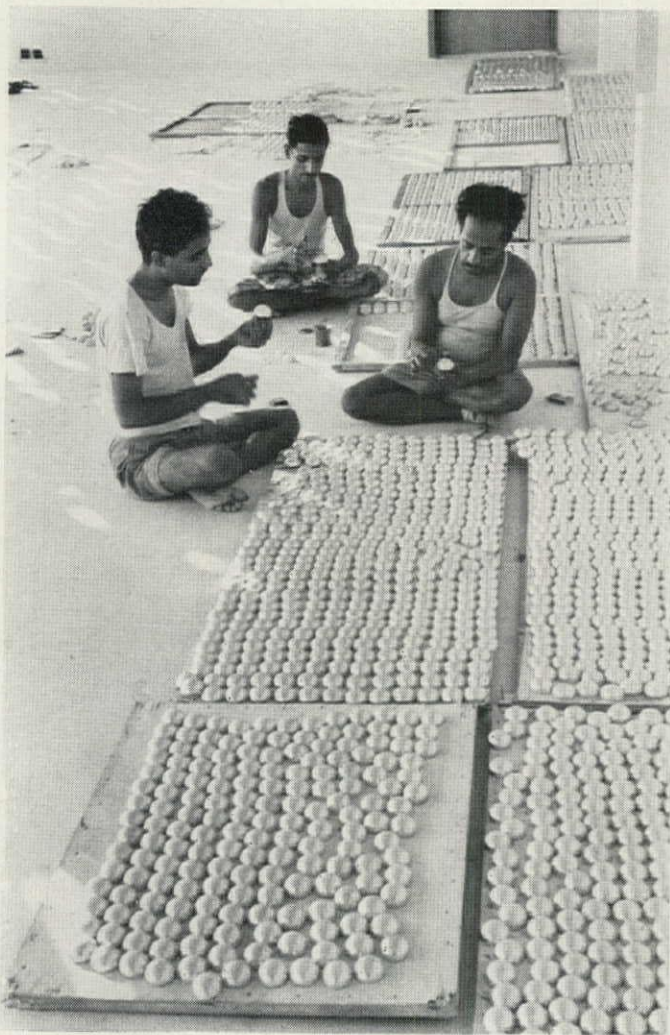
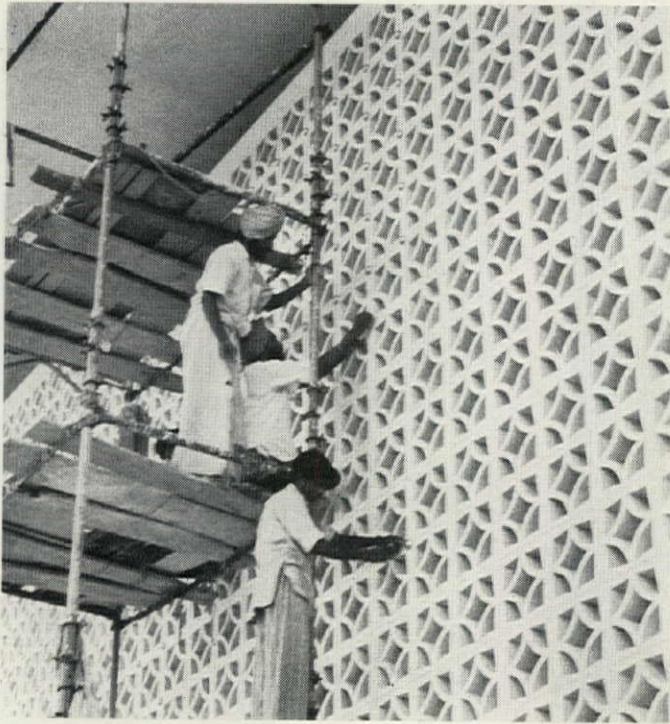
The New Delhi Embassy is, at heart, a pool of water with splashing fountains, enclosed in a court, and surrounded by a two-floor bulwark of offices with glass exterior walls. Over the court is an arbor made up of anodized aluminum stampings strung on cables. Around the exterior glazing is a cast terrazzo screen intended to baffle burglars and the Indian sun.

In detail, the new embassy was put together as meticulously as a piece of elegant Indian filigree. Any apparent machine finish is deceptive; loving hand workmanship, under conditions of construction

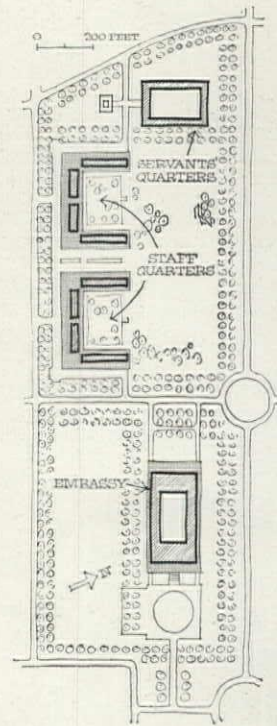
Ambassador's office shows the interior of the screen wall.







Hand craftsmanship accounts for the high finish of the New Delhi embassy. Bottom photo shows Indian workmen preparing the gilded aluminum studs and (top photo) putting them in place to accent the precast screen. The columns outside the screen around the building are covered with gold leaf to sparkle in the sunlight.



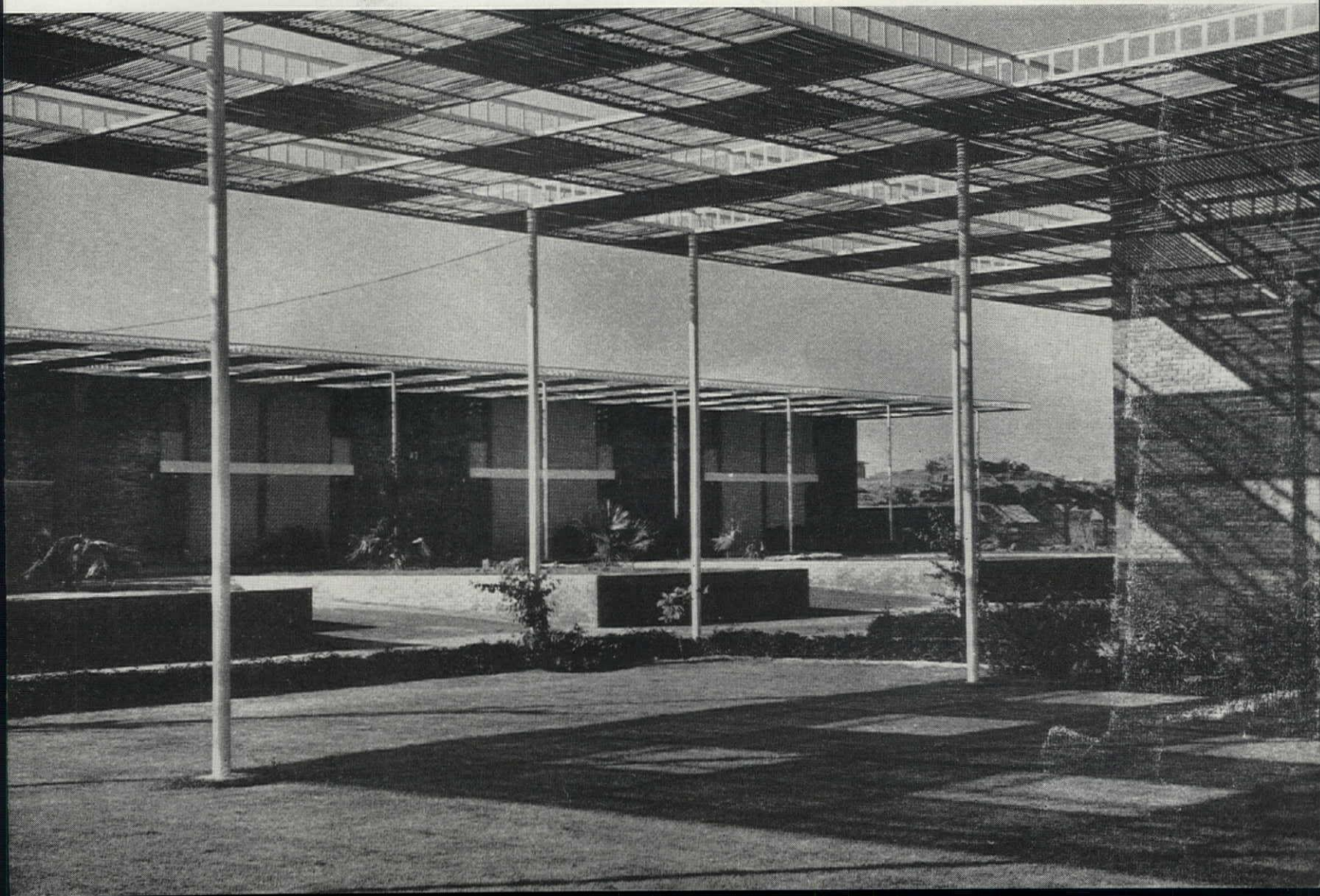
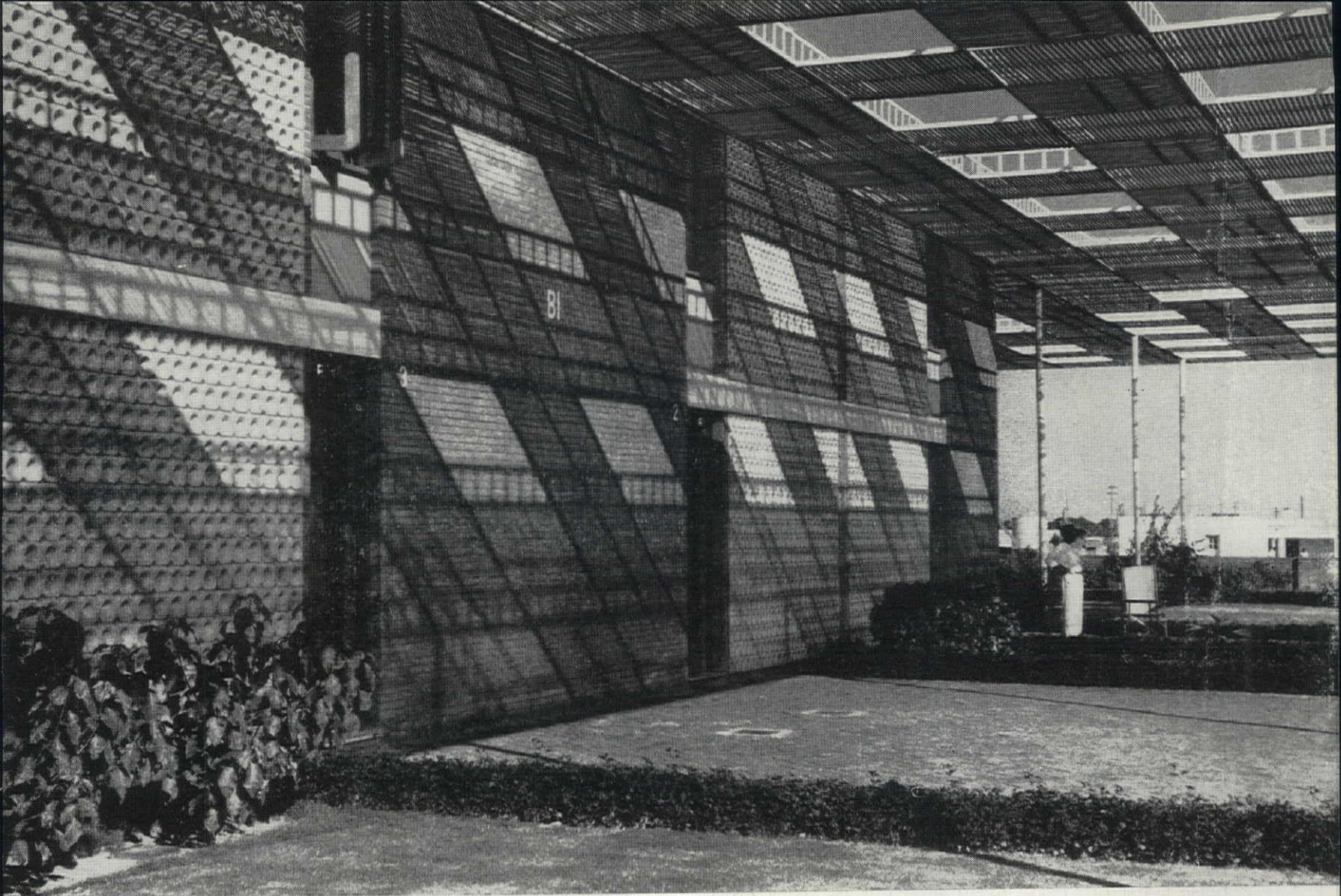
close to primitive, was an important factor in the character of the structure. Says Stone: "This thing was literally built by hand. There were forges on the site to make the rough hardware. Except for the mechanical equipment, everything has a hand polish. This building was assembled like the Parthenon." Anticipation of this kind of workmanship can be traced back from the end result. The detailing was deliberately attuned to the traditionally intricate rhythms of Indian craft; there are many small patterns, few bland surfaces. Textures shift throughout the building, getting finer or coarser, and result in making a really sizable structure (126 feet by 288 feet) seem singularly small. The local contractor, Sardar Mohan Singh, and his workmen were responsible for producing all of these textures (even the furniture, designed by American Edward Wormley, was put together by the Indian craftsmen).

A very popular building already in India, and a diplomatic one in its distant echoing of India's own classic, the Taj Mahal (FORUM, June 1955), Stone's New Delhi Embassy is a remarkable envoy to another land. It is also a somewhat melancholy reminder for Americans that the most promising public buildings, those that might set a new pattern for "governmental character," are still only being built by the U.S. abroad.

END



Staff quarters share the site with the embassy and servants' quarters (see plot plan at top of page). The latticed sunshades around the buildings, designed on the principle of florists' lath houses, will soon be covered with shading, cooling vines. The design of these quarters is clearly domestic and does not vie with the embassy building for authority.



Citizens and architects

A selection of six men who
are exerting a beneficent influence
on civic architecture.

In the resurgence of civic building in the next decade, the best hope that public buildings will achieve a new quality and character lies in the individual architect. FORUM here presents, in a suggestive line-up, six outstanding men who, in various capacities, have brought something of that new quality and urbanity to the public scene. They do not comprise a list of "best" architects, but rather a cross section of the competence and influences needed.

Architectural ambassador

After long adherence to a stodgy policy on its buildings overseas, the U.S. Department of State has swung over to a dynamic, distinctly contemporary approach to architecture. In large measure, this change is due to the influence of Ralph Thomas Walker, 69, who in 1954 was one of three architects appointed to advise State on its foreign building operations (the others: Henry R. Shepley and Pietro Belluschi), and proceeded to get rolling a sparkling U.S. program.

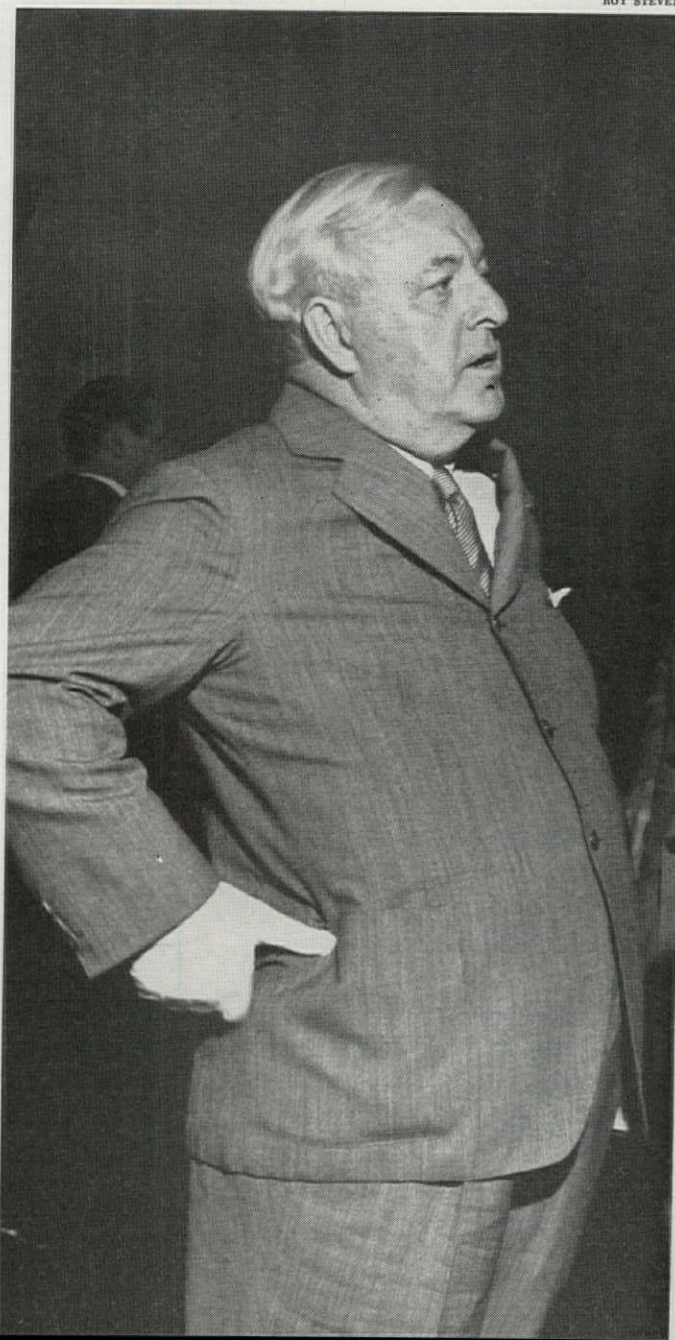
One of the first fruits of this program may be seen on page 84 in the new U.S. embassy building at New Delhi, which is soon to be followed by outstanding new buildings in London, Bangkok, Baghdad, and other world cities. For these designs some of the most "contemporary" U.S. designers have been selected: Edward D. Stone, Eero Saarinen, John Carl Warnecke, José Luis Sert, and others.

All this would not be so startling if paradoxical Ralph Walker were not regarded by many young architects as a white-haired Napoleon of active opposition to contemporary ideas. Described in FORUM 28 years ago as "dynamic," "modern," and an irrita-

tion to the "old guard," he told FORUM last month: "I am against anonymity, uniformity, and all the things that go to make up modernism." His work of 40 years with what is now Voorhees, Walker, Smith, Smith & Haines—a long association from which he retires this month—included the 1926 New York Telephone headquarters, advanced for its day. But Walker tended later toward substantiality rather than daring. Why, then, did Walker, the outspoken defender of conservatism ("I don't see what's wrong with the so-called 'wall punched full of holes'") advocate contemporary design for the new program?

Says he: "I did not advocate that they do anything but hire a lot of youngsters and send them out to see what they could do." Further, he says: "I am not basically a traditionalist or a conservative. I am a humanist. I face all architectural problems not in terms of steel and glass but in terms of the human beings they enclose."

ROY STEVENS



RALPH T. WALKER



G. HOLMES PERKINS

Planner

Philadelphia has not been quite the same since G. Holmes Perkins, 54, a New Englander born and bred, came to town eight years ago as dean of the School of Fine Arts at the University of Pennsylvania and chairman of the school's Department of Architecture. In large measure he has been responsible for working out and winning support for Philadelphia's proposed bulk zoning system (FORUM, February 1958), which rewards a builder for providing open space at the building site by allowing him to erect a taller structure.

One of Holmes Perkins' strongest convictions concerning architecture and city life is simply a matter of making the city liveable: "We've got to get the open spaces back. One thing we have lost in the past several years is the creation of great park systems like those our grandfathers used to build." He believes that bulk zoning may be the only way to provide these open spaces once again "and make city life decent living for the person on foot." Bulk zoning, he says, "will give the architect more freedom to develop an imaginative and efficient building."

On his arrival at the University of Pennsylvania in 1951 (from Harvard, where he had been chairman of the Department of Regional Planning), Perkins was almost immediately made a director of both the Philadelphia Housing Association and the Citizens' Council on City Planning. In 1955, he became chairman of the Zoning Commission, and today is chairman of the City Planning Commission. At Penn, he established a Department of City Planning and was responsible for setting up the Institute of Urban Studies, a research organization with an annual budget of \$200,000. One of his aspirations is to raise the level of architecture in Philadelphia, inducing young architects to set up offices there and show their work. Perkins has great hopes for "a new architecture, in which buildings will be seen as three-dimensional sculptures, surrounded by open space."

State architect

Alfred J. Nelson, 36, is representative of a new breed of energetic young architects who work directly for the public. As state architect for Minnesota since 1956, he has won credit throughout his native region for changing hostile public attitudes toward state building and state architecture. Four years ago, despite an urgent need for new buildings, the Minnesota legislature was wary of making appropriations, because many legislators doubted the state administration's ability to supervise any new projects. Moreover, Minnesota's private architects were shunning state work because of red tape and uncertain lines of authority.

Today, Minnesota is in the midst of an \$80-million state building program, the greatest in its history, due in large measure to a close working relationship between Nelson's office and the legislature; far from questioning his ability, legislative committees now call on his office for advice. Furthermore, some 60 private architects have signed up for state jobs. And

CARLETON RUST



ALFRED J. NELSON

ten of these, along with ten engineering firms, have already made detailed surveys of Minnesota's major institutions, e.g., hospitals, schools, jails, to evaluate their building needs, all without charge.

Minnesota's trouble, as with so many state building programs, had been a lack of planning. The state's physical plant, consisting of more than 2,000 buildings, had grown haphazardly; no central office could even list all the buildings, much less determine future needs. But in 1955, in a noteworthy example of cooperation between state house and legislature, a ten-year building program was formulated, upping the state's two-year building budget from \$8 million to \$30 million. In 1957, the biennial budget was again increased to \$50 million, a level it is likely

to maintain until 1965. Nelson, who had tried state work after securing his degree from the University of North Dakota in 1950 (his thesis: a hospital for retarded children) and then turned to private practice in St. Cloud, Minnesota, was handed the task of translating the new program into power plants, warehouses, hospitals, state office buildings.

Thus far, more than \$20 million of work has been completed. And, most important to the private architects, clear lines of authority are set up: after approval of preliminary drawings, architects deal only with Nelson's office, not with the officials of the state institutions for whom they are designing. Yet, Nelson says: "This only scratches the surface of the job to be done."

Urban renewer



CECIL ALEXANDER

MAYOR WILLIAM B. HARTSFIELD

In the development of that vital phase of civic building called urban renewal, architects have, by and large, been conspicuous by their absence. A notable exception is Cecil Alexander, a 40-year-old Atlanta architect and former president of the Georgia chapter of the American Institute of Architects, who is leading Atlanta's redevelopment efforts.

Alexander, for the past year, has headed a 90-member mayor's advisory committee on urban renewal, and is credited by both Mayor William B. Hartsfield and Urban Renewal Coordinator Colonel Malcolm Jones with being largely responsible for securing enthusiastic backing for city redevelopment

in Atlanta. Hamilton Douglas, chairman of the committee on urban renewal of the Board of Aldermen, says: "Alexander has devoted as near full time as anyone to urban renewal and his main function has been to convince people in city government that urban renewal is necessary."

One of Alexander's first moves last year was to broaden the membership of his own committee from nine to 90 (keeping a ratio of one Negro to two whites). He has established good relations with Atlanta's newspapers, and consequently has got continuing coverage of urban problems.

For the past year, Alexander has devoted so much time to his committee work that his own practice (which so far has profited nothing, in monetary gain, from the program) and his wife and two daughters see very little of him. Perhaps that explains why his wife has given up some of her own civic activities to act as Alexander's secretary on city matters.

Alexander's vigorous efforts in Atlanta's redevelopment stem both from his affection for his native city (his father established a hardware business there shortly after the Civil War) and from his feeling that architects "have taken too much of a back seat in policies which affect their profession." Recalling his training in planning when studying at Yale and Harvard, Alexander adds: "In taking part in these city planning projects, we are looking after the future of architects."

Builder's architect

Architect Ieoh Ming Pei is a slender man of conservative habit and self-effacing, Oriental reserve whose best client is boisterous Builder William Zeckendorf, who calls him "a pleasant guy to have around." Pei, born 41 years ago in Canton, China, is a passionate believer in urban renewal, "the great hope for architecture and planning," and he has allied himself with Zeckendorf and his real estate firm, Webb & Knapp, because he believes that such organizations are to be forces of great strength in urban redevelopment's future. "Some 90 per cent of all rebuilding is done by men like Zeckendorf," he notes.

And roughly 85 per cent of the commissions of I. M. Pei & Associates, whose offices and Zeckendorf's are in the same Madison Avenue building in Manhattan, come from just down the corridor, from Zeckendorf's sumptuous "throne room." Of course, Zeckendorf is not the sort of man who becomes



JOHN EISTEL

IEOH MING PEI

fatherly toward an architect simply because he is a "nice guy." In fact, Pei is an especially talented designer, as is shown in his Mile High Center building in Denver (FORUM, November 1955). Further, in Zeckendorf's words: "He is probably the greatest site planner alive. He has tremendous ingenuity in design and remarkably good taste, combined with comprehension of the economic requirements. But he is practical, no egghead." Zeckendorf calls Mile High "the greatest job he has ever done," but says that Pei's plan for the 400-acre southwest redevelopment project, in Washington, D. C. (FORUM, January 1956), will be even better.

Pei might have severed his ties with Zeckendorf long ago (when their association began in 1948, Pei had been teaching at Harvard), but for his conviction that the planner, architect, and businessman have a new kind of responsibility today, which did not exist 20 or 30 years ago: "This is the trend to the superdevelopment, the type of development that must be created, not building by building, but in whole blocks of building."

Landscape architect

Thomas Dolliver Church is a landscape architect who, in the opinion of many, has done more than anyone else to lift his art out of the stage of merely pretty horticulture into a working partnership in the design of cities and urban surroundings. He does not believe in the park, landscaped area, or garden as a formal, axial design of specimens and symmetrical beds, merely to be viewed, but as something to be molded to a purpose, to live in, easy to maintain and enjoy. And he has practiced his beliefs broadly over the country from a base in San Francisco—his projects include the Metropolitan Life's handsomely landscaped Park Merced housing development near San Francisco, Stanford University's master plan at

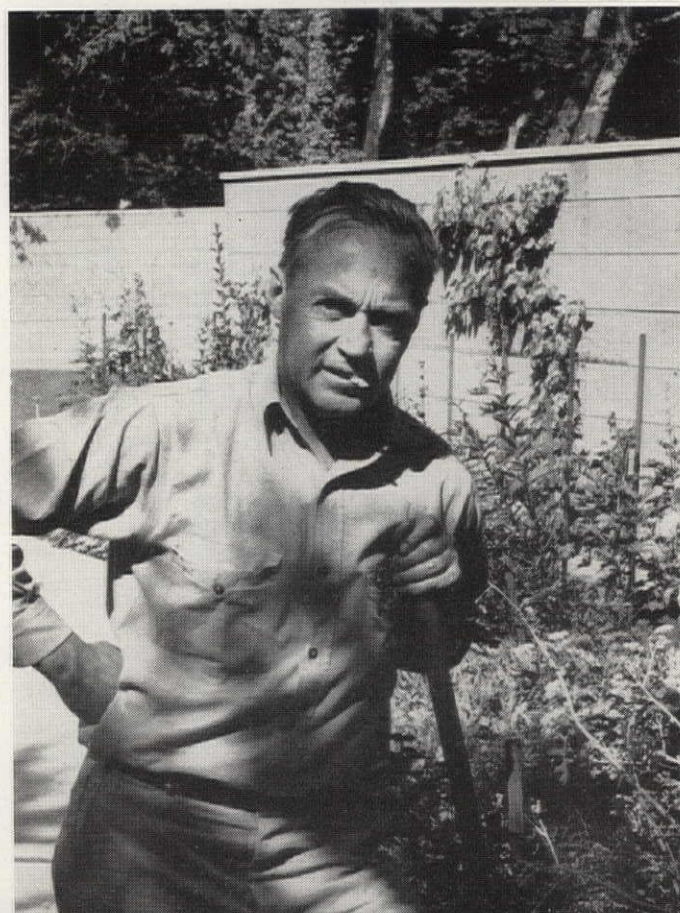
Palo Alto, the famed General Motors Technical Center in Detroit, and the Rock Creek Plaza Apartments in Washington, D. C. He has won the AIA's Fine Arts Medal and many other honors.

An amiable, hard-working man who almost always carries a pair of pruning shears in his back pocket, Church was born in Boston in 1902, moved to California at the age of ten. At the University of California he found himself studying law, in the family pattern, until he took a "snap" course in landscaping and found his life's work. After further work at Harvard and on a traveling fellowship to Rome, studying gardens in Italy, France, and Spain, he returned to California to teach and enter private practice in 1932. He brought the Spanish garden back to fullest flower in California, and has written and designed a book, *Gardens Are for People*, which is filled with his own accomplished photographs, and is a best seller in its field.

Church, who lives with his wife, two daughters, and a French poodle in a Victorian-decorated house beside a large garden in San Francisco, is optimistic about the American landscape. He points to the fact that industry in its moves to the suburbs is creating greenbelts far different from the paved, beaten industrial landscapes of the past. He finds the current alarms over decaying cities and disappearing parks signs of a new maturity, growing awareness of natural resources, "a new stage of architecture in America."

END

W. MILLER—MAGNUM



THOMAS D. CHURCH

Building for the community

The sprawl and spread of the great metropolitan cities
may have outmoded the concentrated civic center.

What many cities need now are little centers—all over town.

Are civic centers obsolete?

BY RICHARD A. MILLER

FROM "CARL MILLES," BY MEYRIC R. ROGERS. YALE UNIVERSITY PRESS





Spires of Wren's churches gave seventeenth-century London a well-defined neighborhood pattern.

Like Sir Christopher Wren's spired churches in seventeenth-century London, the community buildings which will be built in the decade ahead should be located where they can best serve the city and the people who will use them. They should proclaim their purpose and improve their environs. And they should give the spread-out cities a visually apparent sense of order.

There is a distinct parallel between Wren's problem and the situation facing city planners today. London before the great fire of 1666 was an intolerable chaos, not unlike the chaos of many American cities today. Wren wanted to rebuild London according to a grand plan, as Haussmann was later able to do in Paris. But when his plan was rejected, Wren seized upon the opportunity of rebuilding the churches to give London a far more subtle organization. His churches (drawing above) served as neighborhood focal points and their spires made the city's new organization clearly visible. That is precisely what most U.S. cities need today—multiple, manageable centers of civic life.

Unfortunately, few of today's city planners have either Wren's flexibility—or his perceptiveness. Today's "civic centers" tend toward the grandomania of the Place de la Concorde in Paris (or the more modest Piazza San Marco in Venice) even though to obtain it they often must isolate themselves from the city they are supposed to serve. No Grand Boulevards or twisting Fondamentas reach into the city from these "centers." Both the downtown area and the residential neighborhoods are usually miles away. And precisely because the functional ties between

the civic center and the city have been so poorly established—or are totally lacking—more than one center now abuilding is likely to become a focus of future blight rather than culture. That is what happened in St. Louis (photo opposite).

Indeed, the monumental civic center, embracing all elements from city hall to art museum, may be obsolete. Of course, some central focus, or, rather, foci, are still essential in every city, big, medium, or small. Libraries, post offices, and police stations, for example, need central headquarters, but they also need branches close to the living neighborhoods of the city. Like the human heart, civic centers cannot work if they are cut off from the blood stream of city life. Many of the cultural elements of the city in fact—government as well as private—cannot be centralized at all. Churches and schools, indeed, consist almost entirely of "branches" now. Even where the cultural facility is one of a kind—such as a civic auditorium—the logical and fundamental relationship is usually to "downtown" rather than to any artificial civic "center."

Faulkner's courthouse square

This interweave of community buildings with the city they serve was instinctively built into the turn-of-the-century town square. William Faulkner describes this interrelationship well in his fictional Jefferson, Mississippi: "A square, the courthouse in its grove the center; quadrangular around it, the stores, two story, the offices of the lawyers and doctors and dentists, the lodge rooms and auditoriums above them; school and church and tavern and bank and jail each in its ordered place; the four broad diverging avenues straight as plumb lines in the four directions, becoming the network of roads and byroads until the county would be covered with it."

If the limits of this typical turn-of-the-century civic center could be stretched far enough to en-



St. Louis civic center has at its center Sculptor Carl Milles' famed fountain, "The Meeting of the Waters." Despite its delightfulness, the center itself is too big and too concentrated. Consequently, the adjacent downtown, declining fast itself, is unaided by the center.

compass today's widespread city, it might still work. But in most large cities, burgeoning urban development, the concomitant expansion of government, social, and cultural needs, and the advent of the automobile have made such an uncomplicated solution impossible—no matter how big the square or how high the buildings. And, urban renewal notwithstanding, no one has any serious plans for rebuilding the entire city. Thus, Wren's second choice is the only realistic one available today. Like his churches, community buildings must be tucked in where they fit and where they can do the most good.

The standards

Unhappily for planners and architects who like simple solutions, this tucking-in must proceed with infinite care. There is no textbook situation, no standard solution. But there are some standards:

► The first thing to keep in mind is that cities range from mammoth concentrations like New York or Chicago to small cities like Larchmont, New York or Lake Charles, Louisiana. As a rule, the concentration of community buildings can be increased in inverse ratio to the size of the city. The single police station in Larchmont becomes a hundred police stations in New York. The city hall and civic auditorium in Lake Charles can be situated downtown and still be adjacent to each other, but in Chicago the proper place for one building downtown may be far removed from another.

► The second thing to remember is that cities are, in effect, living organisms constantly growing and changing. Any viable plan for the city, therefore, must be highly flexible. As London grew in the seventeenth and eighteenth centuries for example, other churches were able to take their place in Wren's pattern very easily. Indeed, the pattern remained a predominant influence in London from the time of the fire to the middle of the nineteenth century—a period when London's growth equalled that of any American city today. Today's civic centers, even with holes left in them for "planned" growth, are bound to create problems when the city hall has to be expanded or the civic auditorium needs a new wing for exhibition space. Cleveland, Ohio, now planning expansion of its monumental civic center, is grateful that Daniel Burnham's railroad station at the end of the mall was never built—it left a convenient hole for expansion of convention facilities.

► The third thing to keep in mind is that planning civic facilities is not only a science but an art. After all the traffic counts and habit surveys have been taken, the women's club may quite rightly decide (as it did in Elyria, Ohio) to buy a fine old house

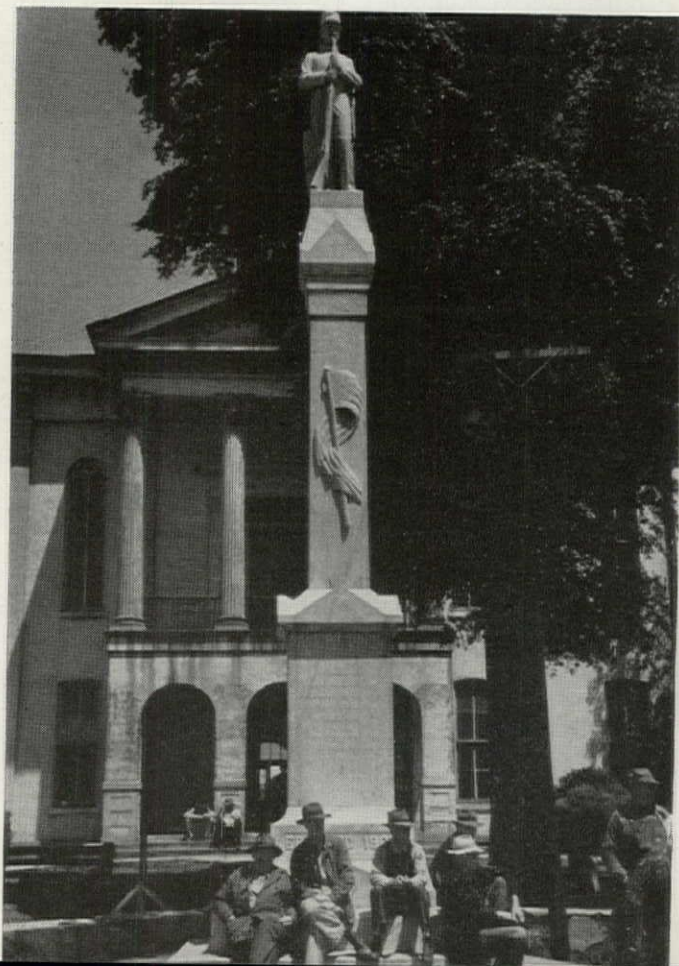
and remodel it simply because the ladies like the house and want to save it.

Often the forces tending to disperse the civic center are the particular needs of the individual civic services. Librarians, for example, consider their books a commodity and prefer a retail-type location downtown. Branch libraries are commonly located in elementary schools, but many librarians would prefer a location next to a supermarket in an outlying shopping center. The art museum, however, is "one of a kind" in most cities. The preferred location for it seems to be, not in the center of downtown, but on the edge (as in Newark, New Jersey and Portland, Oregon) to encourage trips from home and tours from the schools.

Museum Expert Laurence Vail Coleman points out that "propinquity to the point of having several museums under one roof is disadvantageous, and so is the scheme of building a museum as a wing of a library or public archives, or as a part of a community building, or courthouse, or convention hall."

The convention hall, indeed, has unique problems of its own, not the least of which is its discouraging bulk. As a convention facility, it should be within walking distance of as many hotel rooms and

Courthouse and square in sleepy Oxford, Mississippi is the model for Faulkner's Jefferson center in *Requiem for a Nun*. This particular civic focal point is still vital (partly because of Faulkner's protective vigilance) but it is a vanishing American phenomenon.



HENRI CARTIER-BRESSON—MAGNUM

good restaurants (and stores and strip-tease joints) as possible. But the building cannot be plunked down in the middle of these subsidiary facilities because its bulk would ruin the district. A location at the edge of the hotel area containing these facilities, therefore, is usually best (as in Detroit); but the architect should not put the entrance to his convention hall on the far-from-downtown end of the building (as happened in Cleveland, Ohio).

Government buildings—the city hall, fire station, and police stations—which were long the nucleus of most civic centers, tend themselves to be dispersed today. The reason is obvious. Fire and police buildings, for example, are best located at a central point in the street network, and with the building of expressways, this point rarely intersects with the best location for the mayor's office or the council chamber. Service agencies (such as the water and park departments) increasingly favor headquarters locations adjacent to their operating facilities. In Philadelphia, where two new government office-type buildings will be erected, the city also plans to remodel and expand the old city hall in Penn Center to house the mayor and the council—thus retaining a symbolic center of government in the heart of the city.

Sharing in the suburbs

This pattern of dispersion of public community buildings is also becoming characteristic of private community facilities. The Salvation Army wants to be "where the need for our service is heaviest." Family service agencies, which provide psychological aid to disturbed families, generally prefer inconspicuous locations on the edge of the central business district, often taking an old house rather than a new building. Other community welfare agencies, often under the aegis of the Community or United Fund, are building office buildings to house many functions, but the generally preferred location is right in among the other office buildings of the central city. Unions and Chambers of Commerce uniformly prefer locations near the business enterprises they serve.

In Cleveland, Ohio, a common desire to establish good scattered locations for branch facilities led the YMCA and the YWCA to build six new buildings on a joint basis. According to Grace Martins, associate director of the Community Division of the YWCA, "The suburbs are increasingly numerous and homogeneous. It may be necessary for us to share facilities in the suburbs, but we must have separate facilities in the downtown area to care for our interracial and intercultural interests."

An example of fairly effective spotting of civic facilities within a city-wide framework is found



The Campidoglio in Rome, sandwiched between an old church and a hillside of ducal palaces, is a masterpiece of architectural adaptation to a difficult site. Civic architects face similar challenges today.

among Protestant churches now acting through committees of comity in most major U.S. cities. These committees are formed under the guidance of the National Council of the Churches of Christ in the U.S.A. When the Presbyterians, for example, decide to move from their old church downtown, the committee of comity helps establish it in a neighborhood not adequately served by churches—including churches of other Protestant denominations. Then, when the Methodists decide to move, they are encouraged to move to another neighborhood rather than directly next door to the Presbyterians. Thus, each church serves an entire Protestant neighborhood besides serving the confirmed, third-generation members of the particular denomination scattered throughout the community.

Actually, a city and its community facilities represents a vast overlay and interplay of networks on many levels—networks of interests, ages, beliefs; networks of people, each with desires and needs and conflicts and social inclinations. To a large extent the city builds itself through these networks. It grows, like the human body, in ways too complex to be completely understood. But to aid this process, a well-staffed, city-wide committee of comity, operating under the planning commission, is needed.

Such a committee must first be concerned with the availability of each kind of service over the entire city. The committee might initially conduct a survey of all existing community facilities similar to the community recreation studies prepared for some 12 Ohio cities by Landscape Architect Marion Packard and Doctor Arthur Daniels. These studies list the existing community services, evaluate their facilities, and ascertain their plans for the future.

Unfortunately, such a study in one city would have very little in common with studies in other cities. Some help could be obtained from national agencies such as the National Recreation Association, the American Craftsmen's Council, or the American Federation of Arts. More help could be

obtained by way of the national offices of organizations represented locally. But in the main, each city's problems are unique.

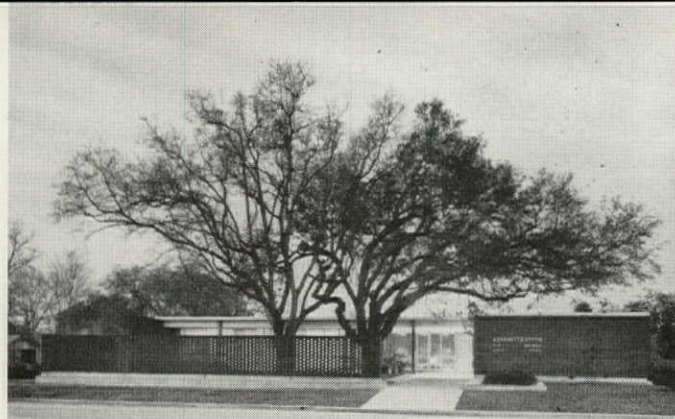
To encourage the creation of neighborhood focal points and a rich blend of scattered cultural facilities there would, of course, have to be some fundamental changes in public policy and law. Highway planners would have to consider matters other than traffic count and right-of-way costs (as they did in Detroit, Michigan) as determinants of location. Equally important, urban renewal planners and new subdivision builders would probably have to be required by law to leave adequate open land for essential community buildings in their plans. And, community facilities, whether sponsored by government or nonprofit private agencies, would need some assistance from the community as a whole in site acquisition. One technique for providing this aid was suggested in a recent report by the New York chapters of the A.I.A. and A.I.P.: establish a separate zoning category for community-use sites.

Shoehorning in

Only after all these steps have been taken, can something really rational be done about effective and handsome groupings of civic buildings to create focal points or areas. True, this concept might limit those planners who think of civic design merely as a process of shoving block models around on a small-scale drawing of vacant acreage. But, for any designer who has observed the way Michelangelo shoehorned his magnificent Campidoglio in Rome between an existing church and a hillside of ducal palaces (see photo, page 97), there should be no reason for despair. The strength of civic design would be found in its limitations—where any vital form is found. A truly civic architecture does not gain its main importance from its bulk and majesty, however, but from the influence it exerts on the environment around it. A library, properly placed downtown with, perhaps, a square in front of it, establishes a distinctive character for the whole district in which it is placed.

In seeking to express this kind of civic design, architects could well study Wren's techniques in London. He built porches over the sidewalk so the churches could be seen from up and down the street, he used existing open spaces for entrance yards. He raised spires above the sky line, and today his accomplishment is acknowledged to be noble civic architecture—a fitting challenge to the great designs of Augustus' Rome and Napoleon III's Paris. If the architects and planners of U.S. community buildings can do as well in the decade ahead, American cities will be civilized places indeed.

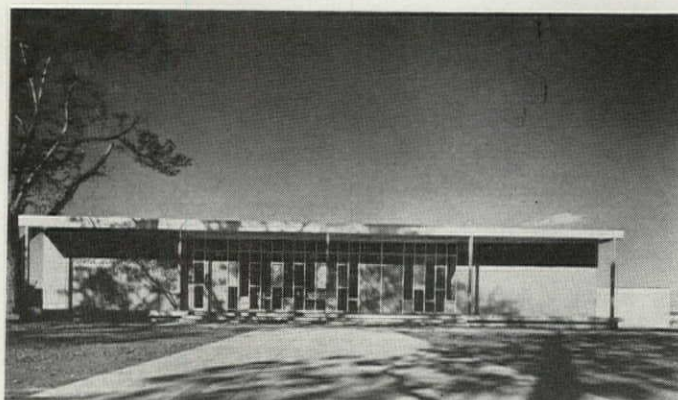
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CITY HALL

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ROLAND CHATHAM



GOVERNMENT SERVICES

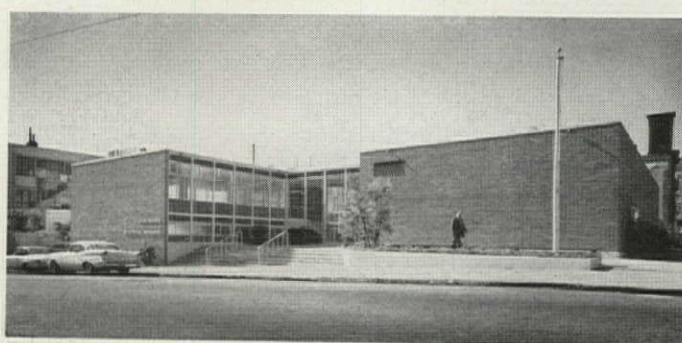
(2)



LIBRARIES

(3)

LENS-ART PHOTO



CLUBS AND ASSOCIATIONS

(4)

BALTASAR KOBAN

CHURCHES

(5)



JOE MUNROE

What is a civic center?

All the buildings on these two pages provide community service and might conceivably be found in a single civic "center." Over the years, however, most of the functions have gradually been dispersed because of their changing relationships to the city as a whole. But properly situated, these scattered centers can still provide an orderly and pleasant civic pattern.

Illustration: (1) Administration building, Alvin, Texas by Caudill, Rowlett, Scott & Assocs., (2) Board of Education Administration Building, Monroe, Michigan by Eberle M. Smith Assocs., (3) Library, Grosse Point, Michigan by Marcel Breuer, (4) Local No. 6 Hall, International Brotherhood of Electrical Workers, San Francisco by Francis Joseph McCarthy, (5) Saint Stephens Episcopal Church, Columbus, Ohio by Brooks & Coddington, (6) Police Building, Tyler, Texas, by E. Davis Wilcox Assocs., (7) Auditorium, Santa Monica, California by Welton Becket, (8) Loveland Museum, Loveland, Colorado by Linder, Wright & White, (9) Herbert Hoover Junior High School, San Francisco by Ernest J. Kump.

ERWIN LANG



AUDITORIUMS

(7)

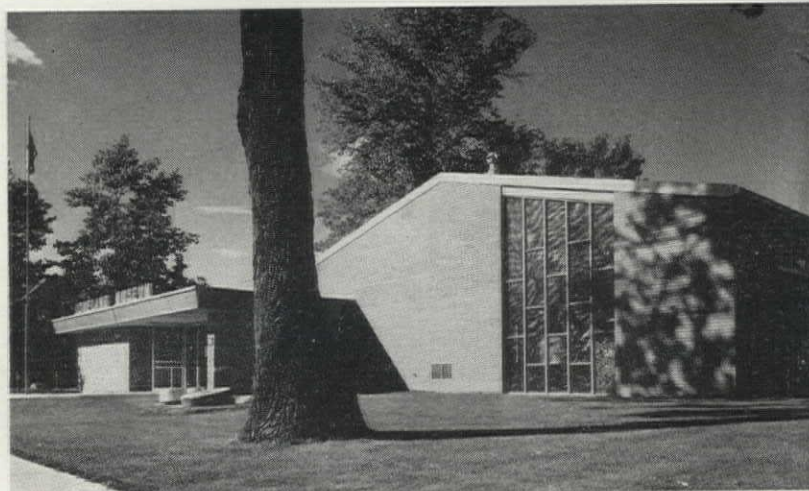
ROLAND CHATHAM



POLICE AND FIRE BUILDINGS

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R. H. BURNELL



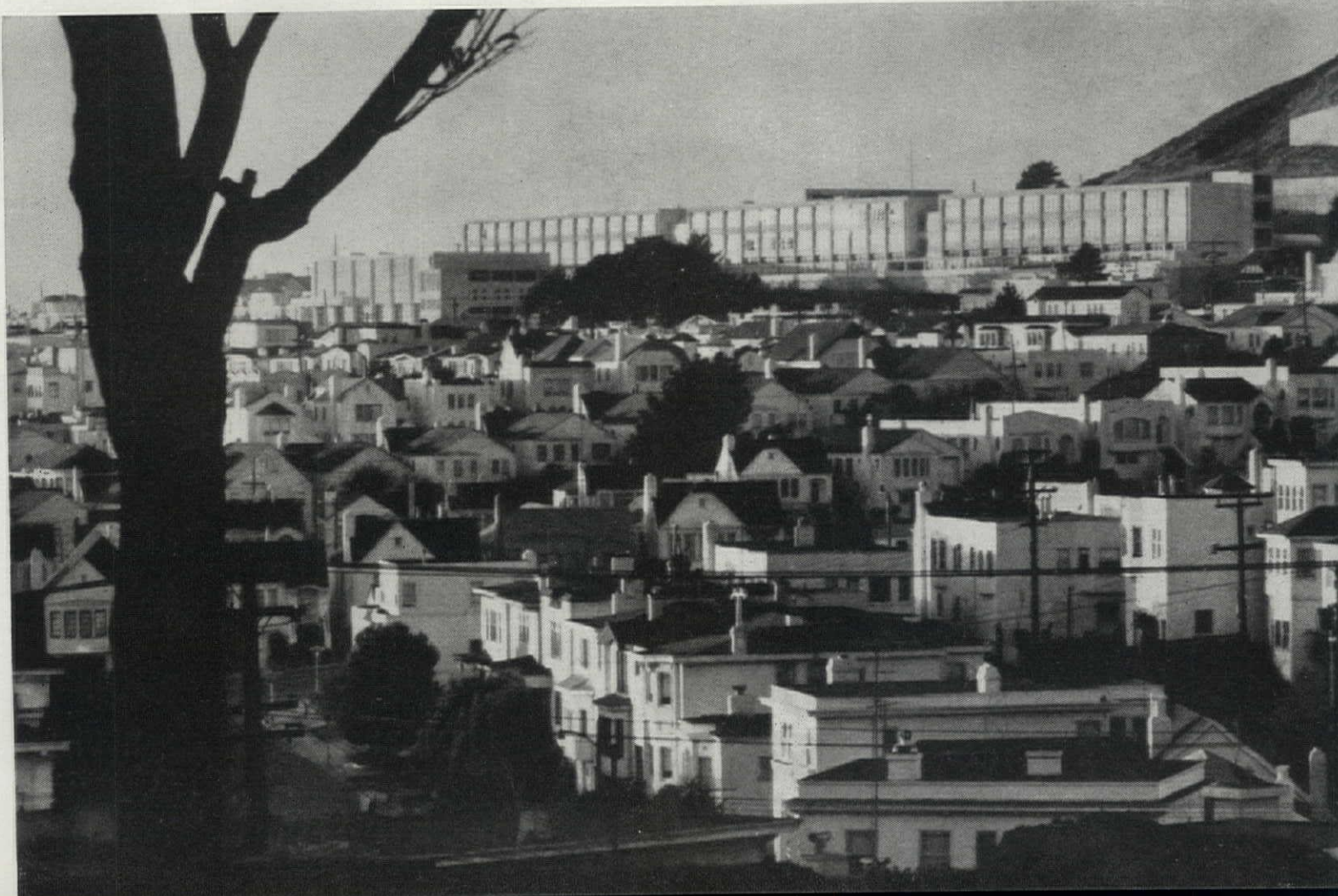
MUSEUMS

(8)

SCHOOLS

(9)

ROGER STURTEVANT





Building for the community

In the metropolitan civilization now rapidly approaching, what will Americans—over 200 million of them by 1968—do for plain, old-fashioned breathing space?

Parks are for pleasure

BY OGDEN TANNER

Adding up all the local, state, and national parklands in the U.S., there is still a lot of public recreation land available: 48 million acres to be exact, or about 1 acre for every four Americans.* The park acreage in and within 50 miles of major U.S. cities, however, in the areas where a rapidly rising proportion of the population lives, amounts to less than 6 million acres. No major city in the U.S., in fact, any longer meets the 25-year-old rule-of-thumb requirement of 1 acre of parkland per 100 residents. Add to this the growing urge of an indoor society to get outdoors, the increasing number of retired "senior citizens," and the leisure demands promised by the nascent trend toward the four-day week, and the supply of accessible parkland begins to look less adequate.

One does not have to go very far for proof that urban parkland is, in fact, already critically short—and disappearing fast. Try to find a piece of bench to sit down on in New York's Bryant Park (left). Watch children playing in the slum streets of Baltimore or Chicago, or campers and picnickers stumbling over one another in one of Massachusetts' famous town forests.

The cities with the finest park systems today—Minneapolis, Cleveland, Madison, Memphis, for example—owe most of their good fortune to the foresight of city fathers of two generations ago and more, men who fought for parks, and in some cases donated them, to insure the openness and dignity of their growing towns. Some cities profited also from WPA spending in the thirties, the last, pump-priming heyday of park development. But today all too few municipalities are protecting and nourishing the priceless public heritage handed down to them. In city after city surveyed recently by FORUM, recreation seemed to be the stepchild of municipal finance.

Most public officials protest they have a hard enough time getting money for schools, sewers, and roads, let alone parks. "If there is anything left over," says one West Coast park planner, "we get it. But without regular funds earmarked for recreation, we have to sit back and watch needed parkland we could have picked up cheaply rise to prohibitive prices overnight—or be swallowed and lost forever." Even Westchester County, New York, one of the richest counties in the U.S., enjoys one-third less park acreage per capita today than it did in 1930. And even Boston's farsighted Metropolitan District Commission last year received only \$5 million from the state legislature for a park program estimated to require \$80 million.

The park grab

The most shocking aspect of the park situation, and one that is beginning to arouse enough indignation to promise broader solutions, is not the fact that cities are merely failing to keep pace with recreational needs leapfrogging ahead of population growth. Some cities—often the ones that can least afford it—are actually giving their existing parks away, and not getting equivalent land in return. Co-operating in this subtle process are a whole host of land-seekers. Murfreesboro, Tennessee, for example, was hungry enough for new jobs and taxes to give away its only playfield to new industry. Braintree, Massachusetts recently let the Walworth Company have part of its only park for a new plant. Not long ago the merchants of little Andalusia, Alabama, persuaded officials to pave over as a parking lot the town's central—and only—square.

More often than not, however, park-chiseling is the result of well-intentioned civic enterprise. Buffalo, for instance, has permitted a new library to be erected on a public golf course, and a new veterans'

* Excluding grazing, timber, watershed and wildlife lands and remote areas in the public domain.

Fun in the park:
the lively new shapes of
playground design.



Arching ladders and a spiral-ramped tower get full-time use in one of Philadelphia's new neighborhood play lots.

hospital in a public park. In Toledo, one park was recently turned over to private operators for a municipal parking lot, part of another to the YMCA for a new building, 25 acres of a third to facilities ranging from sewage disposal to a police pistol range. In countless other pennywise communities, schools, government buildings, museums, and firehouses are nibbling into the public greensward. ("We already *own* the park, don't we—why not use a little corner of it and save some money?")

By far the biggest single poacher on parkland, though, is the automobile. In their haste to cash in on federal highway funds, cities are allowing state highwaymen, already notorious for straight-line, money-saving plans, to knock out a fearful number of parks and playgrounds, or to split them up sufficiently to render what remains largely unusable for recreation. Current plans, for example, would run new highways through no fewer than 21 parks in Portland, Oregon, removing 16 from effective use. (The city's insistence on equal acreage in return, however, is forcing highwaymen to consider other routes on some of these.) Wilmington, Delaware, stands to lose some 30 or 40 acres to expressways, which would leave it with only one-third of the open recreation land it should have by minimum standards. In Louisville, Kentucky, new routes would chop 55 acres out of two parks, cut through a golf course and obliterate another small park across the river. Highway officials have promised to pay for the preempted parkland, but only at the going rate for ordinary open land, hardly enough to pay for replacement of needed park space in already built-up areas.

Getting organized

The land grab in parks, along with equally uncoordinated programs in other lines of community

endeavor (see page 94), underscores the critical need for positive park policies and programs, based on realistic inventories and projections of land availability, and, above all, fitted within the framework of publicly supported master land-use plans.

Due to lack of programs, or funds, or both, park acquisition, until now, has been largely a hit-and-miss proposition, particularly in small towns and counties on the urban fringe. Yet it is precisely here that land can, and must, be set aside before it is too late. The first step for such communities is a survey by professional consultants, with recommendations on the improvement of existing parks and playgrounds and the development of new ones. This kind of service, long extended by the nonprofit National Recreation Association and others, has recently been widened to include whole regions. One of the most comprehensive studies yet made of public recreation is the NRA's new report on Pennsylvania, which recommends a \$40-million program to improve 160,000 acres of existing parks, and to acquire and develop 115,000 more. This would raise the present state average of 1 acre of park per 66 persons to 1 acre per 40, and distribute the acreage to provide at least one large park within 25 miles of every Pennsylvania resident. Other regional studies are under way for the 11-county area of southern California and the three-state metropolitan region around New York.

Parks for free

Whether at the state, county, or municipal level, the first step to be taken after such a survey is completed is the creation of a strong, independent park commission, which will work with city planning people to carry out the detailed recreation plan.

Land for some new parks and playgrounds will have to be bought outright, with powers of condem-



Concrete parasols shade a new restaurant pavilion by Architect Richard Aeck in a park south of Atlanta, Georgia.



Fountains, planting, patterned levels—all add to the life, and great popularity, of Mellon Square in downtown Pittsburgh.

nation if necessary, to get strategically located pieces while prices are still within reach. But there are less costly ways to pick up parkland for immediate use or future reserve:

- ▶ Tax-delinquent land, where suitable for parks, can be appropriated and transferred to the park department (after foreclosure and fair payment to the owner) rather than sold at auction to the highest bidder. Such land can be held for future park use as needs arise and as funds for development become available.

- ▶ Options to purchase, good for 10 or 20 years, can be obtained on large parcels about to be engulfed by private developers. Communities in Wisconsin and New York have used variations of this system. In return for granting an option, the owners—farmers, for example—are allowed use of their property, and their taxes are reduced or eliminated. At the end of the option period, the city or county may purchase



Zigzag wading pool designed by Robert Royston delights children at a municipal park in Palo Alto, California.



Jump-in holes and crawl-through tunnels are patterned for fun in the children's section of Palo Alto's new park.

the land at the price originally agreed on (which, compared with risen land prices, is often a bargain).

- ▶ Development rights on estates, farms, and golf courses can be purchased by local or state park agencies. By not exercising such rights, once purchased, the state prevents housing developments, industry, and billboards from marring rural scenery, removes pressures on owners to sell, and in some cases can create purchasable future parkland.

- ▶ Some potential parkland is still being bestowed on the public by multimillionaires, but smart communities are also seeking philanthropy from less affluent individuals, and from small trusts, foundations, corporations, real estate developers, and unions as well. In the rapidly growing area of Lorain-Elyria, Ohio, an offer of 174 acres on the beautiful Vermilion River came within two weeks after the establishment of a Lorain County Park Commission. The commission now has the power to accept more

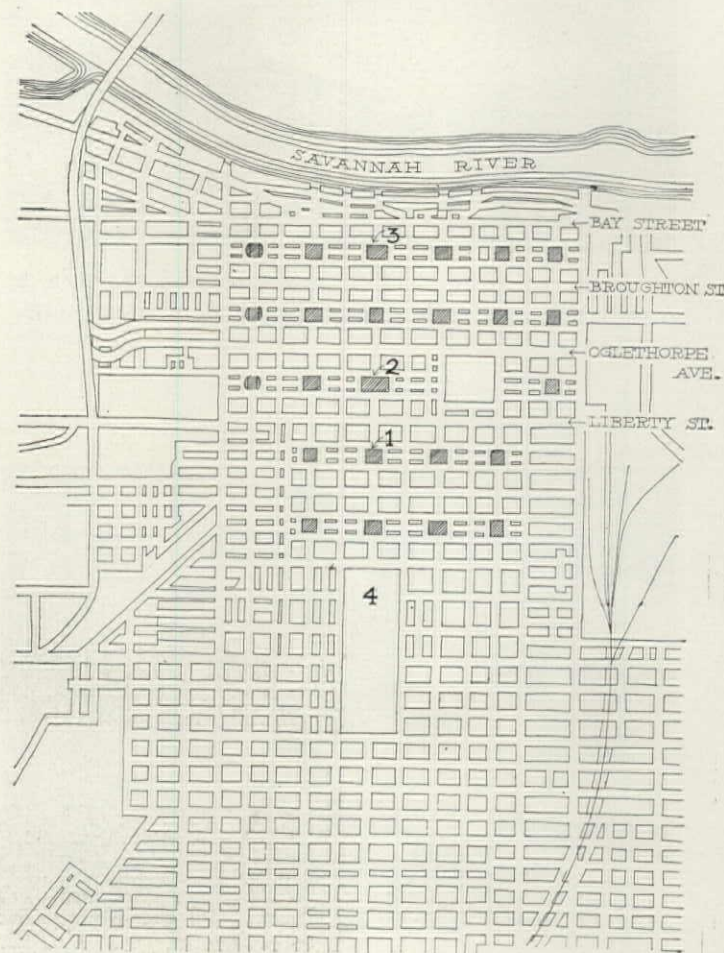
PHOTOS 1 & 2 (ON OPPOSITE PAGE) : ANDREW J. BUNN

such gifts, and to levy taxes for acquisition and development of additional land (the donor of the park has been given life tenancy of her land, and some form of tax relief for her is in the works). In growing Morris County, New Jersey, planning and park department directors encouraged the gift of 160 acres in one valley from four donors who wanted its natural beauty preserved. The directors hope ultimately to put together pieces of nearby land to form a larger park.

Land donors in high tax brackets, besides deriving the satisfaction of being public benefactors, have discovered that they can write off the full market value of the land (determined by a thorough professional appraisal) against their regular income. Some have actually found it financially advantageous to give away land rather than keep it. Others have divided their total gifts into separate parcels, deeded them to the park department over a period of years to get the full deduction allowed on charitable contributions in any one year (30 per cent of taxable income on federal joint returns). Still others have given a major fraction of their land for a park, taking the tax advantages, and then watched the park boost the value of the land they retained.

To make up for the gradual disappearance of millionaire philanthropists, public-spirited citizens in some cities have formed park associations. For example, in Madison, Wisconsin, a city noted for its parks, the Madison Parks Foundation purchases desirable land beyond the advancing outskirts of the city, holds it in trust until the city decides to buy. In Glens Falls, New York, 16 local businessmen united to purchase 20 acres for a needed playground when it came on the market at a good price, and held it until the city could appropriate funds.

Corporations, too, are beginning to donate parkland. In addition to providing recreation facilities for their own employees, many companies have



Savannah's gracious grid

Savannah is a slumbrous place, an American city with a leisurely, civilized tempo. It is not only the Georgia climate that commands this pace, nor the pervasive environment—the delicate, old, wrought-iron balconies hung on massive stuccoed walls. It is also the fact that Savannah is a pleasant city to stroll in; you never want for a tree.

Downtown, in the commercial center of the city, there are no fewer than two dozen diminutive squares to shade the pedestrian's eye, with benches waiting under the flourishing, feathery old foliage. Equipped with names like Madison (photo 1, right), Chippewa (2), Johnson (3), and monuments to match, the squares measure only about 200 feet by 200 feet.

These little feather dusters in the city grid actually were set up as fortifications during the eighteenth-century days of General Oglethorpe's colony; surrounded by wood walls, they were the multiple inner keeps of the settlement, where the English settlers ran when their Spanish rivals descended. In ensuing decades the squares themselves have been defended by the citizens against those who would like to make them into streets. Today this network of small squares and medium-sized parks (e.g., Forsyth Park, photo 4) is the very model for a modern downtown plan, stoutly defending the unique character of a pleasant city from the creeping macadam tide.

continued on page 141



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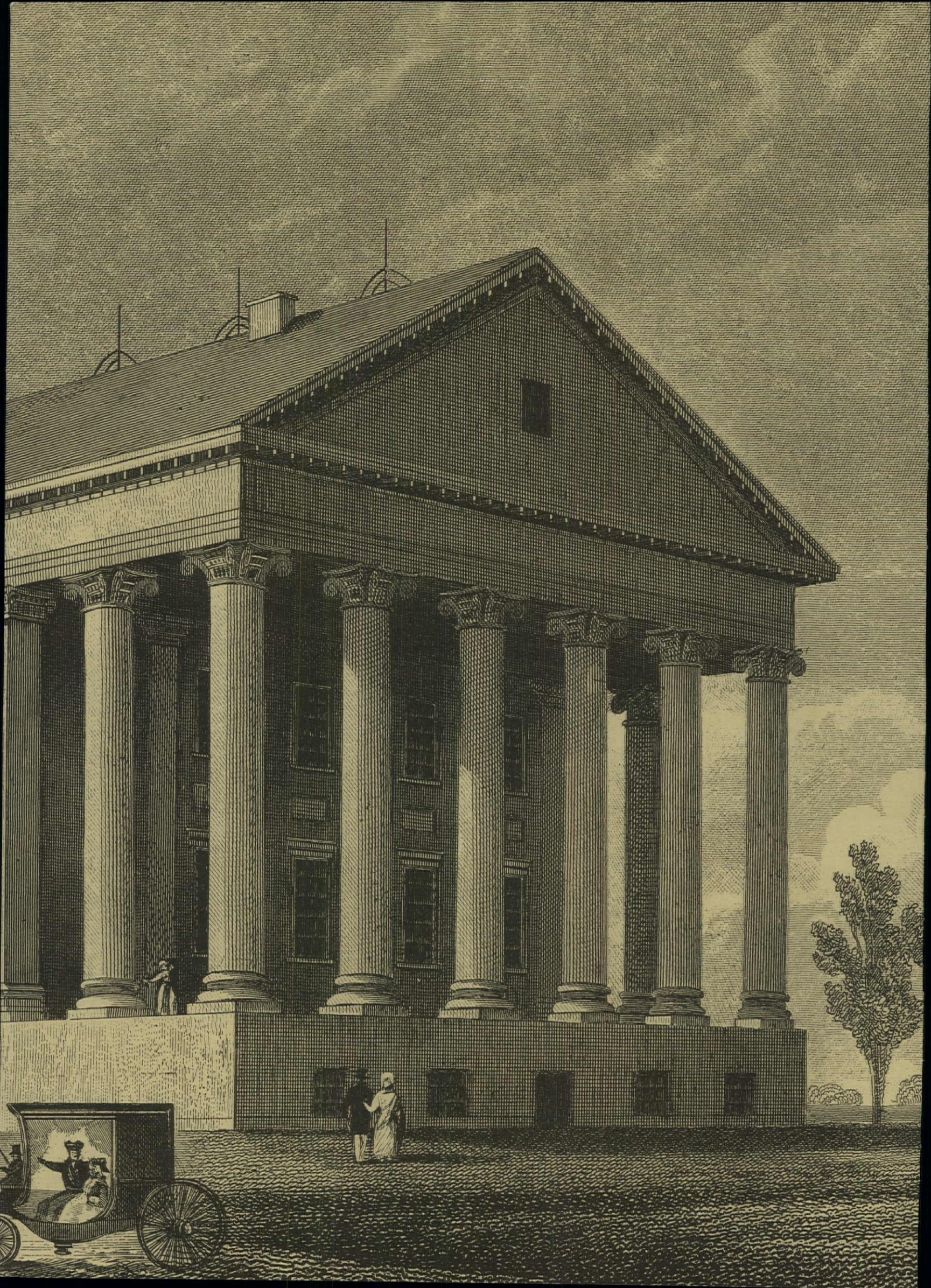
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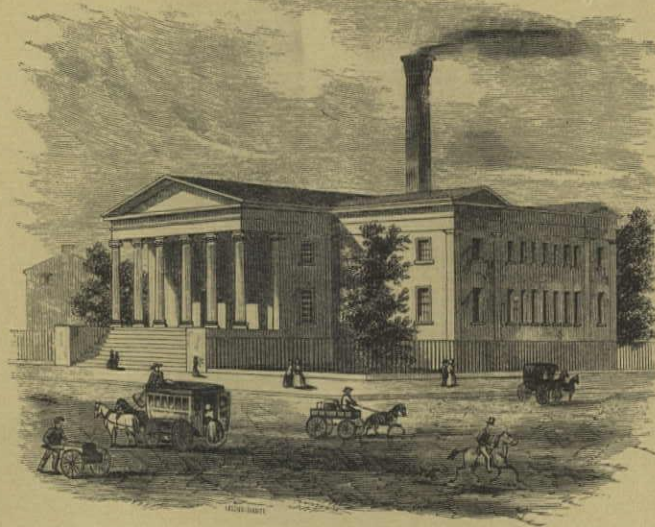


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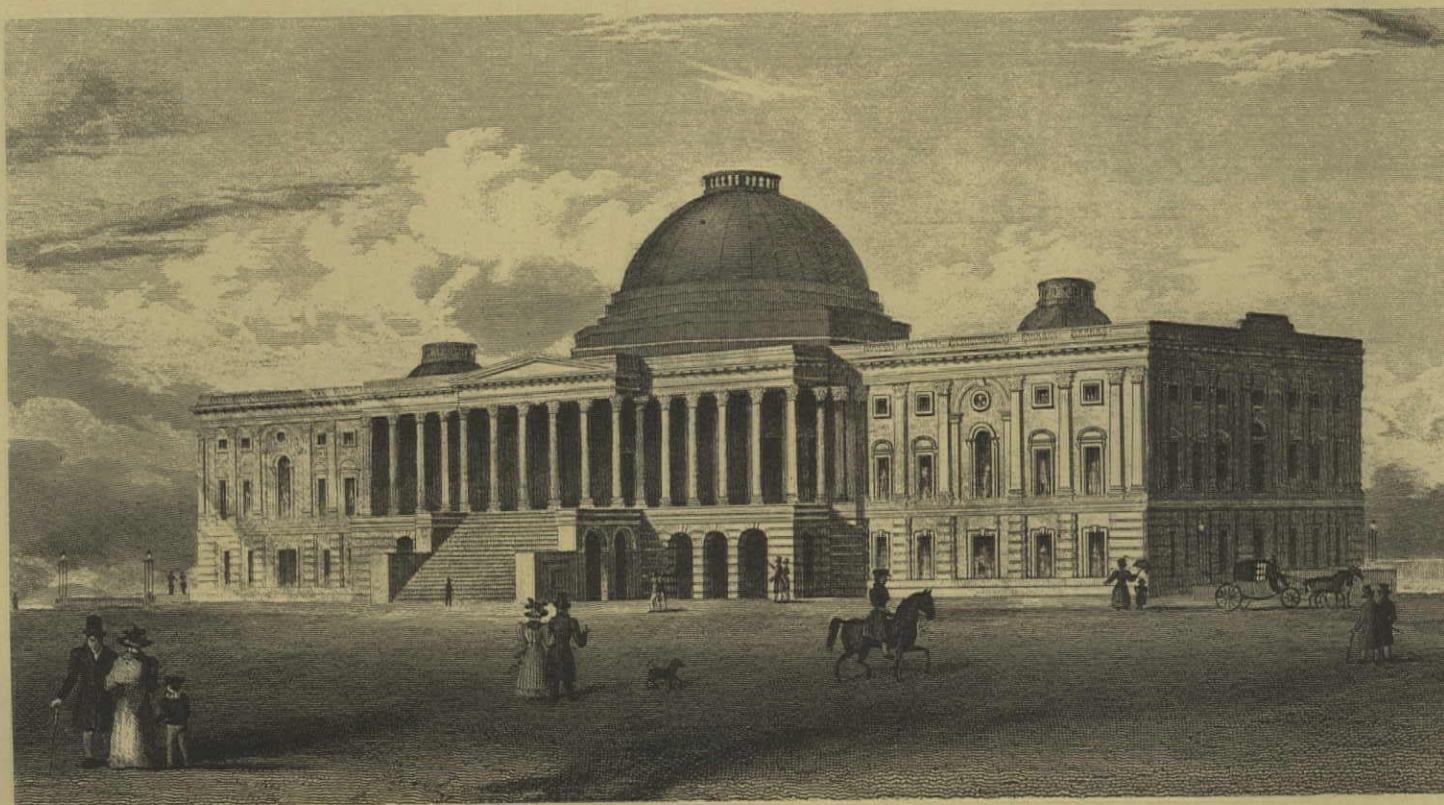
UNITED STATES MINT, PHILADELPHIA.

Gallery

When civic architecture flourished

"Never before or since, I believe, has there been a period when the general level of excellence was so high in American architecture," Historian Talbot Hamlin once declared, "when the ideal was so constant and its varying expressions so harmonious, when the towns and villages, large and small, had in them so much of unostentatious unity and loveliness as during the years from 1820 to the Civil War." This was the heyday of the Greek Revival, when government was dressed in an architectural toga, and nearly all civic buildings had columns.

As the old prints reproduced on these six pages indicate, the Greek Revival Movement meant more than archaeological draftsmanship to its early practitioners. They were after a certain air of purity and refinement. To them the style was something for individual interpretation, and it had the advantage of lofty simplicity. The columnar style began its decline after the Civil War, but it is still printed on our money and in our minds.



CAPITOL OF THE UNITED STATES, WASHINGTON, D. C. 1803 BENJAMIN HENRY LATROBE, ARCHITECT

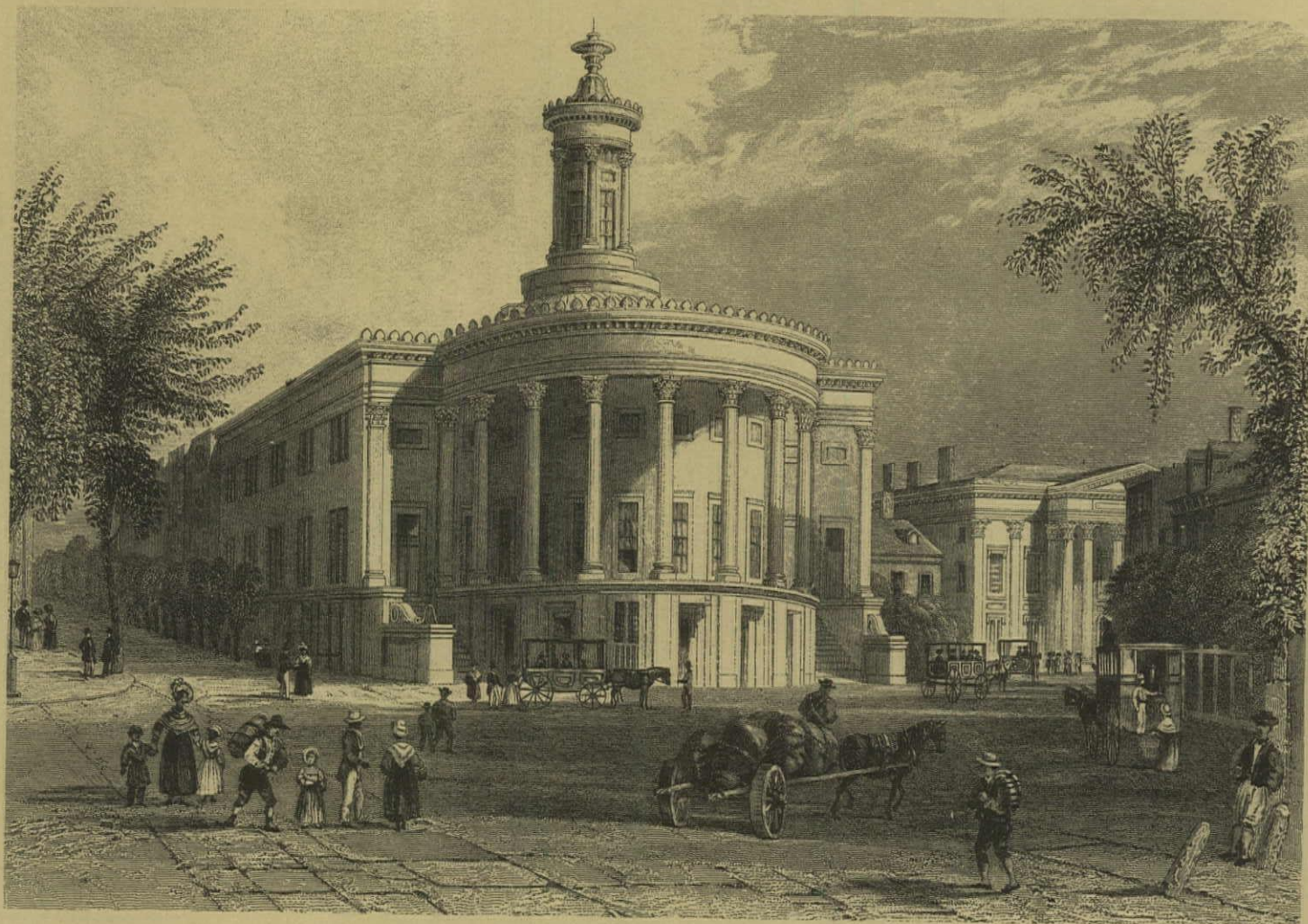




PLATES ON PAGES 106-110: THE BETTMANN ARCHIVE. PAGE 111: LIBRARY OF CONGRESS.



THE PHILADELPHIA WATER WORKS, built between 1811 and 1819, were (and remain) a succession of small templelike structures atop parapets housing the mechanics of the system. The design is attributed to Frederick Graff, but Robert Mills is also thought to have had a hand in it.



THE EXCHANGE, PHILADELPHIA, PENNSYLVANIA 1836 WILLIAM STRICKLAND, ARCHITECT



CUSTOMS HOUSE, BOSTON, MASSACHUSETTS 1837-1847 AMMI B. YOUNG, ARCHITECT





Paying for public building

State and local governments will bear most of the cost of community building in the coming decade.

Here are some tips on how they can raise the money.

The U.S. in the coming decade will spend more than a quarter of a trillion dollars for new community facilities (see page 70), an average of \$28.5 billion a year. How will the nation pay for, or at least finance, this colossal ten-year outlay of \$285 billion, which is more than the whole of the present federal debt?

Actually the problem is not so much one of ability to pay—but of *how* to pay. Last year's outlays of nearly \$22 billion for "public-use" building, for instance, amounted to only \$123 per person (less than 5 per cent of total gross national product per capita). On the other hand, by 1968, allowing for population gains (the Census Bureau predicts there will be 207 million Americans then), per capita outlays for community facilities will amount to \$162—an advance of \$39 a year. Meanwhile, however, the gross national product will have advanced by \$626 per capita—16 times as much.

And if the outlays for highways (28 per cent of the projected total) and public utilities (almost 29 per cent) are left out, per capita spending for all other publicly owned community facilities will rise only \$11 over the next ten years, from \$39 to \$50.

How will this increase be financed? Who will do the spending? Contrary to popular impression, the federal government's role in financing all this public-use construction will be a minor one. State and local governments are the big spenders in this field, with the federal government accounting for only about 25 per cent of all expenditures for public construction. Only in the new highway program is the federal role the dominant one (i.e., \$5 billion annually). Thus the big question is: how readily will state and local governments be able to absorb the cost of, or obtain the financing necessary for, public construction that will (excluding highways) average \$8.7 billion a year?

During the past five years, while shouldering roughly \$50 billion of new community construction (including

\$22.5 billion of highways), state and local governments increased their outstanding debt by \$24 billion, to about \$58 billion. To avoid even steeper increases in their outstanding indebtedness, they have been taxing their citizens even more heavily. Estimates for 1958 are not available yet, but from 1954 to 1957, state and local tax revenues rose from \$22 billion to \$29 billion, or 32 per cent. Property taxes collected rose from \$10 billion in 1954 to \$13 billion in 1957, up 30 per cent; state and local income-tax collections rose from \$1.9 billion to \$2.7 billion, up 42 per cent.

In many communities, however, local tax rates, particularly real estate levies, appear to be bumping against practical ceilings. New tax sources may eventually have to be tapped, but meanwhile a substantial share of all community spending for capital improvements will have to be financed through bond issues. Harry L. Severson, New York economist and bond analyst, predicts that new issues of such securities will increase from last year's record volume of \$7.5 billion to an annual rate of over \$16 billion by 1968. Severson also predicts that outstanding state and local debt will reach the \$75 billion mark during 1962, and pass the \$100 billion mark by 1966 (including \$20 billion of bonds for highways).

There is no question of the nation's ability to support such an expansion in community building. Nevertheless, in the interplay of the money market and the constantly shifting competition for funds among different types of investments, there are a number of ways in which state and local financing procedures could be revised in the near future for greater economy and tax savings to all taxpayers, particularly on occasions when heavy pressure on the money market may make other investment offerings more attractive. Some possibilities:

► *Tax exemption "pass through."* In recent years state and local governments have had to increase the interest rates they pay on tax-exempt bonds because the "scarcity" value of tax-exempts has declined. As the volume of new tax-exempts rose from \$2.5 billion in 1947 to over \$7.5 billion last year, top income-tax-bracket investors have become more and more "selective" in buying competing issues, and an ever broader market has been needed to absorb all of these securities. But as the market has broadened it has had to include investors in progressively lower tax brackets (not just the 90-per-cent group) and for these investors

the relative advantage of tax exemption has decreased. This, too, has exerted upward pressure on municipal bond rates.

Even more important, the tax-exemption feature has little appeal to tax-exempt pension funds and large institutional investors such as insurance companies which do not pay ordinary tax rates. The popular open-end investment trusts, meanwhile, that serve thousands of small investors, have refrained from buying tax-exempts because it has been impossible for them to "pass through" their tax-exemption benefits to individual investors. An amendment to the Internal Revenue code that would permit tax-exempt bond interest to remain tax exempt when distributed by an open-end investment trust would greatly broaden the market for state and local bonds and thus tend to hold down interest rates — and benefit taxpayers generally.

► *State or federal guarantees.* Many communities would benefit, interestwise, from some form of bond guarantee program. The credit ratings of state and local governments obviously vary as much as do the personal credit ratings of individuals, and these ratings largely determine the interest rates on municipal bond issues. The mortgage insurance and guarantee programs of the Federal Housing Administration and the Veterans' Administration have helped millions of families — with widely varied credit ratings — to obtain liberal home-purchase loans at lower interest rates than they would otherwise have paid. In an extension of this principle, federal or state guarantee programs could be developed to reduce interest rates and increase the marketability of many local bond issues for all sorts of community facilities. Service fees or premiums could be charged for such guarantees, or "reserve" funds for them could be established out of either new or existing taxes.

► *Bond "reservoirs."* As an alternative to a guarantee system, the federal or state governments (or both) could establish special agencies with authority to purchase approved local bond issues much the way the Reconstruction Finance Corporation did in the thirties and the Federal National Mortgage Association (Fanny May) now buys FHA and VA home mortgages to aid home financing in periods of stress. This kind of agency would not need to oper-

Is civilization worth 7½ cents?

In the musical comedy *Pajama Game* the workers sing a lively tune to the effect that a prospective 7½-cents-an-hour wage increase will not amount to "a helluva lot." But when they figure it out, give it to them "every hour, 40 hours every week" and in due course it will have them "livin' like a king."

For a shade less than 7½ cents per person—not every hour, but only once a day—the U.S. could finance, and in due course amortize, the entire \$87 billion of new community facilities that will have to be built by public agencies in the next ten years (exclusive of new highways and public utility facilities—see page 70).

To amortize \$87 billion in 30 years at 3½ per cent would cost \$4.7 billion a year. Based on the current U.S. population of 175 million, an annual expense of \$4.7 billion would run just under \$27 per capita—and \$27 per year is only 7.4 cents a day. By the time the U.S. population reaches 206 million in 1968, moreover, the cost of financing a better society will be even lower: only 6.2 cents per day.

ate with government appropriations, but could raise funds by selling its own tax-exempt securities in the open market. It could raise surplus funds during slack periods in the money market, so that it would not have to borrow so heavily or expensively in tight-money periods. Indirectly such an agency would give local communities the benefits of stronger federal or state borrowing power (lower interest rates and better marketability).

► *Special-purpose authorities.* The American Municipal Association last month proposed the creation of a Federal Office Building Corporation, similar to Fanny May, that could sell its own revenue bonds (nongovernment obligations) in the open market to finance construction of federal office buildings. The interest and amortization on such bonds would be covered by the rents of the federal agencies occupying these buildings. One bill in Congress proposing such an agency would set a precedent by granting

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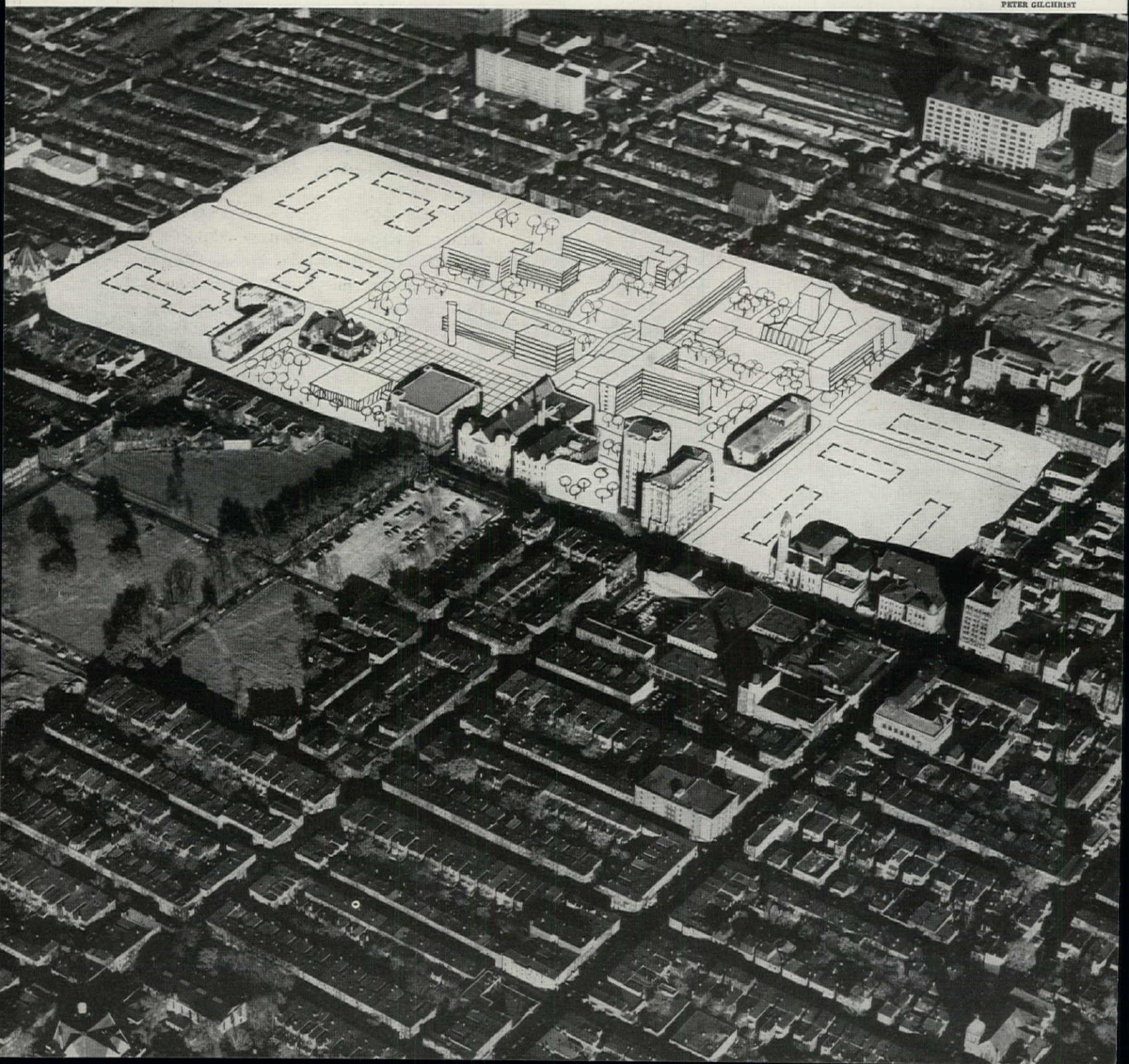
Building for the community

New job for colleges

U.S. universities will complete more than \$5 billion worth of building in the next dozen years—and give a cultural focus to our urban civilization.

BY RUSSELL BOURNE

PETER GILCHRIST



Last month the executive director of the South East Chicago Commission, an effective slum-battling agency that owes its origins and its continued life to the University of Chicago, looked out his window at the university's Gothic spires and told a visitor: "It would have been easier for those men to have stayed in their ivory tower. But they chose the other way. The university elected to give leadership to the end that American cities may become not the symbol of failure but the evidence of the success of our American democracy."

Culture and art have been advanced in a variety of ways over the years. For the university the traditional pattern has always been to develop in sequestered spaces an environment and a curriculum that represented the beauty and order that graduates should later seek on a larger scale in the world beyond the gates. Recently, however, the universities have been adopting a less remote role, and, indeed, in many instances they are contributing aggressively, directly, and practically to the building of a modern, metropolitan civilization.

In the first place they have taken on the job of teaching many more students. Total university enrollments amounted to only about one million before World War II, but rose to two million immediately after the war and are three million currently. An anticipated rise of 39 per cent in the college-age population would indicate that there will be at least five million students enrolled in college by 1970. But here another factor enters: a steadily increasing *percentage* of the college-age group has the ability, the means, and the desire to go to college. The upshot is that the 1970 college enrollment will stand at nearly six million.

The task of making room for these culture-hungry millions by 1970 will be enormous. It has been estimated as a \$13.5 billion undertaking—if building were to go on at the current per capita rate (an average annual capital expenditure of \$4,700 per additional student). But present university building schedules provide for only \$5.5 billion of new construction—for the perennial reason that the public building dollar is elusive, even in an affluent society (see "Paying for public building," page 112).

The universities are becoming shrewder about their pursuit of money, however, and are devising

new money-raising techniques. Long-term revenue bond issues, for example (paid off by student fees or by charges to those members of the community who will use the facility), will produce 22 per cent of the capital funds spent for 1956 to 1970. Thus it seems probable that the college community will somehow manage to raise most of the money needed to finance its expansion.

Community focus

Actually, the universities are confronted with a much bigger challenge than an expanding student population; they are confronted with the task of providing a cultural and intellectual focal point for the entire community. A number of institutions across the country are moving to meet this much broader challenge of community education, community improvement, and community planning.

► The University of Chicago, which helped set up the South East Chicago Commission in 1952, has since helped it push through \$135 million of slum clearance and rebuilding in downtown Chicago.

► The University of Pittsburgh last month bought Forbes Field, home of the Pittsburgh Pirates, for \$2 million, will put up a new graduate school of social work there.

► Stanford, seeking the best community use for 9,000 acres it owns in Palo Alto, decided to use half of the acreage for academic purposes, half for residential, commercial and light industrial development. A \$15-million shopping center and an industrial park have already been built, and university talent is being made available to help develop the nonacademic areas: e.g., a Stanford professor rewrote most of the city charter; professors have been signed on as planning consultants to companies that are moving in; a Stanford engineer showed the city how to get into the utilities business.

► The University of Southern California, quietly working with Los Angeles city officials to improve the 150 blighted acres around its campus, has produced the most ambitious renewal program in California: the university has agreed to buy or pay for the improvement of 60 per cent of the area.

► The University of Wisconsin, which not only offers Madison residents monthly concerts, plays, and road shows, but also invites them to two or three lectures each day, recently spent \$2.1 million for a new headquarters for its adult education activities.

Thus, in many different ways, the colleges and universities seem to be trying to provide the cultural spark and focus for a richer U.S. society. The four universities discussed overleaf represent four different types of college environment, and are making especially notable efforts to meet this challenge:



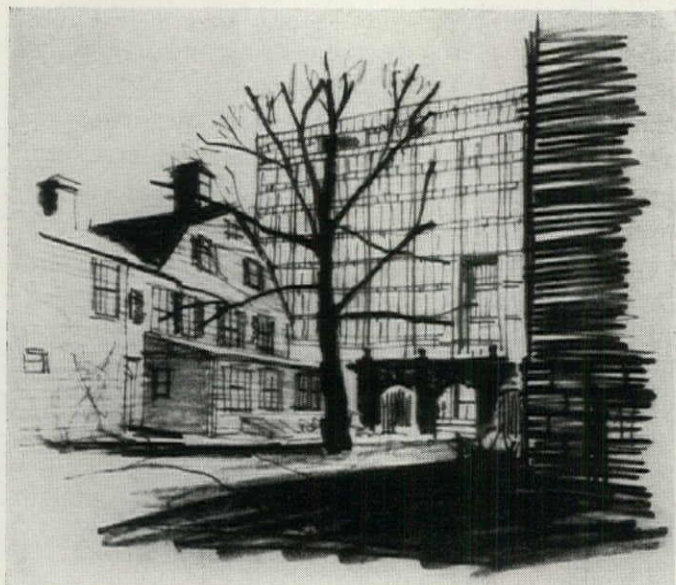
Temple University's expanding mid-Philadelphia campus is shown in the air photo at left as it will look in 1967. The 11-acre plan, suggested by the city and aggressively implemented by the university, gives Temple an opportunity to emerge as a symbol of cultural leadership for a metropolitan civilization.

1. Harvard's romance

Harvard University, which has exercised prestigious cultural leadership in America for over 300 years, has recently rediscovered Cambridge. Harvard's famous Yard, its gleaming cupolas above the river have long been popular images of the ideal of the privately financed university (private universities, incidentally, now enroll only 43 per cent of all U.S. college students). But because of its aloof and independent character, Harvard traditionally has had difficulty communicating with the City of Cambridge. And that difficulty did not ease when Cambridge began to deteriorate during the thirties. Faculty homes became too expensive to maintain; the professors fled to the suburbs; the splendid homes became dilapidated rooming houses. But no plans for the preservation of the city's life were forthcoming from the university.

In 1956, however, President Pusey accepted an invitation from the Mayor of Cambridge to join the Citizens Advisory Committee on Urban Redevelopment. And in the same year Pusey announced a program for Harvard College whose major feature is the physical integration of town and gown. The program calls for the raising of \$82.5 million, roughly half of which is to go into buildings across the city.

An example of the building pattern that is being



Harvard University's emerging city-consciousness is demonstrated in the sketch above. At left is one of the original frame houses that bordered Harvard Yard (Wadsworth House, 1727); at right is a pseudo-Georgian administration building made necessary by the University's gradual expansion (Lehman Hall, 1924); and rising above the Class of 1857 Gate directly on Harvard Square is the proposed University Health Center, a strikingly urbane, ten-story complex of shops and offices.

established by the planning coordinator, José Luis Sert, dean of the Graduate School of Design, is the \$9-million, ten-story office building that will be erected directly on Harvard Square. The multipurpose facility is designed to link Harvard Yard with the College's residential houses that lie on the far side of the busy, commercial Square (see sketch). On the upper floors there will be room for the University Health Services and office space for faculty and administration. But, recognizing that the building would displace a number of much-needed shops from the community's center, Dean Sert has provided ground-floor space for modern stores, with a covered arcade for pedestrian shoppers. Thus, the varied nature of the Square will be preserved.

The Harvard program also calls for the construction of a nonresident undergraduate center, a sort of "Commuters' House." This proposed \$1-million structure would give the 400 (out of 2,800) undergraduates who commute to Harvard from the Greater Boston area their own library, dining hall, and recreation rooms. Local students will no longer need to feel like second-class citizens.

This, perhaps, is the most convincing evidence that Harvard—which has already raised two-thirds of its \$82.5-million goal—intends to be a major contributory force in the development of a popular, rather than an elite, culture.

2. Temple's battle for the city

Another private institution that has been admirably aggressive in its campaign to bring culture to a cramped, industrial city, is Philadelphia's Temple University. Eight years ago Temple shocked the city by buying an 80-acre suburban site and preparing to move to it. But last year Temple committed itself to staying in the city by embarking on a ten-year, \$55-million campus enlargement and improvement plan first outlined by the Philadelphia Planning Commission, later designed by Architects Nolen & Swinburne (see air photo, page 114).

Moreover, although Temple remains today a bumptiously independent private institution, it has been able to get financial assistance from federal, state, and local government sources. First, Temple demonstrated its faith in its own program by putting up a 50-classroom building, financed entirely (\$1.3 million) by university funds. Next it appealed to the HHFA for a federal loan to build a \$1.5-million women's dormitory (completed last year). Now it is concentrating on the planning of a \$4-million science building which is to be completed by 1961. One-third of the money for this building's land will come from Pennsylvania's General State Authority (a public body established originally to



GOTTSCHO-SCHLEISNER



Fairleigh Dickinson, a new, decentralized university, has kept pace with the mushrooming cultural needs of suburban New Jersey by taking over big homes (like the Twombly Estate in Florham Park, top), adding new buildings when the means were available (like the classroom building at the Teaneck campus (above), and grouping them together as best it can (as at the Rutherford campus, right).



help finance hospitals and other state building projects but recently given the go-ahead to assist higher education's capital spending programs). The remaining two-thirds of the land costs will come from federal urban renewal funds channeled through the Redevelopment Authority of the City of Philadelphia. All the money for the building itself will come as a grant from the GSA.

Thus Temple has already proved that the battle to establish a viable cultural focus in the city is worth waging, worth recruiting allies for — and can be won.

3. Illinois: the state solution

A state university that is trying valiantly to enhance the diverse cultural community which it serves is the University of Illinois. Although located in Champaign-Urbana, 125 miles outside Chicago, the university established a supplementary (and supposedly temporary) GI campus at Chicago's Navy Pier in 1946. After the war, the city invited the university to remain since there was no publicly supported institution of higher learning in the city.

Although the peculiarities of Illinois politics (a Republican agricultural south versus a Democratic industrial north) have slowed down the establishment of the city campus, it is now anticipated that \$50 million of state funds will be spent for that purpose, and that the 4,000 freshmen and sophomores now at Navy Pier will be housed at the new campus by 1963. The site that city officials would most like to have the university use is right in the Chicago Loop. Their argument: the city's life is

being threatened by the social and physical degeneration of this central area; if the university is interested in preserving culture, that is the place to begin.

Meanwhile, back at Champaign-Urbana, university officials are having a job keeping up with more conventional growth problems: the combined city and university expansion has crowded the original campus, forcing new facilities to be built out toward the country, away from the community heart. The planning that must be done and the buildings built to get ahead of these crises at Champaign-Urbana are expected to cost \$190.5 million (\$116 million of which will come from the state, \$60 million from HHFA loans and \$14.5 million from a bond issue that will be paid off by student fees). The most spectacular structure will be a \$7.5-million, Harrison & Abramovitz assembly hall that will look like a grounded flying saucer, and will house both athletic and cultural events for the mutual edification of the student body and the local citizens.

By such means Illinois is attempting to meet the cultural needs of a state that is almost symbolic of the national scene, having changed so thoroughly from land-dependence to industry-dependence.

4. F.D.'s home-town approach

An institution that is attempting an entirely new and different approach to the problem of providing educational and cultural opportunities in the exploding metropolis is Fairleigh Dickinson University in New Jersey. Founded in 1942, in Rutherford, as a junior college, Fairleigh Dickinson literally takes its

continued on page 146B

Building for the community

Modernizing the faltering urban transportation system is the biggest technical challenge to civic building.

Sick transit: the

BY LAWRENCE LESSING

The greatest single challenge to civic building in the next decade, and the largest potential area for vital construction revolves around urban transportation. To the still-mounting problems created by the automobile, still largely unsolved, is now added, almost as corollary, a mounting crisis in rapid transit and commuter services. Indeed, the crisis in mass transportation, foreseen some time ago (FORUM, June 1957), is suddenly reaching a fever peak. Some recent events and pronouncements:

► An end to all railroad passenger service by 1970, if traffic receipts continue their long decline under the attrition of the automobiles, bus, and airline, was predicted in a 70-page report by Interstate Commerce Commission Examiner Howard Hosmer. He gave railway commuter services only slightly longer to survive, a prediction that soon looked optimistic.

► "We are approaching collapse of commuter service in the next five years," said Solomon J. Flink, Rutgers University consultant on transportation to the New Jersey State Legislature. He and others proposed that the deficit-ridden commuter services of eight New Jersey railroads, carrying some 75,000 commuters daily to Manhattan, be turned over, in lieu of consolidation or some more economic solution, to the Port of New York Authority.

► In Boston, all commuter service was halted one day on the money-losing Old Colony line of the New York, New Haven & Hartford Railroad, serving 37 suburban communities. Boston and the stricken towns hastily raised \$900,000 to continue the service until next July, when, unless firmer support is found, the line will be wholly abandoned.

► In Philadelphia, the Pennsylvania and Reading Railroads accepted \$160,000 from the city to subsidize lower commuter fares for a period in an experiment to determine whether lower fares will lure more riders and revenues into commuter services, lessen the jam of private autos in the center city.

► In New York, the Lehigh Valley Railroad, serving a three-state area on its 447-mile line between Manhattan and Buffalo, New York, petitioned to

Monorail is the leading recommendation in large-city transit studies for rejuvenating rapid transit and moving more people faster and more economically between city and suburb. The largest recent proposal is a 290-mile system for Detroit.



DRAWINGS BY RUSSEL HOBAN

city's No. 1 problem

drop all passenger and commuter services immediately, while the Delaware, Lackawanna & Western Railroad proposed to drop commuter service into New York within a year unless losses could be cut.

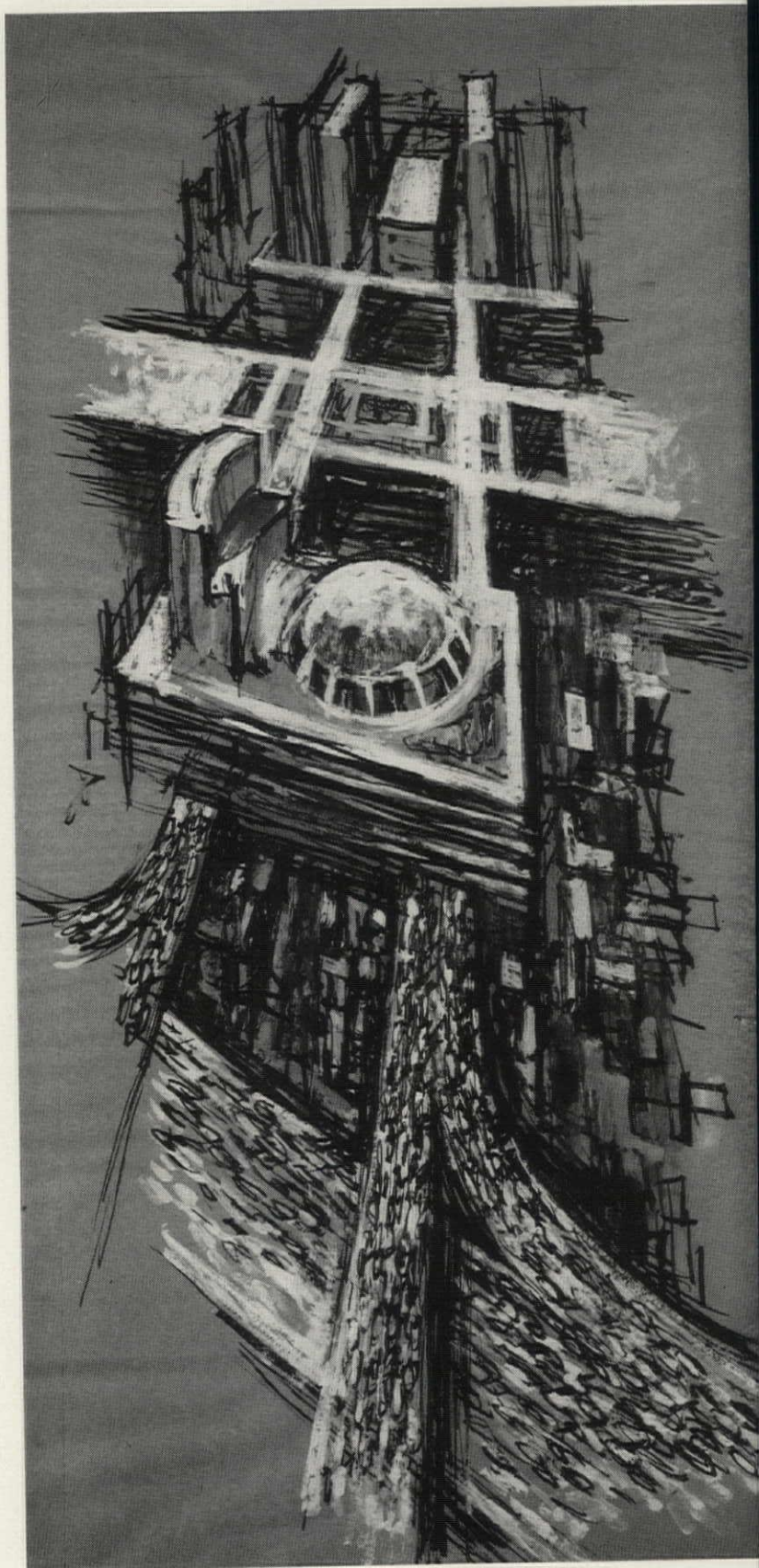
Scope of a solution

The one salutary effect of these events, still only symptoms of graver crises to come, was to make cities face suddenly the specter of a day when the trains might stop running. The chaos of present traffic jams would then pale by comparison. The proudly built "civic centers" would become not centers but dead ends. The great new business office complexes, the new downtown shopping malls, the whole urban renewal ideal and the city itself would approach strangulation. For, without effective mass circulation, modern metropolises, already struggling in the toils of anarchic private traffic, could not survive. Merely to park the cars, if everyone drove into town, would require, it is estimated, three out of four buildings to be devoted to parking, equivalent, on Manhattan's scale, to everything below 60th Street.

So far, to be sure, most of the symptoms of transit paralysis are endemic in the crowded Northeast. And some of the symptoms are transparently being put on by the railroads to wring tax concessions or equalization with other forms of transportation. But passenger traffic is everywhere in deep and real trouble, as ICC Examiner Hosmer's report makes clear, and this is soon bound to affect many more cities than the major commuting centers of the Northeast. Indeed, the modern city is faced everywhere with the growing frustrations, inefficiencies, and breakdowns of transportation. If this major problem in the technology of cities is to be solved, a new and dynamic balance must be struck between rapid transit, automobile, and pedestrian traffic.

Obviously, the measures so far taken are mere stopgaps. Moreover, a continuation of piecemeal subsidies and patching of present transit systems is not likely to increase their traffic or solve the basic problem. How big is this problem? Transportation ex-

Elevated freeways and super-garage-office structures, integrated over the downtown grid of streets as a separate traffic system, are the extreme alternatives to mass transit. At right, sketch of a proposal recently made to Los Angeles.



perts estimate that some form of rapid transit is needed by all metropolitan areas over 750,000 population, which means that some 20 U.S. communities are or should be in the market for modernized rapid transit. Taking in terminals, stations, and other facilities, this means construction of a very large order. One economist and expert on municipal bonds, Harry L. Severson, predicts that with cities about scraping bottom in the deterioration of mass transit, with little or no replacement, there will be a major upturn soon in borrowing for modernized systems, starting in two or three years at about \$500 million a year and rising in the late sixties to about \$3 billion annually, which is a little more than half the rate of current highway construction. This may well be a conservative estimate.

For the underlying fact about the present crisis is that railway transit services, except for some streamlining and other improvements, are still basically nineteenth-century mechanisms, laid down to serve the growth patterns of 50 to 100 years ago. While newer forms of transportation zoomed up with the glamour of greater speed or convenience, the railroads fell far behind in development. To pull rail services up into the late twentieth century, therefore, will require a very great effort—one in which, unfortunately, private capital largely has lost interest and the means of public financing are not yet clear. Suppose, however, that all the dazzling technology of the present, which is about to carry vehicles to the moon in shorter time than many trips are accomplished on earth, were to be applied somehow to the commuter problem. Only by thus raising the speed, frequency, glamour, and convenience of rapid transit is it likely to regain its attraction.

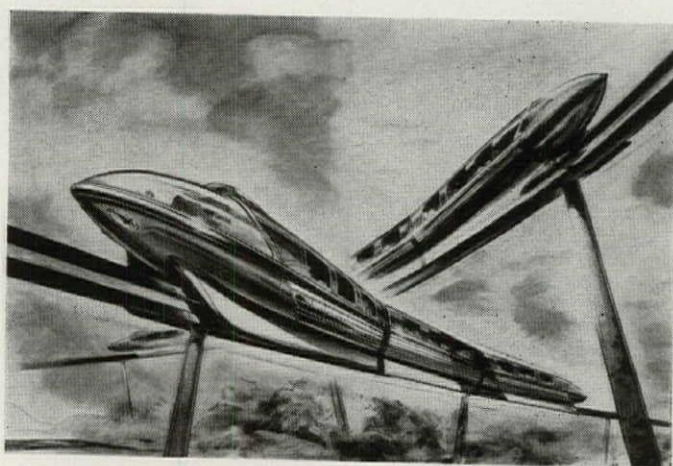
Flight on a rail

The most persistently proposed new transit system, and thus far, the most radical, is monorail. Paradoxically, of course, and typical of the lag in surface transit, monorail is neither very new nor wholly radical, having been first built in Germany some 50 years ago, where it has been running continuously ever since, and introduced in the U.S. over a decade ago, where it has had almost no success as yet in finding a market. But the adaptation of light metals and aircraft construction to the lightly suspended cars and superstructure, a big advance over the ponderous design of earlier models, makes this system a distinct prospect for the future.

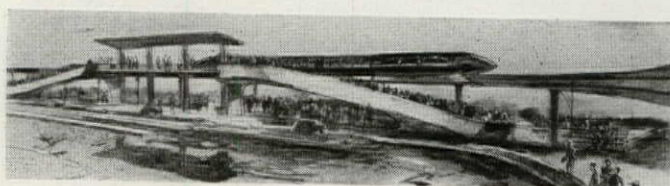
The largest of recent monorail proposals was put forth only last summer by Detroit's Rapid Transit Commission, which, in an exhaustive traffic survey and report, recommended a 54-mile, \$250 million monorail system, with a later, 240-mile extension into

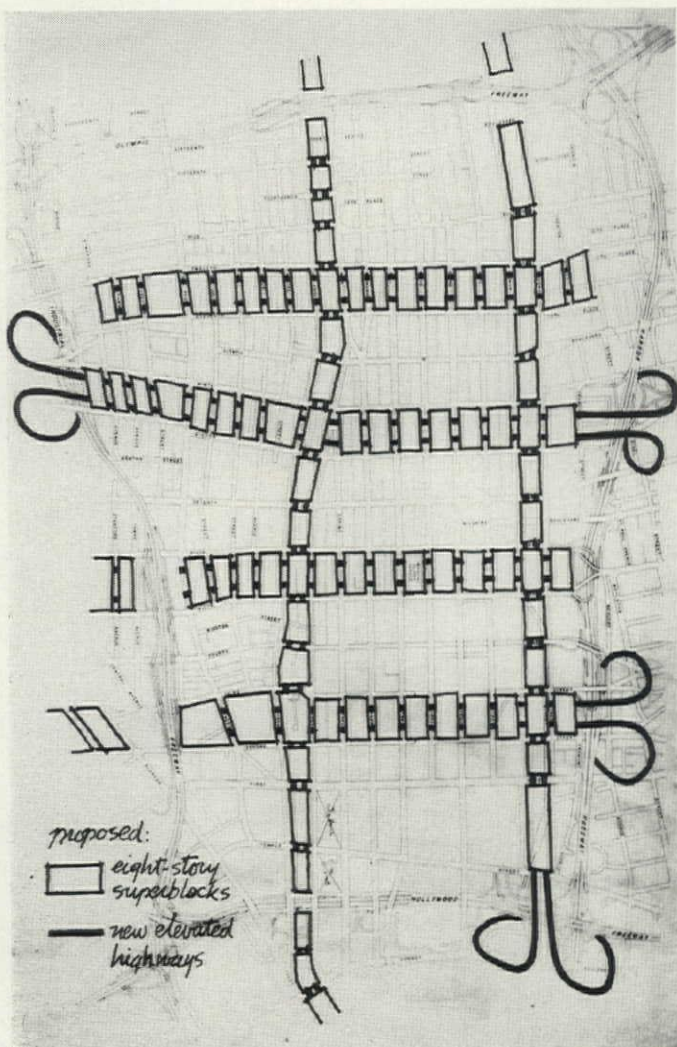
the suburbs, to relieve congestion and link sprawling suburbs with the motor capital's hub and new civic center. The reasons for the choice were approximately the same as those which have induced similar recommendations for San Francisco, Boston, New Orleans, and other areas in recent years. Monorail is lighter, faster, less obstructive of right-of-way, light, and air, and cheaper (cost: \$4 to \$5 million per mile) than subways (\$12 to \$15 million per mile), rails on expressway malls (\$8 to \$9 million per mile), or modern elevateds (\$6 million per mile). With top speeds of 80 miles per hour and average trip speeds of 30 to 40 miles per hour, monorail would be three to four times faster, by survey, than Detroit's present bus service, and up to twice as fast as private automobiles. Finally, it was felt, in this silent, gliding form of travel, which riders have called the closest thing to flight on rails, there was the spark to restore rapid transit to public favor.

In Detroit, as elsewhere, the monorail scheme has no immediate prospects of realization. "Until a transportation crisis reaches mountainous proportions," the Transit Commission observes, there is little likelihood of building anything as unconventional as monorail. Monorail, Inc., of Houston, Texas, which was set up in 1955 and in the following year built a 1,600-foot pilot line on the Texas State Fair grounds at Dallas that has since carried some 600,000 passengers, has had hard sledding. Recently,



Rail in the sky: This new German-designed monorail system, running on a single concrete "beamway" supported on concrete pylons, will be built this spring in Disneyland, near Los Angeles, as a carnival attraction and a stimulant to civic interest. Below is Disneyland's projected monorail station.





Highway in the sky: This is the plan presented to Los Angeles by independent Engineer E. M. Khoury for pushing block-wide elevated thruways at intervals over congested downtown streets and feeding them directly at upper levels into new garage-office structures. Thruway cars would never descend to the streets, which would be left to pedestrians.

controlling interest was bought in the company by Axel Wenner-Gren, international financier and transit magnate, and, in a battle that ensued, the original founders pulled out to form a new company. In addition to the cities previously mentioned, monorail lines are under study for Seattle, Los Angeles, Miami, and Upper Darby to Media, Pennsylvania. One short monorail system of a new German design (see sketch, left), will be built this year at cost of about \$1 million in California's Disneyland. One or another of the shorter lines may soon be contracted, and as the transit crisis deepens monorail may well get a major break.

Meanwhile, developments in more conventional commuter systems have not been lacking, though they are only slightly more successful in sales than monorail. In many instances, due to local conservatism or the necessity of fitting new services to present lines, plans for improving rapid transit have followed conventional railroad practice, meaning surface express systems, modern elevateds, and even,

despite their cost, subways. Washington, D.C., for instance, is contemplating a major subway installation. The Budd Company and other railroad-car builders are pressing commuter versions of their lightweight passenger cars. And the General Electric Company, which has been conducting a wide community campaign for rapid transit with an obvious interest in electric traction equipment, foresees, by simple extension of present technology and automatic controls, a highly efficient transit service at top speeds beyond 100 miles per hour and average speeds of about 50, or about triple the speed of the present rapid transit system at peak hours.

In nearly all earnest civic studies of the traffic and transit problem, however, it has been found that present rapid transit lines, grown up as appendages of the railroads, often mixed with other services, are for the most part in the wrong locations in the wrong patterns to fit the metropolitan growth of today. Hence, if rapid transit is to be financially feasible and serve the future, the cities are faced with the problem of building new transit systems, specialized for really rapid service, from the ground up, a situation hardly met with in a half a century.

Or garage the city

The extreme alternative to all this is to bring in all commuters by private automobile or bus, building sufficient expressways, garages, and parking areas to accomplish it with maximum freedom of flow. The most radical proposal in this direction comes, naturally, from the vicinity of Los Angeles, the city built around the automobile, which already has gone further in this direction than any other city of the world. How far it has gone was recently summed up by Los Angeles' Traffic Manager S. S. Taylor, who noted that two-thirds of downtown Los Angeles already was given over to freeways, streets, and parking areas. Yet, Los Angeles' traffic situation grows steadily worse, and the inability of streets and parking facilities to carry increasing loads, he said, "threatens to choke off the economic breath of our metropolitan area."

To remedy this, an independent engineer and inventor of an ingenious warped-floor, multilevel type of parking garage, E. M. Khoury of Canoga Park, California, has proposed to meetings of city officials, realtors, and businessmen a superplan that would "go all the way for the automobile." Noting that the trouble plainly stemmed from the freeways emptying their heavy loads into narrow downtown streets, never built for such traffic, Khoury proposed that the freeways be "knifed through" the downtown area on elevated highways at selected, block-wide intervals over the present street grid (see

map, page 121), and that these new elevated extensions of the freeway system be fed directly into combination, multilevel garage and office structures, built around the elevated highways. The effect would be to create a second independent traffic system over the existing one, and, if necessary, a third and fourth above that. Whole blocks (mostly deteriorated area) would have to be razed to accommodate the plan. Freeway cars would enter the garage-office structures at the fourth-floor level, the eighth-floor level, and so on—"deskside parking" Khoury calls it—and never or rarely ever descend to the street. Ultimately, the street would be left entirely to the pedestrian.

The plan at least has the virtue of carrying things to their ultimate conclusion, remaking the city entirely in the image of the automobile. No one knows how much it would cost altogether. Khoury thinks there would be no trouble in privately financing the freeway office-garage structures as lucrative investments, but the freeway approaches and elevated roads would have to be borne by public highway funds. And these alone would probably run well beyond the expressway average of some \$8.5 million per mile. A long-term program in New York, already well under way, for arterial expressways over and around Manhattan, new bridges, levels, and approaches will come to some \$2 billion, and cost as much as \$35 million per mile. By any calculation the additional costs of garaging a city's entire traffic would be towering. Ultimately, however the facilities are financed, it is the motorist who pays, and unless he figures tolls, advanced taxes, and other hidden charges into his expenses he has no realistic idea of the costs of running into town.

Actually, the building of parking garages is already a trend, and double-level streets are on the way, so far only adding to the congestion because they are not integrated into separate traffic systems. Unless some way is found to divert, in part, the motorist from his uncontrolled desire to plunge his space-consuming vehicle into the maelstrom of center city, these problems will mount and the tiered, clamorous, more than slightly monstrous Babylonian auto-city is not far off.

The future traffic blend

Thus the argument comes back again full circle to rapid transit as the only means, and the most economical in the end, for lessening or leavening the urban transportation problem. Los Angeles itself, for the first time, is seriously exploring a rapid transit system. Los Angeles, like all other metropolitan areas, is faced not with a static traffic problem at the present level of automobile population but with

one that is still dynamically growing, and one which, in the next decade or so, with the expected doubling of population, the continuing suburban explosion, and the still centrifugal force of urban concentration, will find space crowded and at a premium. Here the rationale of rapid transit is clear. Against the ability of a single lane of highway to move 2,000 people per hour, and of buses on the same lane to move up to around 3,000 per hour, a single rapid transit line can move up to 40,000 people per hour. To move the same volume of people per hour, highways would have to be at least 20 lanes wide.

Of course, no single form of transportation actually can solve, except by unwanted dictatorship, the complex problems of movement in the increasingly crowded, urbanized world of the future. Outside of aircraft, jet, and rocket travel, which undoubtedly will pre-empt all long-range transportation, the future forms of urban travel will be a blend of three: rapid transit of a new order for all short-haul travel, carrying the bulk of commuter traffic; automobile, with developments in double-level highways and parking garages to relieve congestions, for freedom and inter-urban movement; and pedestrian the oldest and most necessary form of all.

The movement to shut off certain downtown shopping areas, cultural centers, and even whole downtown districts to all but foot traffic is an idea gaining favor both here and abroad, and it may yet play a role in reducing the overdominance of the automobile, while increasing rapid transit loads. But this is a complex, controversial matter, and one that cannot move far until there are adequate transit services to take up the load. At that point, covered pedestrian malls, downtown shopping centers, and other interesting developments may be forthcoming to return parts of the city to the human scale.

Most significantly, the idea is gaining ground that, instead of the various forms of transportation fighting one another, there should be a new coordination, balance, and unity in transportation policy as a whole. Even the truckers are sounding this note. "I believe," said Guy W. Rutland Jr., president of the American Trucking Association, recently, "that the time is coming when all the wheels—the railroad wheels, the truck wheels, the airliner wheels, and the wheels in the pilot houses—will be moving in closer concert." Philadelphia's able Mayor Richardson Dilworth calls for a comprehensive study of national transportation policy to integrate and coordinate its disparate parts, and strong bids will be made in the next Congress to rejuvenate railroads and rapid transit. In the pendulum swing of events, rapid transit may yet be considered as important as highways.

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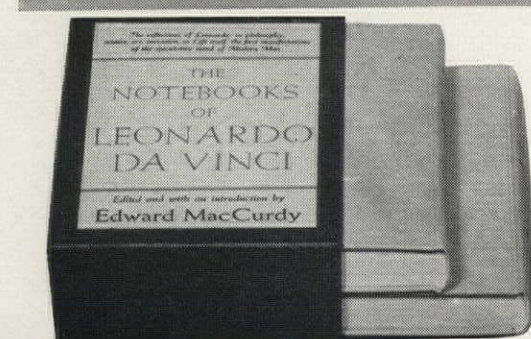
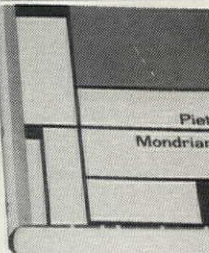
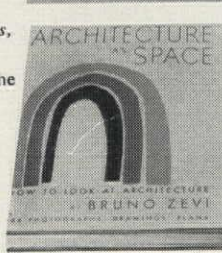
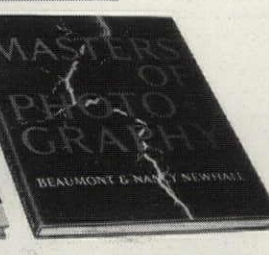
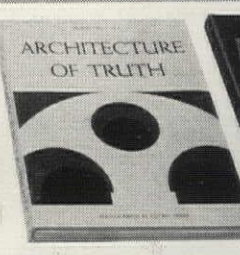
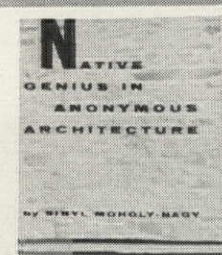
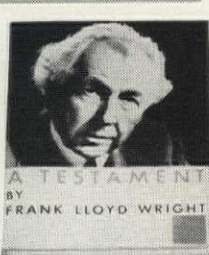
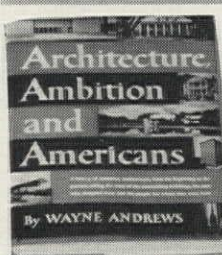
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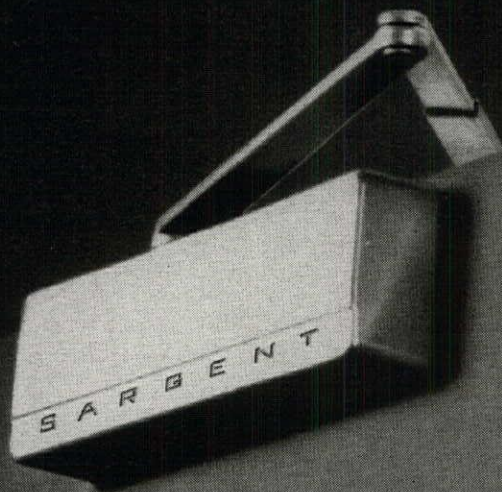
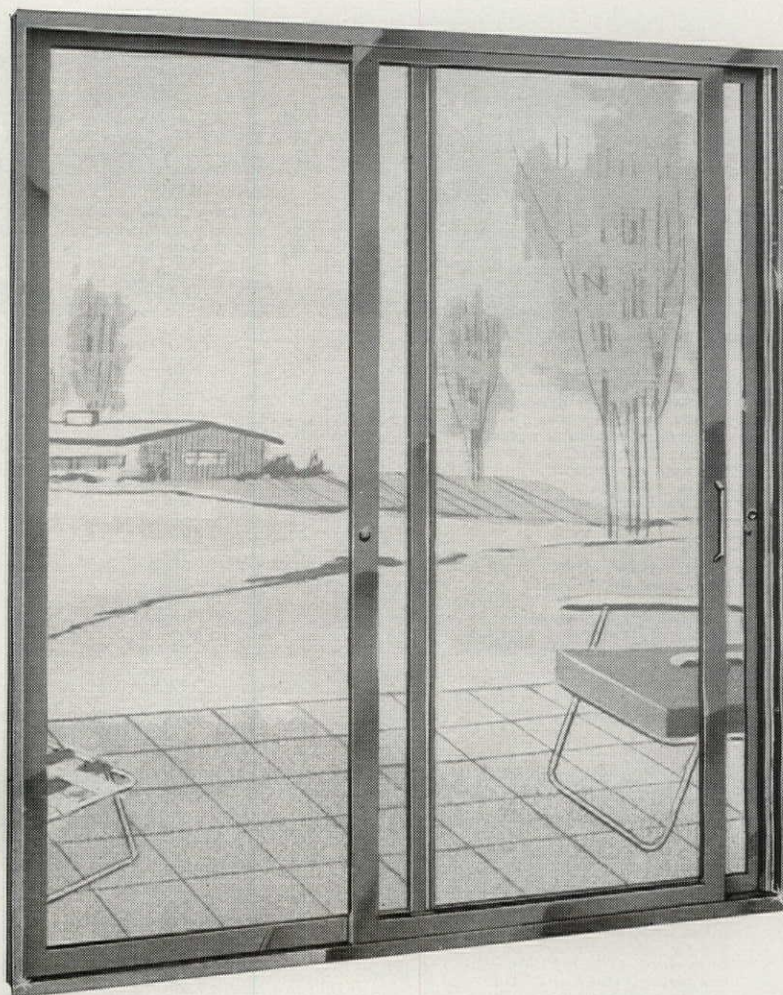
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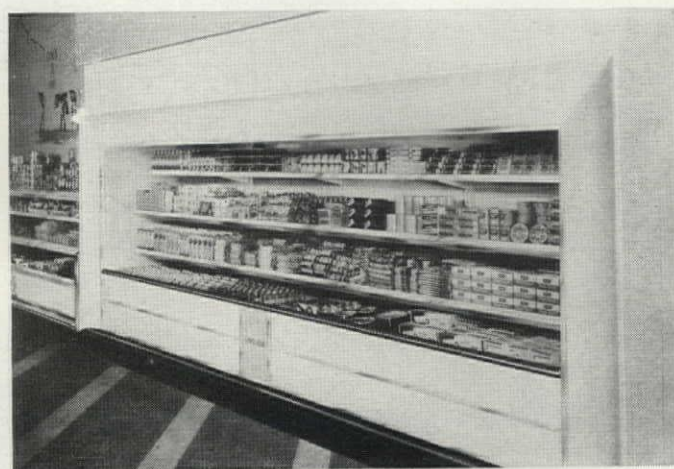
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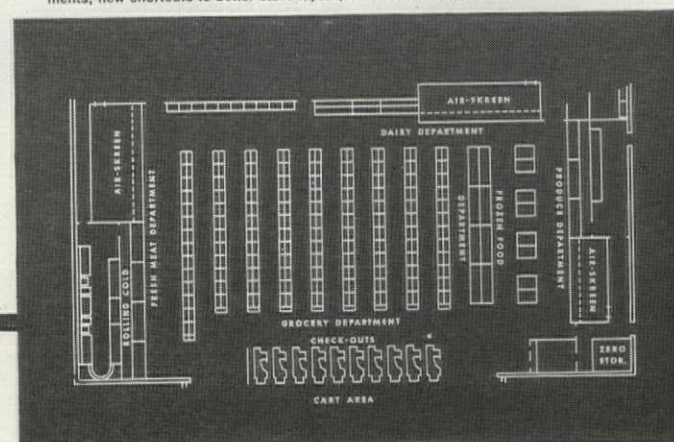
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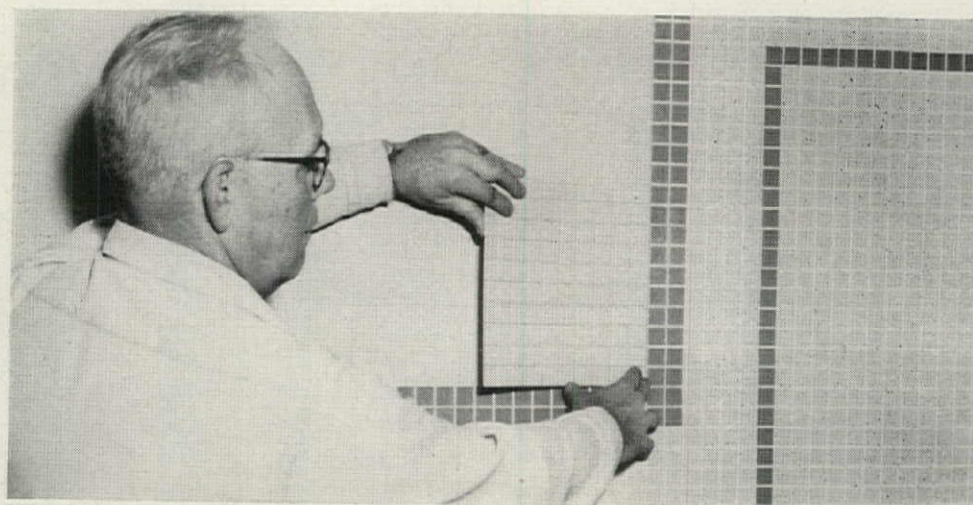
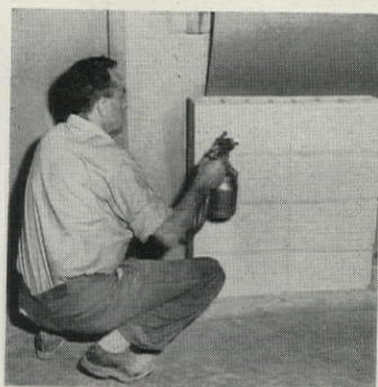
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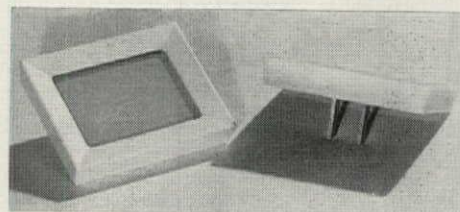
Manufacturer: Quartz Mosaic Sales Co., 914 Orange St., Wilmington 1, Del.

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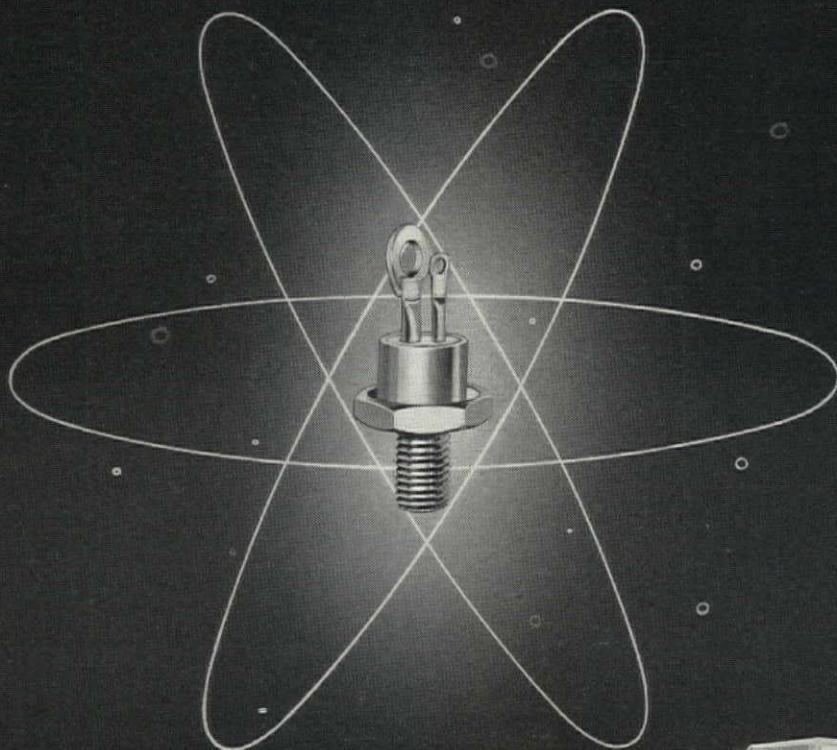


green light and has a rated life span of 10,000 hours, or about 14 months. (Life span for an ordinary bulb: 750 to 1,000 hours.) Equipped with a special device (not shown) which will make it theft-proof, the *Rayescent Safety Lamp* will be marketed for use in bathrooms, or along stairways and hallways in hospitals, hotels, and motels. Price: about \$1.

Manufacturer: Westinghouse Electric Corp., MacArthur Ave., Bloomfield, N.J.

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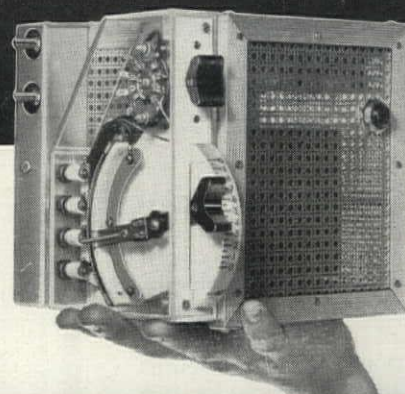
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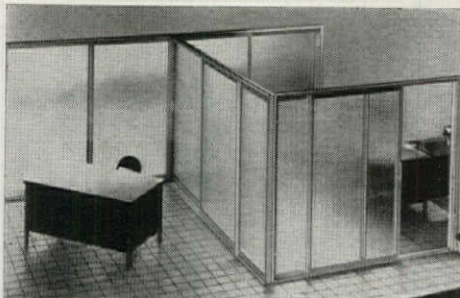
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Manufacturer: Glamour Glass Wall Office Partition Co., 3040 W. Lawrence Ave., Chicago, Ill.

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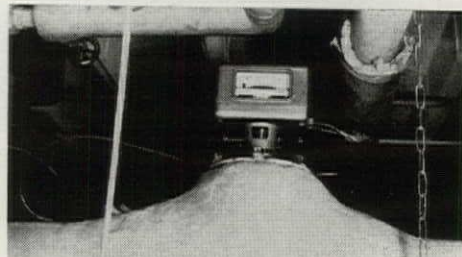
A remarkably strong, colorless adhesive which was introduced last year by Eastman Chemical Products Incorporated as a "laboratory curiosity" is now being commercially marketed by the Armstrong Cork Company and may soon be used in the manufacturing of many building products and for certain construction applications. Known as *Eastman 910 Adhesive*, the new material glues almost any combination of materials (wood and steel, rubber and glass) without excessive pressure, heat, or additives, is unaffected by heat or cold, and is so strong that one drop will sup-

port a 5,000-pound car on a rig. The product is already being used to provide a tough, watertight seal between rubber and plastic in skin-diving masks, to secure metal hammerheads to plastic handles and for making jewelry, hi-fi parts, fountain pens, and printing press fixtures. Another great advantage of the adhesive is that it dries in few seconds. However, its use, for the time being at least, will be limited to applications where no other adhesive is practicable; for its cost is high—about \$75 per pound.

Manufacturer: Eastman Chemical Products, Inc., 20 Madison Ave., New York 16, N.Y.

GERMAN B.T.U. METER determines heating and cooling costs

The German-made *Pollux B.T.U. Meter* pictured below accurately measures the number of heating or cooling units used by each individual tenant in large structures such as airline terminals or shopping centers—thereby providing landlords with a precise means for determining monthly charges for heating and air conditioning supplied by hot or chilled water. (Usually these charges are based on the total cubic feet of rented area or the number of hours an area is occupied.) Now on sale in this country, the



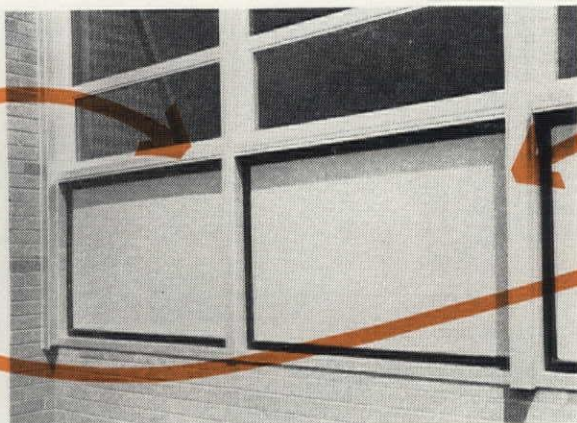
device consists of a liquid meter, an integrator, and two temperature-sensitive bulbs. One bulb is placed in the supply main, the other in the return main. The temperature difference between the supply and return mains is multiplied, by the integrator, with the flow (volume) of water which has been measured by the water meter and converted to weight. The result, in B.T.U.'s, is shown on the face of the meter. Two meters, one for chilled water and one for high-temperature water, are used to record each rented area. Available in various sizes for installation on pipes with diameters from ½ to 20 inches, the *Pollux* meters are priced at about \$650 and up.

U.S. Distributor: Air Conditioning Equipment Corp., 219 E. 44th St., New York 17, N.Y.

SPECIALLY TREATED VERMICULITE introduced for block wall insulation

A water-repellent granular material which can be poured into concrete block cavities or cores to reduce heat transfer by as much as 50 per cent has been introduced by the Zonolite Company. Developed in-

continued on page 130



Detail shows use of Inlock gaskets with 1" porcelain panels.

lock out leaks, have design freedom with

INLOCK[®] GASKETS



St. Dominic School, Youngstown, Ohio. Architect: P. Arthur D'Orazio, Youngstown, Ohio.

Inland developed the patented Inlock Neoprene Structural Gasket to provide a leakproof member for today's curtain wall architecture.

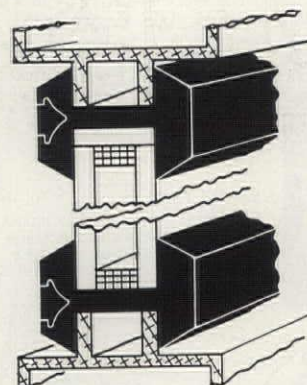
Not a drop of water can seep through an Inlock gasket. All angles are injection molded. Permanent sealing method uses patented filler strip. Mastic glazing methods have been completely outmoded.

Greater design freedom is the result. In curtain walls, ribbon windows, separate or continuous sash, or

combined with insulated panels, Inlock is the architectural answer as the setting member for glass with glass or metal with metal. Design leeway is broadened.

One man can install or replace Inlock gaskets from inside or outside. Permanently water-repellent, Inlock is maintenance-free. Labor saving, too!

Versatile Inlock gasket is available in standard sections, or can be designed to your specifications. Send the coupon for catalog.



Typical Inlock section for 1" glass or panel installation.

Specify . . .

INLOCK[®]

NEOPRENE STRUCTURAL GASKET



INLAND MANUFACTURING DIVISION
General Motors Corporation, Dayton, Ohio

INLAND MANUFACTURING DIVISION
General Motors Corporation
2737 Inland Avenue, Dayton, Ohio

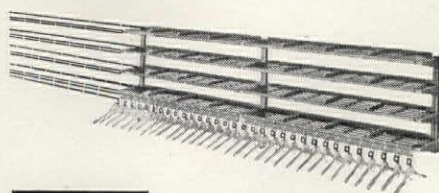
Send complete information and catalog on Inlock Neoprene Structural Gasket.

Name _____
Title _____
Company _____
Address _____
City _____ Zone _____ State _____

Products

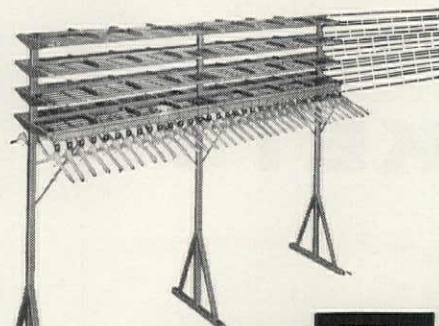
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Checker® COAT and HAT RACKS



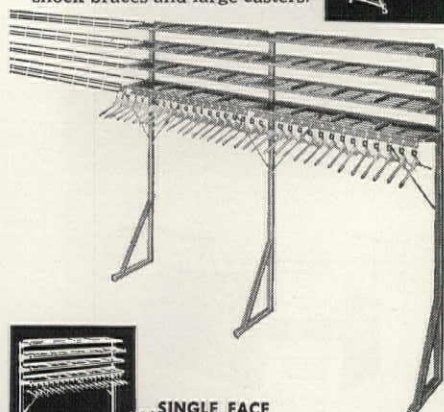
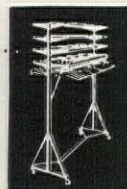
... WALL RACKS

Basic 2' 2", 3' 2", 4' 2" and 5' 2" units mount directly on wall. Interlocking add-on sections make racks of longer lengths and greater capacity.



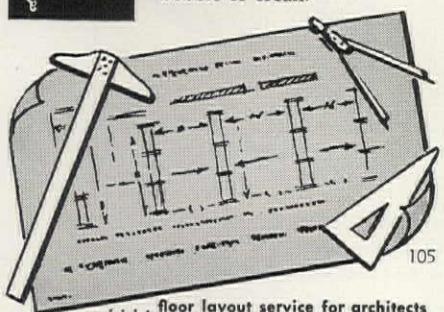
DOUBLE FACED ...

These standard cloakroom racks (with or without checks) hold 8 coats and hats per foot of length. Also available in 4' 2" and 5' 2" portable racks—with shock braces and large casters.



... SINGLE FACE

Stationary or portable racks fit close against wall. Sections snap-lock together to make rigid assembly that will not sag, wobble or creak.



... floor layout service for architects
Let our cloakroom and checkroom specialists suggest equipment requirements and efficient layout. Just send outline of available space, capacity desired and nature of load. No obligations, of course.

Write for Catalog Sheets, CK-48

VOGEL-PETERSON CO.

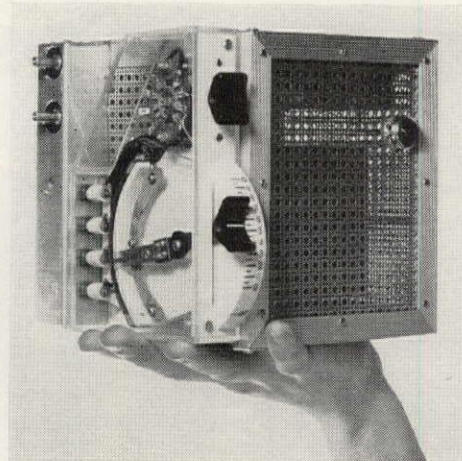
1121 W. 37th St. • Chicago 9, Ill.

initially for insulating cold storage units, the product is a specially baked, chemically sprayed vermiculite. Cost to insulate a block wall with 2-inch cavities: about 15 cents a square foot, or about half as much as some board-type insulations.

Manufacturer: Zonolite Co., 135 S. La-Salle St., Chicago 3, Ill.

MINIATURE LIGHT DIMMER will fit into small, convenient space

The *S.C.R. Dimmer* (below) is roughly one-twelfth as large, one-fourteenth as heavy as conventional light dimmers capable of handling equal voltage. Reason: it employs the recently developed silicon controlled rectifier—a tiny, electrical com-

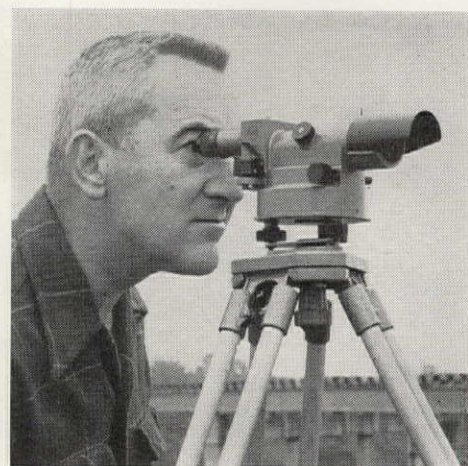


ponent which controls the flow of current. The 4,000-watt *S.C.R. Dimmer*, the only model now in production, weighs about 5 pounds, occupies 1/8th of a cubic foot, and is completely silent in operation. Thus, for offices, restaurants, cocktail lounges, etc., a complete bank of dimmers can be installed in a small conveniently located area such as a closet—and single units can be built into walls 4 inches thick leaving only the face plates showing. The *S.C.R. Dimmer* operates on standard 120-volt alternating current; response is said to be instantaneous, the loading range infinite (e.g., one watt or 4,000 watts can be controlled with equal ease). Cost for the unit shown: about \$600.

Manufacturer: Kliegl Brothers Lighting Co., 321 W. 50th St., New York 19, N.Y.

SELF-LEVELING LEVEL expedites extensive surveying

A German level, new to this country, automatically assumes a truly horizontal position once it has been approximately leveled by its circular bubble. The self-leveling system consists of two carefully positioned prisms which are moved by a magnetic dampening device to a precise realignment with any accidental change of instrument setting, such as one tripod leg sinking into soft soil. During extensive leveling operations, use of the instrument will reportedly cut working time as much as 50



per cent. The *INA* level is 5 1/4 inches high, has a 30X telescope, and weighs (including tripod) 19 1/4 pounds. Cost: \$635.

Manufacturer: Ertel-Werk, West Germany; U.S. Distributor: Precision Instruments, Inc., 1900 Fifth Ave., Troy, N.Y.

WALL-HUNG HEADBOARD reduces bedroom maintenance

Designed specifically for hotels, motels, and schools the wall-hung *Bed-bax* (pictured below) integrates headboard, bed frame, night tables and bed lights in one unit which will, according to the manu-



facturer, save 10 to 15 minutes per day in room "make-up" time. *Bed-bax* units are available in maple or walnut, with white plastic desk tops. Contract price for the unit shown, excluding beds: about \$150.

Manufacturer: Architectural Furniture Components, 341 Nassau St., Princeton, N.J.

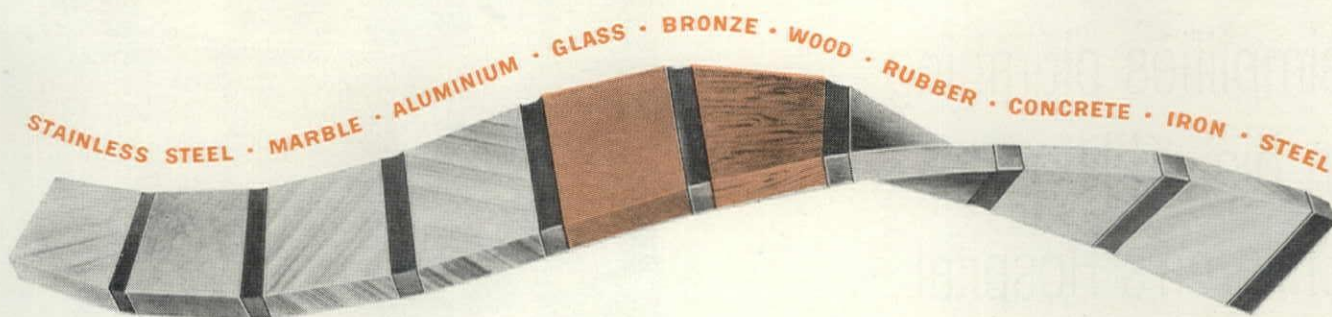
WATER-THINNED WOOD FINISH is flame- and alcohol-resistant

Tunglac, a new sealer-primer and finishing solution for natural wood, is thinned with water. Composed of tung oil (China-wood oil) and vinyl, it is applied with brush, roller, or spray gun. It dries in about 15 minutes, leaving a clear, semi-gloss finish that is washable, fireproof, and alcohol resistant. Application tools can be cleaned with soap and water. Retail price: about \$5.95 per gallon.

Manufacturer: Crosby Forest Products Co., Box 71, Picayune, Miss.

END

Here's a multi-material sealant that rubber welds curtain walls, glass enclosures, store fronts, gas stations, roofs, copings, flashings, expansion joints, mullions, sidewalks, flooring, pipe joints and passages, air conditioning ducts and units.



THE "ADHERENTLY" DIFFERENT SEALANT

based on THIOKOL liquid polymers



Adhesion makes the difference. Bonds to practically all building materials. Will not flow from joints under heat, stress, or traffic.



Elasticity makes the difference. Gives with building motion. Expands, contracts as structure demands. Cushions against vibration. Absorbs shock.



Longevity makes the difference. Properly formulated and applied, THIOKOL liquid polymer base sealants last for years. No costly, frequent maintenance.



Custom-sealing makes the difference. A true and lasting seal formed on the job — for each job and condition. No gasketing, cutting, splicing.



Excellent resistance to all elements makes the difference. Withstands air, moisture, wind, rain, sun, temperature extremes, oil, chemicals, solvents.



Application ease makes the difference. Applied by caulking gun. Tooled and packed in joint easily. Cures in place to durable seal. No leaks. No dryout.

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COPPER

simplifies plumbing
in big addition to
Children's Hospital,
Pittsburgh



MAKING A SOLDER JOINT on an 8-inch copper soil and waste line — the largest size used in the drainage system. Solder-joint connections are one of the important reasons why copper tube systems are so much easier and faster to install.

SOME 70,000 pounds of Anaconda copper tube were used in the sanitary drainage system, hot- and cold-water lines, oxygen, vacuum, and compressed-air lines of the addition to Children's Hospital in Pittsburgh.

Copper plumbing provides the advantages of easier, faster installation, with additional economies in design and construction made possible by the lighter weight of copper tubes and the trim, space-saving, solder-joint fittings. Equally important, however, are the long-range benefits. Copper tube systems last longer, require less maintenance than systems of other materials.

Everyone benefits with all-copper plumbing. Architects have greater freedom in design to locate bathrooms and utilities where desired without sacrificing useful space. Contractors report that installation time has been reduced up to one-half — and their men prefer working with copper tube. Owners get plumbing that lasts — costs little to maintain.



ARCHITECT'S RENDERING of Children's Hospital Addition (foreground) at Pittsburgh. Architect: Alfred D. Reid Associates, Pittsburgh. Consulting Engineer: J. A. Murray, Pittsburgh. Plumbing Contractor: Sauer, Inc., Pittsburgh.



TESTING A VALVE on the hot-water supply system. Other copper tube lines in view are part of the sanitary drainage system, ranging in size from 1½ inches to 4 inches. Because connections are easily made, even in tight quarters, the lines can hug the ceiling.

Anaconda Copper Tubes are available in all standard wall thicknesses — Types K, L, M, and DWV (Copper Drainage Tube) — through plumbing wholesalers. There's a full line of Anaconda wrought and cast solder-joint fittings. For more information on ALL-COPPER plumbing, write: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.



5809

ANACONDA
COPPER TUBES AND FITTINGS

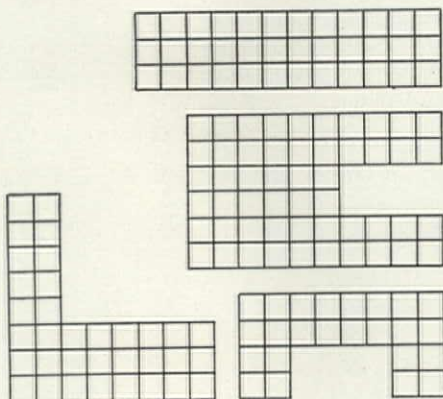
Products of THE AMERICAN BRASS COMPANY
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cells of light...

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LUMINAIRE COMPOSED OF ONLY
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large area, high level illumination **ORIGINATED and introduced by L.P.I.**

"Panelaire" offers both a functional and flexible tool for unlimited freedom of design. This permits the designer to incorporate illumination as an integral part of any overall architectural design.



Panelaire

Panelaire gives you tomorrow's lighting today. This is the world's largest factory assembled luminaire. Modular Luminaires from 2' x 4' to 6' x 8' may be ganged together making areas, islands or lines of light with equal ease. A single unit will cover an area 6 x 8 ft. and enables you to fit any ceiling area with a minimum of modular sections. Illumination levels up to 300 f.c. may be attained by use of either 430 or 800 MA Lamps. A variety of available diffusers may be easily interchanged. The 12' x 16' "Floating Panel" illustrated is installed with only 6 stem hangers. "Panelaire" provides wall-to-wall lighting where desired. Send today for illustrated booklet and photometric data on this newest "pacesetter" in the lighting industry.



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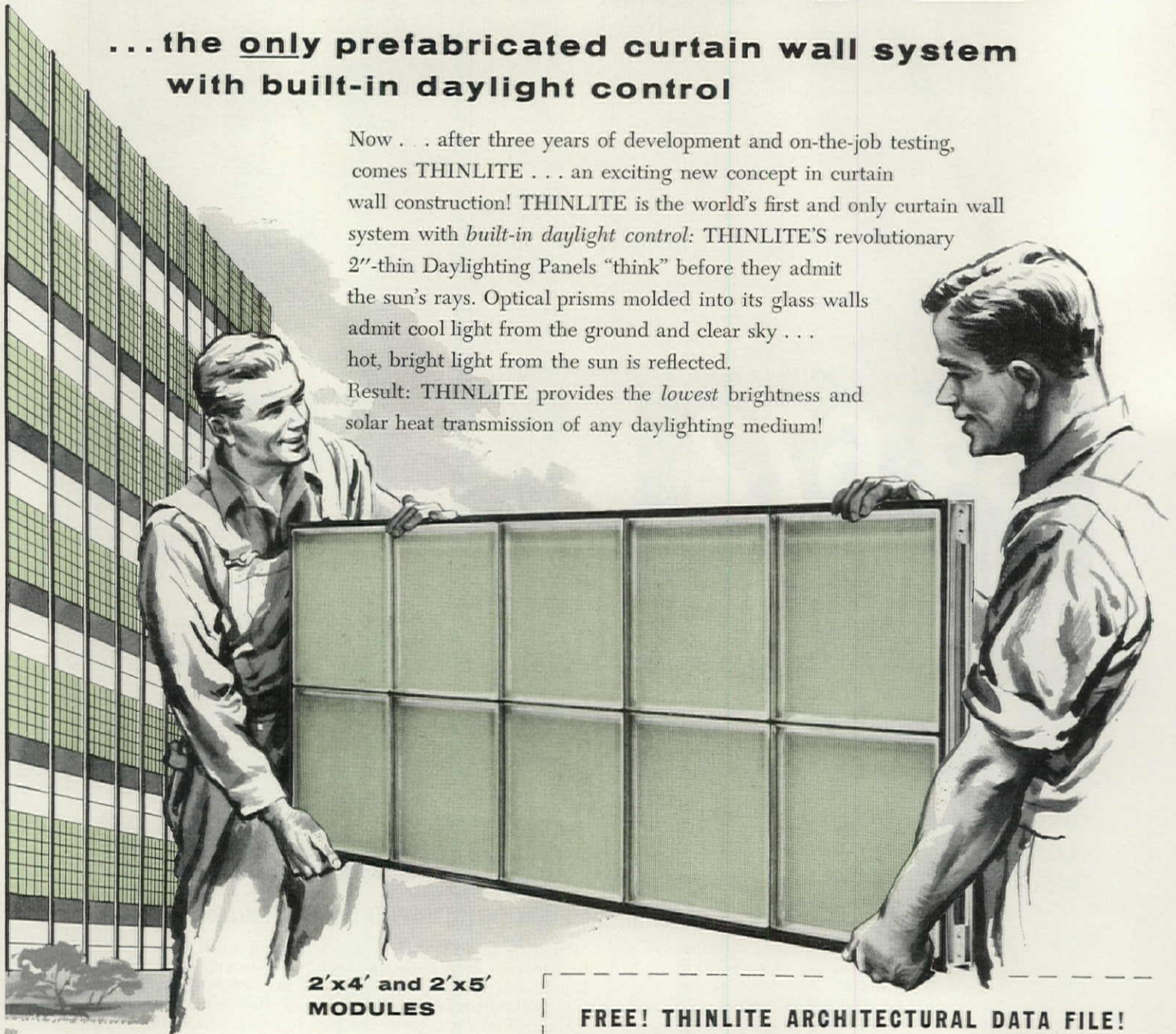
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Pacesetter in the Lighting Industry

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... the only prefabricated curtain wall system with built-in daylight control

Now . . . after three years of development and on-the-job testing, comes THINLITE . . . an exciting new concept in curtain wall construction! THINLITE is the world's first and only curtain wall system with *built-in daylight control*: THINLITE'S revolutionary 2"-thin Daylighting Panels "think" before they admit the sun's rays. Optical prisms molded into its glass walls admit cool light from the ground and clear sky . . . hot, bright light from the sun is reflected. Result: THINLITE provides the *lowest* brightness and solar heat transmission of any daylighting medium!



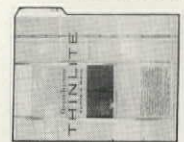
2'x4' and 2'x5' MODULES

PREFABRICATED...

Easy-to-handle prefabricated THINLITE Daylighting Panels are available in 3 colors to meet all daylighting conditions: green (for sunlight exposure), soft white (for general use), and sunlight yellow (for non-sun exposures). THINLITE Accessory Panels—Ceramic Face Glass Panels in a number of striking colors, Window Panels in both fixed and projected types, and decorative glass and porcelain unit panels — provide the architect with a limitless variety of color and texture accents.

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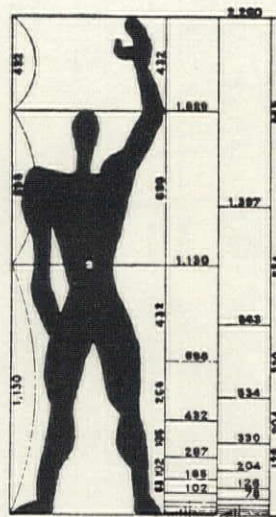
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Modulor buildings . . . industrialized houses

MODULOR 2. By Le Corbusier. Published by Harvard University Press, Cambridge 38, Mass. 330 pp. 7½" x 7½". Illus. \$8.

When, in 1948, Le Corbusier described his "intuitional" invention of a system of proportion based on the human figure his adherents throughout the world hoped that it would unlock the mystery of his vital architecture. The concept he developed in the book *Modulor I* was based on a notion well known to any first-year art student: that the standard human figure is divided into a standard sequence of proportional relations. Le Corbusier, by applying this



theory to a standard figure 2.26 meters high (7 feet 5 inches) with arm upraised (above) found a mathematical progression which he considered useful in proportioning his architectural designs. This second volume on the diffuse and occult mysteries that emanate from the Corbusian numbers game reaches far beyond the mathematical progression and, indeed, beyond architecture.

The new book is a collection of responses to Le Corbusier's final words in *Modulor I*: "Let the user speak next." Unfortunately, it is all too evident that the users produced precious little architecture with Corbu's system. Instead, a simple and valuable design tool has been invested with a language of its own, a mathematical mumbo-jumbo carrying the weight of a cult. The "users" have turned the Modulor idea into an ethic of numbers, a near-religion of numerical rituals.

Now and again Corbu comments in *Modulor II* on the madhouse surrounding his idea with a hint of scepticism, but more often he is enamored with the pages of numbers proving, for example, that the Bayeux tapestry is a Modulor design. And he is much impressed with the gifts of

sculptured pinheads and handy pocket Modulors which the faithful lay at his feet.

If Corbu manages to stir men's minds and emotions with his architecture it may be, in part, because of Modulor. But this latest effort to explain the basis of his work succeeds rather less than his earlier writings. Fortunately, he is building now (some of his work is shown in the book) so that he does not have to depend on volumes like *Modulor II* to convey the word.

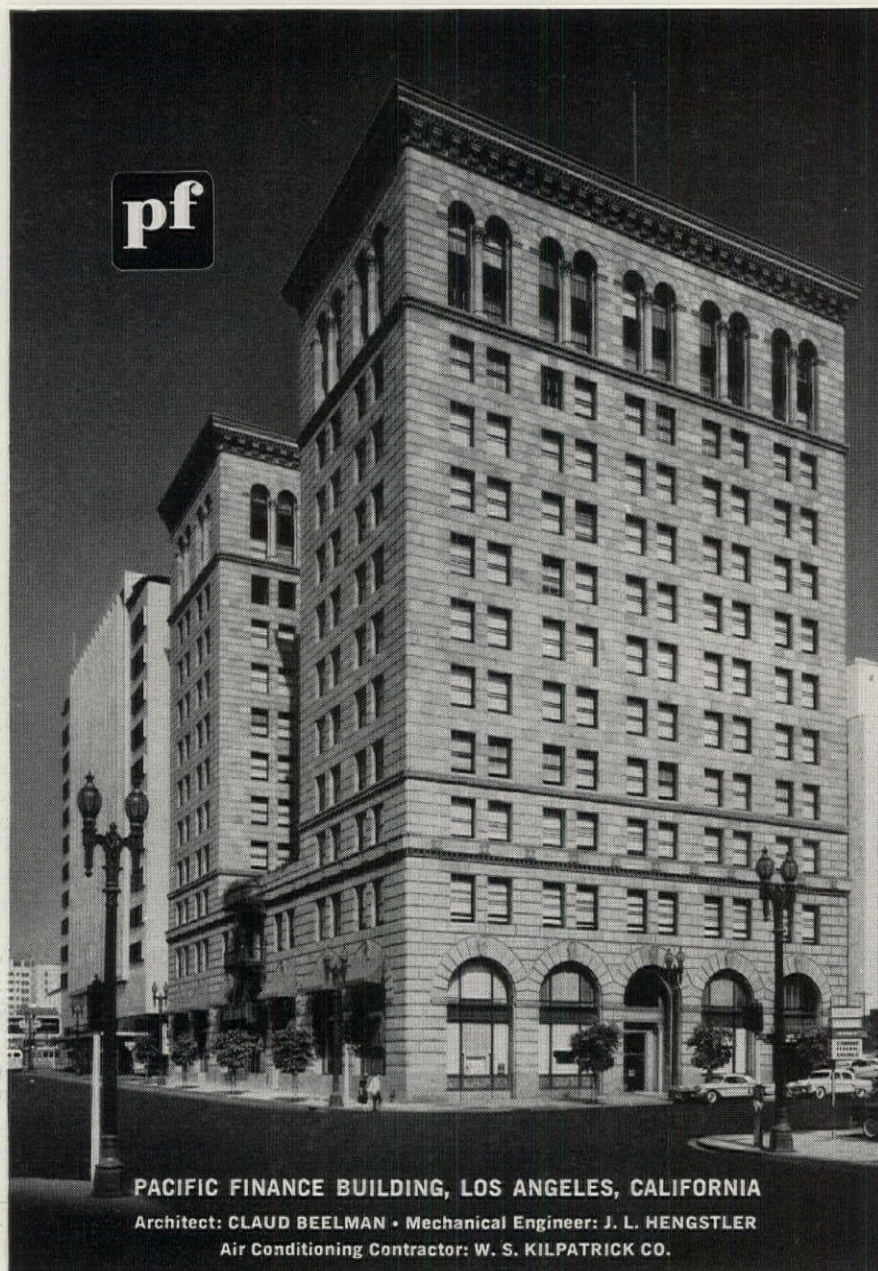
AT HOME WITH TOMORROW. By Carl Koch, with Andy Lewis. Published by Reinhart & Co., Inc., 232 Madison Ave., New York 16, N.Y. 208 pp. 10¼" x 7¾". Illus. \$6.95.

With rambling insight and reminiscent humor, the architect of the Techbuilt house describes the pitfalls and progress of a long professional quest for a good, inexpensive American home. Included are Koch's early brushes with low-cost community house design, the evolution of the foldable Acorn prefab, the lessons of the Lustron steel house (which also folded), the Conantum cooperative housing venture (which almost did), the more widely successful Techbuilt design, and present efforts toward the fully "industrialized" house.

THE HOUSE BEAUTIFUL TREASURY OF CONTEMPORARY AMERICAN HOMES. By Joseph Barry. Published by Hawthorn Books, Inc., 70 Fifth Avenue, New York 11, N.Y. 144 pp. 10¾" x 13¾". Illus. \$12.95.

With the help of 150-odd full-color plates borrowed from past issues of *House Beautiful*, Joseph Barry, formerly executive editor of that magazine, takes would-be builders of the American dream on an informal tour of 32 houses, large and small, scattered across the U. S. Emphasis is on *House Beautiful's* old favorites, Frank Lloyd Wright (lead article, illustrated by nine houses), Florida Architect Alfred Browning Parker (six houses), and other exponents of the warm, rich approach to American life. Many of the big color plates are downright mouth-watering: HB, as usual, has garnished hearthsides and patios with plenty of fruit, flowers, tall drinks, casseroles, mink stoles, old copies of *Flair*—and an occasional Siamese cat. (Owners, however, always seem to be on vacation.) Also absent are the names of all architects except Wright; they are snootily relegated to an appendix while their work is exploited up front. And at least one important school of modern American house design—the Mies-Johnson-Breuer one—is conspicuous by appearing not at all.

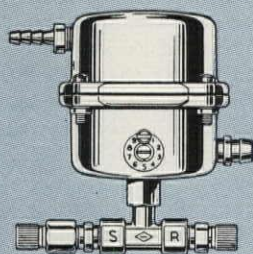
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PACIFIC FINANCE BUILDING, LOS ANGELES, CALIFORNIA

Architect: CLAUD BEELMAN • Mechanical Engineer: J. L. HENGSTLER

Air Conditioning Contractor: W. S. KILPATRICK CO.



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(550 installed here)

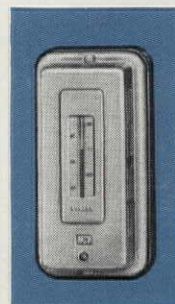
Photo shows it mounted within the mixing box of high velocity dual duct air conditioning system.

Room thermostat controls hot air valve and CAV Regulator controls cold air valve. Working together they provide precise room temperatures at constant air volume, regardless of static pressure variations in air supply ducts. (D-6)

Big Dividends from MODERNIZATION and **POWERS**

Air Conditioning Control

While many building owners in Los Angeles talked about smog and heat problems, Pacific Finance Corporation eliminated both in its 32 year old building at Wilshire Blvd. and Hope Street.



Powers Individual Room Control now provides year 'round personalized comfort for employees and tenants. Properly conditioned smog-free air is distributed throughout the building to 450 under-the-window and 100 ceiling type high velocity dual duct air conditioning units.

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found it smart community relations to provide not only a parklike appearance for their own plants or office buildings, but also to help out with their communities' recreational needs by donating parkland. Such altruism, obviously, can be encouraged by towns in the process of making zoning or other concessions to new industry. Similarly, unions which are not already engrossed in building their own recreational facilities have assisted local programs, donating money, time, labor, and materials.

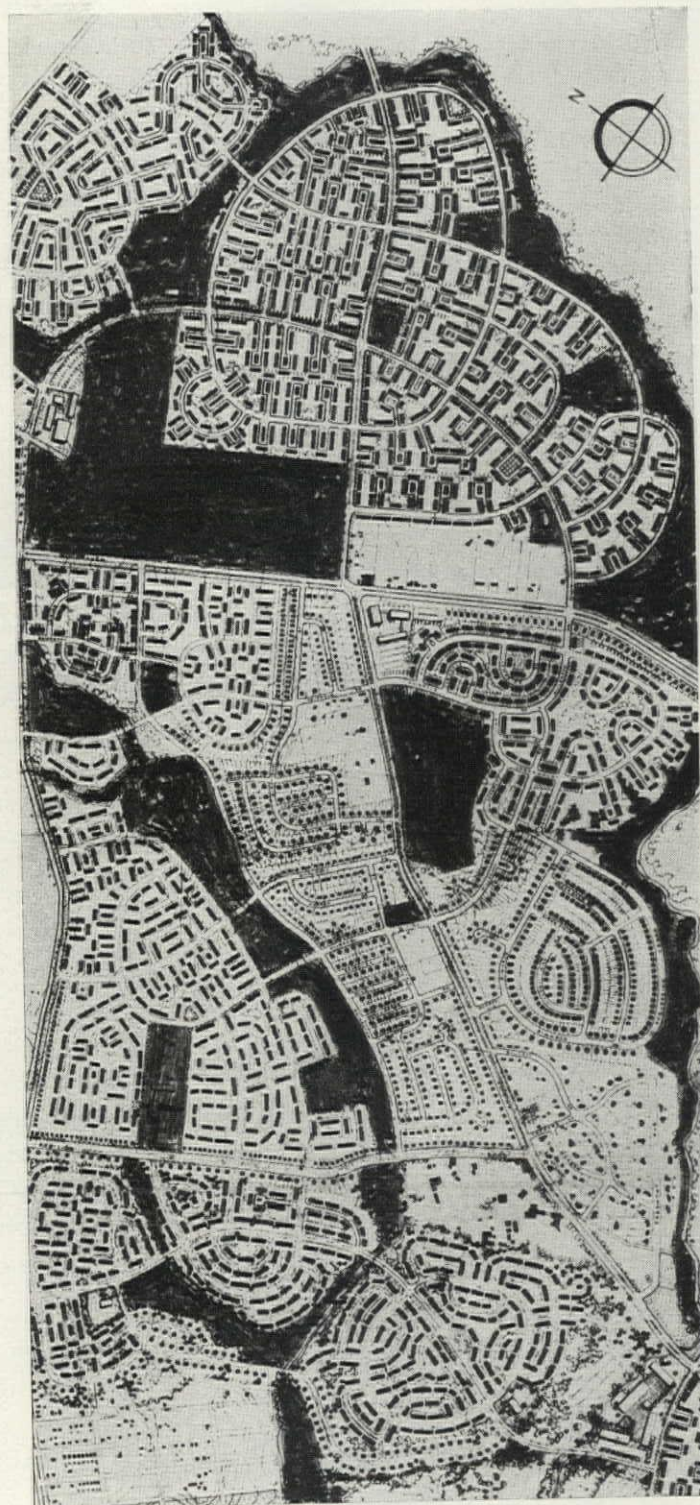
Many communities have found a joint school-park program, an economical way of achieving two ends at once. The Detroit suburbs of Oak Park and Harper Woods have planned new park-playgrounds and schools together as the focal points of neighborhoods. Across the river from Kansas City, Missouri, the suburb of Kansas City North is embarked on a program to acquire some 1,500 acres of disappearing suburban land to create 15 new neighborhood units of about 4,000 people each (FORUM, November 1957). Each neighborhood is centered on an elementary school in, or bordering on, a park-playground of 10 acres or more located within a half-mile walk of every home. Smaller parks, playgrounds, and parkways are being paid for by local benefit tax assessments (a system long used in Minneapolis to create or improve neighborhood parks).

Built-in parks

The creeping, relentless advance of suburbia has frightened some communities into requiring developers to "dedicate" a portion of their subdivision land to recreational use, either a percentage of their total acreage, or a fixed amount per resident (Raleigh, North Carolina, requires 1 acre per 100 families; Radnor, Pennsylvania, 2 acres per 1,000 of estimated future population). Other communities take money instead and put it in a fund for parkland acquisition. The obvious weaknesses of this system, besides its dubious constitutionality, are that the parkland eventually purchased does not always benefit the residents of the new subdivision, and the land may cost more if the community delays in buying it.

One city that is not leaving the problem to chance is Philadelphia. The only remaining undeveloped land, in the northeast section, has been carefully laid out on paper by the city planning commission (see sketch, right). Subdivisions are separated from each other, and linked to schools and playgrounds, by park belts generally following the contours of the stream valleys. Potential developers and their architects are thus presented with a clear, ready-made scheme aimed at maximum general benefit, and can make adjustments within this framework.

Philadelphia has also drawn up a city-wide, \$119-million park program to increase the number of



Park patterns (dark areas in sketch above) relieve the suburban fabric proposed by the Philadelphia planning commission for the undeveloped northeast section of the city. Greenways preserve the stream valleys, separate the subdivisions, and allow children to walk safely to schools and playgrounds located in the middle of the larger parks.

continued on page 142

playfields and parks to 273 (83 per cent more than exist today). The plan provides one playground of 3 to 8 acres for every 12,000 to 13,000 of estimated population, and locates it for maximum convenience to residents of the surrounding neighborhood.

In addition to its subdivision and playground programs, Philadelphia continues to lead in its development of the "greenway" idea downtown. In the

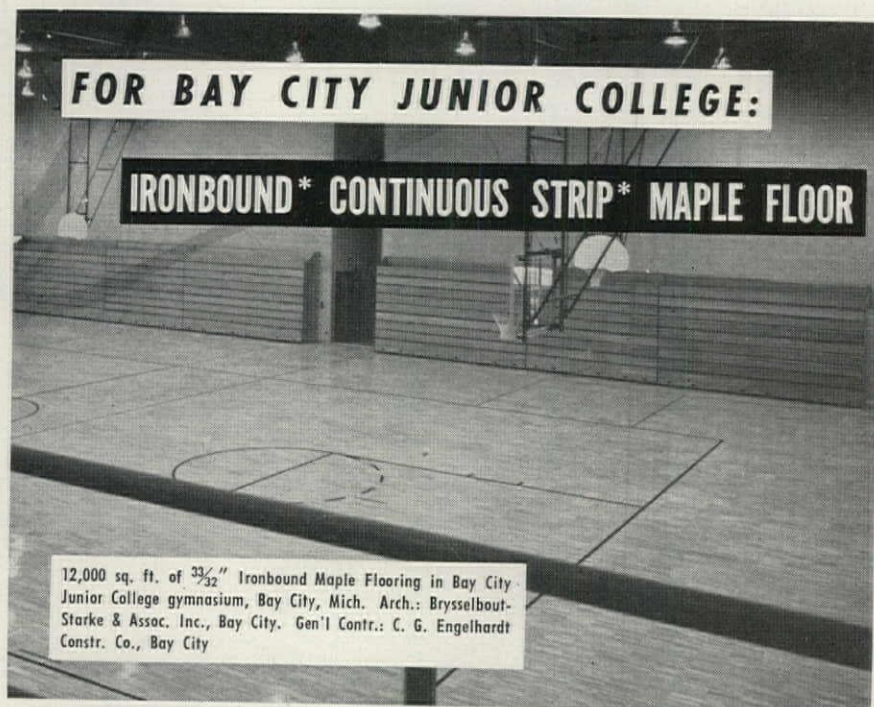
South Temple redevelopment area below Temple University (see "New job for colleges," page 114), promenades will be cut through from both sides of blocks of new row houses, leading to little midblock plazas and playgrounds for residents. In the "Society Hill" project (FORUM, December 1958), pedestrian walkways will connect old and new housing, stores, churches, and historical buildings, leading from block

to block in an intimate neighborhood pattern full of light and air, vitality, and surprise. Philadelphia, Detroit, Cleveland, and other cities are thus carrying on and refining a basic principle: that every redevelopment project should be carefully considered for its possibilities of generating new and useful, not merely ornamental, open spaces within the congested core.

New breaks downtown

The opening up of the central city will not progress far, however, if it relies solely on superprojects of public housing, Title I, or other federally financed programs. It must rely also on the initiative of private individuals—and corporations. Pittsburgh's Mellon Square, built on valuable downtown land donated to the city, is the most dramatic new example of a tradition started by New York's Rockefeller Plaza and San Francisco's Union Square. The gay, crowded popularity of civic congregating places like these suggests the desperate need for more. More parks atop underground garages are being built or considered as a way of simultaneously getting a return out of valuable downtown land, obtaining the relief of open space, and sinking the ugly ranks of parked autos out of sight. Privately built, publicly used plazas—Seagram's in New York, Mile High and Courthouse Square in Denver—are beginning to make their own welcome contributions to public enjoyment as well as corporate prestige. Other cities are studying Chicago and Philadelphia's brand-new zoning ordinances in an attempt to give developers more direct incentives to leave arcades and plazas.

Both in the still-open spaces between cities, and in already crowded downtowns, opportunities for civic park space are being lost almost daily, as more land goes under buildings, good and bad. The real-estate concept of "highest and best use" can no longer sensibly mean just the revenue a piece of ground can produce directly above it. The mounting problem of open space, obviously, is up to all citizens interested in the future of their cities. But it is up to public officials, too, to provide foresight and leadership. And it is up to architects to bring them together with workable plans. **END**



12,000 sq. ft. of $\frac{33}{32}$ " Ironbound Maple Flooring in Bay City Junior College gymnasium, Bay City, Mich. Arch.: Brysselbout-Starke & Assoc. Inc., Bay City. Gen'l Contr.: C. G. Engelhardt Constr. Co., Bay City

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federal and state tax exemption to the bonds of such a corporation.

Fundamentally, this proposal is a variation on the time-honored independent corporation or "special authority" system for the construction of public works. It enables governments to avoid making large capital appropriations that would boost their tax rates or push their debt over statutory limits. This technique can be adapted for

financing almost any type of federal, state, or local project that can show a sure source of revenue to support such an authority's bonds—even if the prospective revenue is merely the long-term "rent" commitment of the same government that created the authority.

► **Lease-purchase.** A number of variations of lease-purchase could be developed to finance many types of state

and local as well as federal buildings, although in some states special legislation might still be required before all municipalities could inaugurate such plans. In 1957, for example, Nebraska authorized its cities (as distinguished from private investors) to sell bonds to erect buildings for the federal government under lease-purchase arrangements, so that the federal government could, in effect, reap the benefit of local government tax-exempt financing. Oklahoma has authorized its cities to make lease-purchase deals with independent nonprofit corporations and "trusts" that are not bound by the borrowing and debt limit restrictions that apply to municipalities.

Of course, lease-purchase (renting while buying over a long period of years) will almost invariably be more expensive for the community over the long run than outright purchase—just as buying a car on time is more expensive than paying cash. In the case of lease-purchase by a state or local government, moreover, the "rent" must reflect the fact that the interim private "owner" has to pay a higher interest rate on his mortgage than the tax-exempt rate at which the government itself could borrow. The premium the government pays for buying on this so-called "easy credit" system, however, may enable it to avoid making a large capital appropriation, or exceeding a fixed debt ceiling. It also may enable the government to obtain a needed facility immediately instead of having to wait a long time to obtain it under conventional methods.

► **Revision of outmoded restrictions.** In attempting to provide a rising standard of civic services, many municipalities and states have bumped into statutory debt limitations that were established in an era of fewer public services (and higher priced dollars). Frequently these restrictions were written for rural communities which have long since been transformed into thickly populated urban and suburban areas through metropolitan growth and core city decentralization.

Usually these municipal debt limits are based on real estate assessment values. Special-purpose authorities and other devices have enabled cities to circumvent these restrictions occasionally but it is high time the states faced the problem squarely and allowed muni-

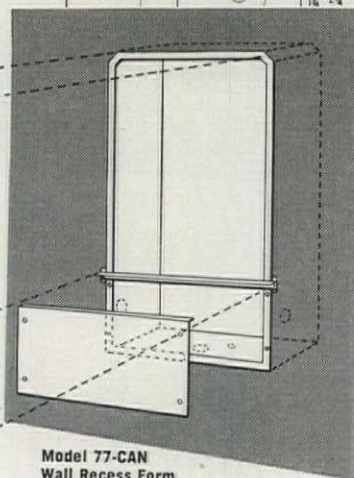
continued on page 146

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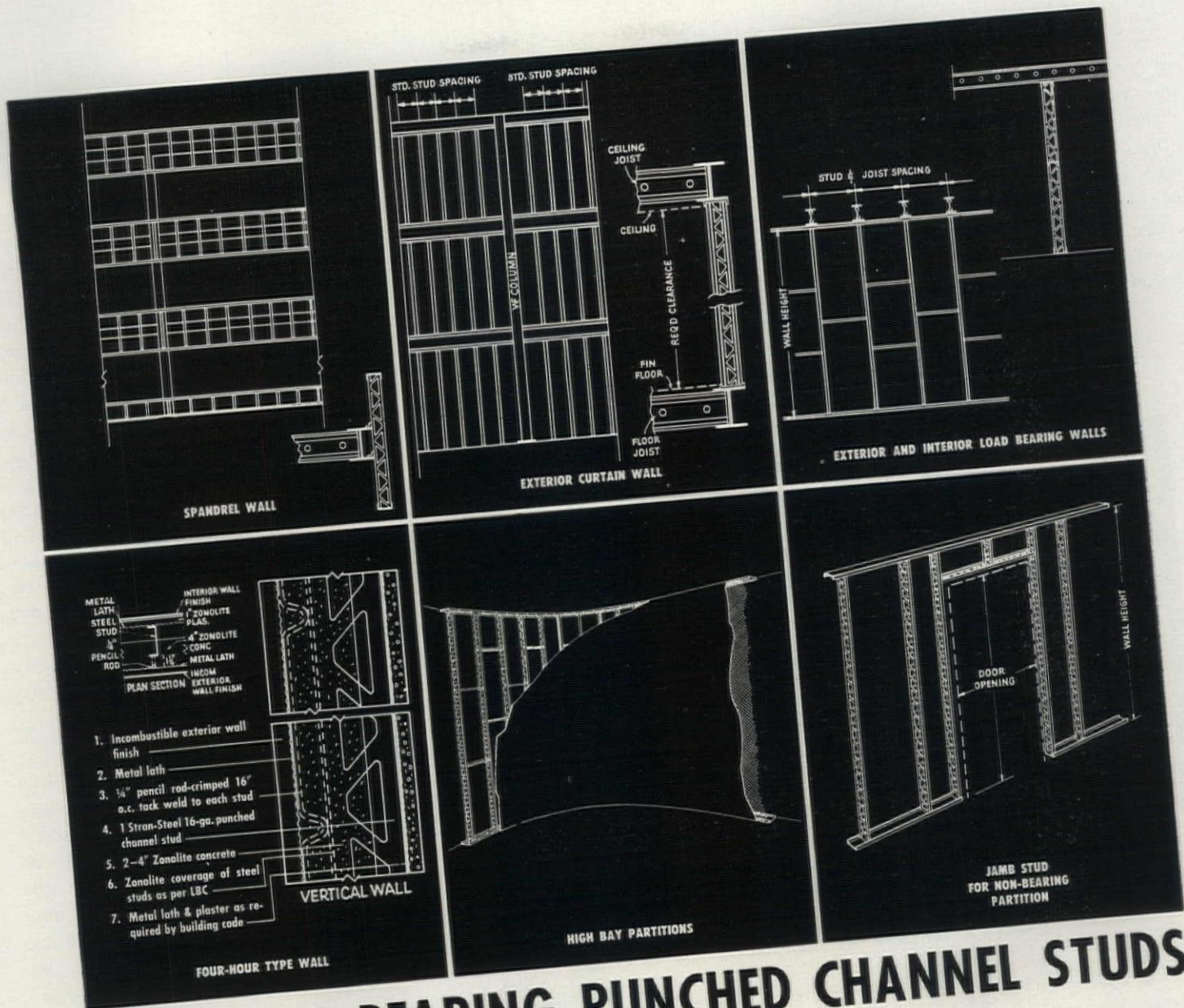
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cipalities to adopt tax policies and debt limits more closely geared to the facts of modern municipal life. In this connection, John S. Linen, municipal finance expert and vice president of the Chase Manhattan Bank, points out that 54.9 per cent of state and municipal revenue is now obtained from taxes other than real estate taxes. He recommends that debt limits be based on net debt rather than gross debt, so

as to exclude "self-supporting" debt incurred for revenue-producing projects or covered by sinking fund arrangements. Frederick L. Bird, director of municipal research for Dun & Bradstreet and former president of the Tax Institute, estimates that resort to special financing devices in "forced evasion" of unrealistic and outmoded tax and debt restrictions has often compelled states and municipalities to

pay interest rates from $\frac{1}{2}$ to $1\frac{1}{2}$ percentage points higher than if they had been free to issue "full faith and credit" bonds.

Aid to private facilities

In addition to publicly financed projects during the coming decade, private individuals and organizations will build some \$35 billion of "public use" facilities (excluding public utilities). These, however, will not pose any problems for taxpayers, for the citizens who want them will pay for them voluntarily—with their individual contributions, pledges of support, etc. Nevertheless, there are two types of private institutions that can qualify for federal financing assistance under some circumstances: colleges and nonprofit hospitals.

Under the "college housing" program of the Community Facilities Administration of the Federal Housing and Home Finance Agency, both private and public colleges and universities can obtain repayable loans to build student and faculty "housing" accommodations and "related" facilities, such as student unions, cafeterias, and health centers—provided private financing is unobtainable. This same program also authorizes loans for similar facilities for interns and nurses in training at both public and private nonprofit hospitals.

Since 1948, under another federal program, the Hill-Burton program administered by the U. S. Public Health Service, private nonprofit institutions have been able to obtain limited federal grants to build hospitals and medical facilities in areas that lack them.

Whether all these community facilities are paid for or financed, however, whether they are purchased with private or public funds, the entire community usually gets full value from them. For every worth-while project makes the community a richer, more agreeable, and more attractive place—and becomes an economic as well as a social asset. An individual property owner or his family may never use a particular community building. But whether the facility is close by (perhaps a school in the immediate neighborhood) or more distant (perhaps a recreation center or a hospital in another area), every citizen's property and estate is rendered more valuable as the result of each new community facility erected anywhere in his town, his city, his state—or his nation. **END**

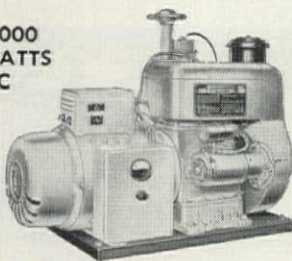


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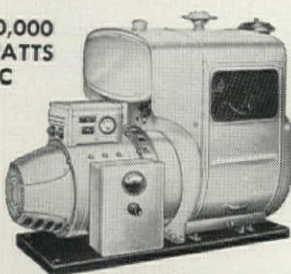
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THE MARKETS OF THE SIXTIES

For some time now businessmen have been talking and thinking about the Sixties as a *distant* bonanza—now they're almost on top of us. Close enough so that it's possible to project many dimensions of the new markets with reasonable confidence—and certainly close enough to suggest that management begin a critical examination of the general character of the markets ahead. Now, in the January issue just out, the Editors of *FORTUNE* begin a new twelve-part series: *The Markets of the Sixties*.

Some Highlights...

The Changing American Taste. What will consumers want next? In light of changing occupations and rising incomes, the spread of education, the trend to bigger families, the decline in proportion of foreign-born, decline in proportion of people who remember the Depression, etc., what is the outlook for spending vs. saving? Suburban vs. city living? Boats vs. cars? Summer homes? Private schooling? Air conditioning? Bigger houses? Color TV? And how will current trends in "discretionary spending" affect business?

Technology. Here the Editors will focus on the scientific and technological advances that might lead, within the next decade, to new products and wholly new markets, or to higher productivity and hence higher purchasing power. Industry's tremendous Research & Development investment of the past ten years is now starting to pay off.

Population. Any businessman using population projections more than a year or so old is probably using figures that are too low. The U. S. is likely to grow by three Texases and reach 200 million by 1970. What effect will this have on the labor force, and on the marketing and investment decisions of the Sixties? The Editors will also examine an intriguing question raised by at least a few economists in recent years: Are all these babies necessarily such a good idea?

Productivity. At the moment we are in the midst of one of the greatest productivity spurts in U. S. history, coming right after one of the worst showings (1956-57) ever. Does this roller-coaster experience leave us more likely or less likely to improve, in the

1960's, on the long-term growth rates in output per man-hour? In essence, how much can the real income of the U. S. be raised in the next decade?

Where Will the Money Go? Assuming $x\%$ increase in productivity over the next ten years, what kind of Gross National Product does that add up to? Maximum? Probable? Minimum? How much for defense and the rest of government? How much for investment? How much for consumption?

The New Society. The income revolution of the Fifties is still in full swing. Will it continue? What will be the impact on business of the occupational revolution now gathering momentum? The new masses of the Sixties will be the clerical-service-skilled worker-technician-professional people.

The Size of the Markets. How much will be spent for consumer goods (food, cars, clothing, shelter, appliances, vacations, etc.) over the next ten years? What are the implications for the industrial market?

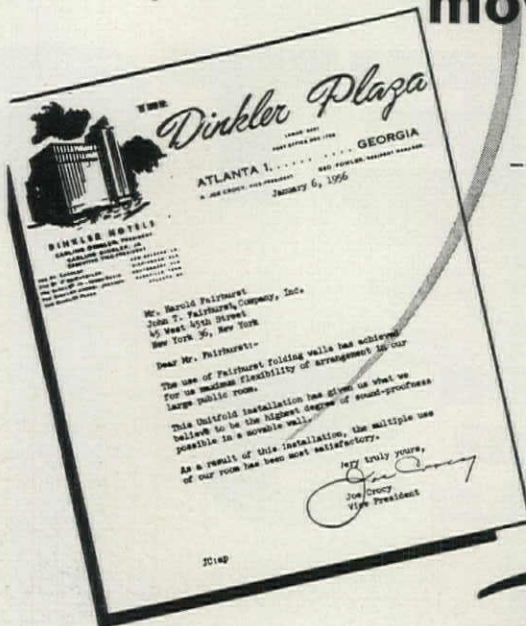
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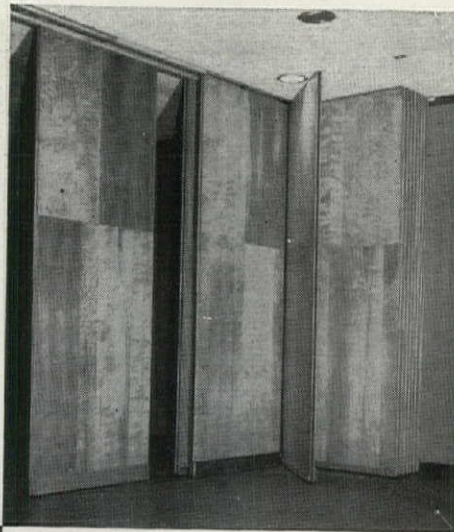
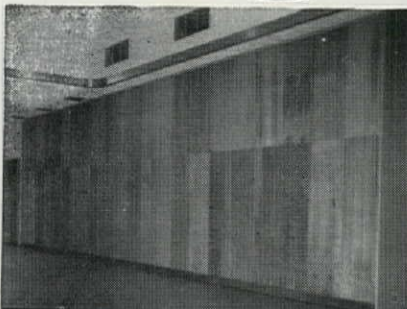
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campus to the community. It now has three scattered locations in heavily populated northern New Jersey (Teaneck, Rutherford, and Florham Park), to which 11,000 night and day students commute by car from all parts of the state.

To date, Fairleigh Dickinson has not considered itself able to afford architectural excellence. It was started on a shoestring (Banker-Industrialist Fairleigh S. Dickinson's gift of a \$350,000 Victorian castle), and, although it has been greatly strengthened by contributions from local businesses, most of the \$14 million spent on physical plant has gone into reconverted buildings that the university acquired when and where it could. When the trustees learned that the 184-acre Twombly estate in Florham Park was being offered for a reasonable sale price (\$1.2 million), for example, they agreed to buy it quite without benefit of any master plan of growth. Such a plan is now being prepared by New York's Fellheimer & Wagner.

It might be argued, of course, that the millions of dollars spent for slapped-together accommodations for a minimum program might have been better spent if more definite, qualitative ideas had been worked out of what the university wants to do—and be—in the community. But, on the other hand, Fairleigh Dickinson in 1958, for the third year in a row, could boast the fastest-growing enrollment, percentage-wise, of any university in the U.S. Because Fairleigh Dickinson is there, thousands of mobile, home-based young people are being educated who might otherwise not get a college education at all. Fairleigh Dickinson is an ingenious, if makeshift, arrangement that has brought culture within the reach and price range (annual tuition: \$650) of middle-class suburbia.

Thus, in an enormous variety of ways, U.S. universities are already striving to meet their new civic-cultural responsibilities. They will need the most talented assistance in architecture, planning, and financial imagination to accomplish their purposes. If they succeed and if they can derive new strength from their more intimate contact with the community, they may provide the cultural focus for history's first great, mass civilization. END



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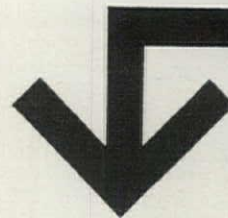
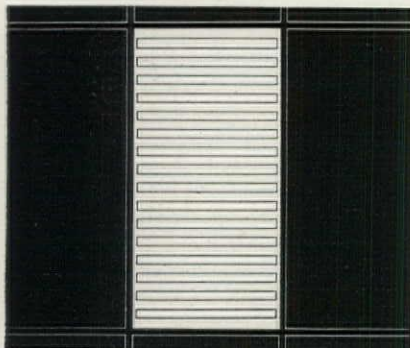
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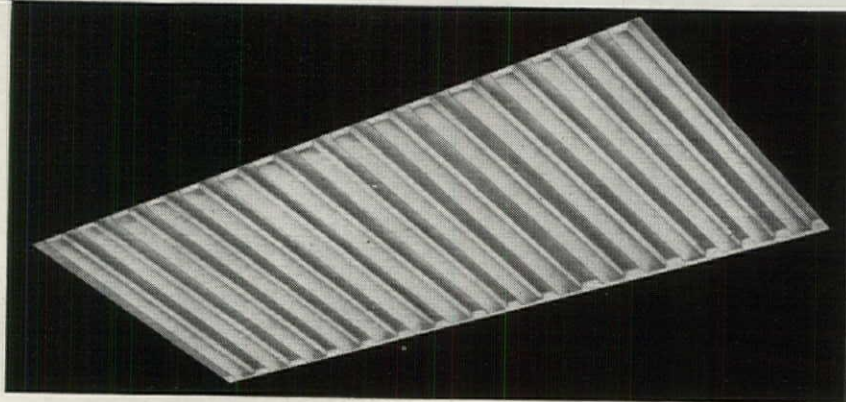
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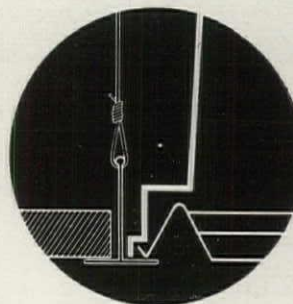


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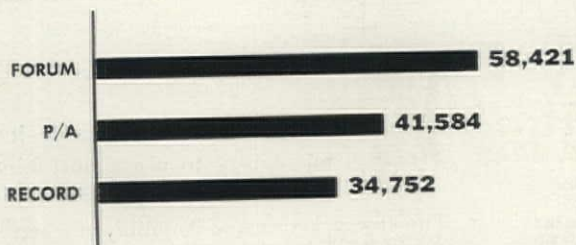
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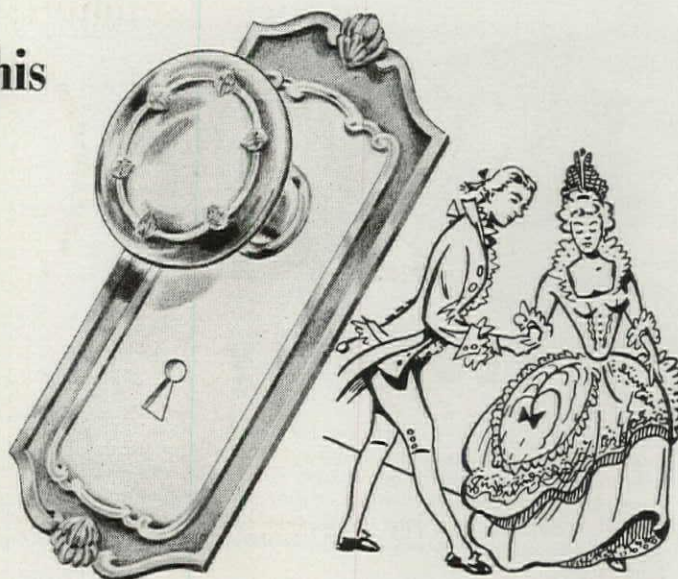


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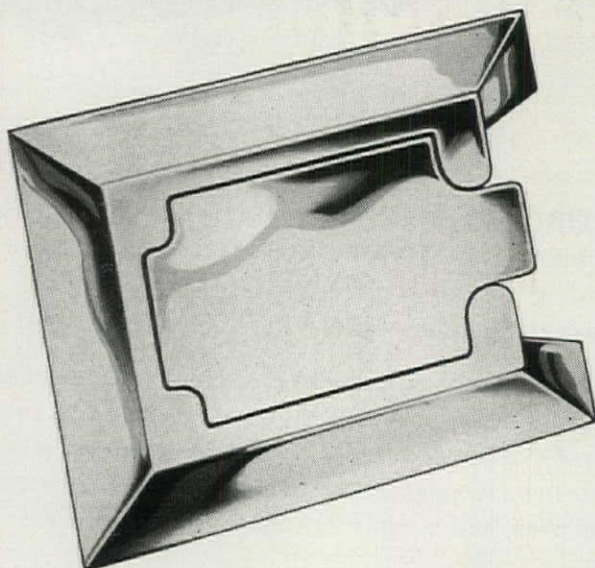
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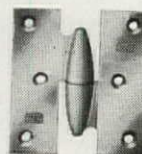
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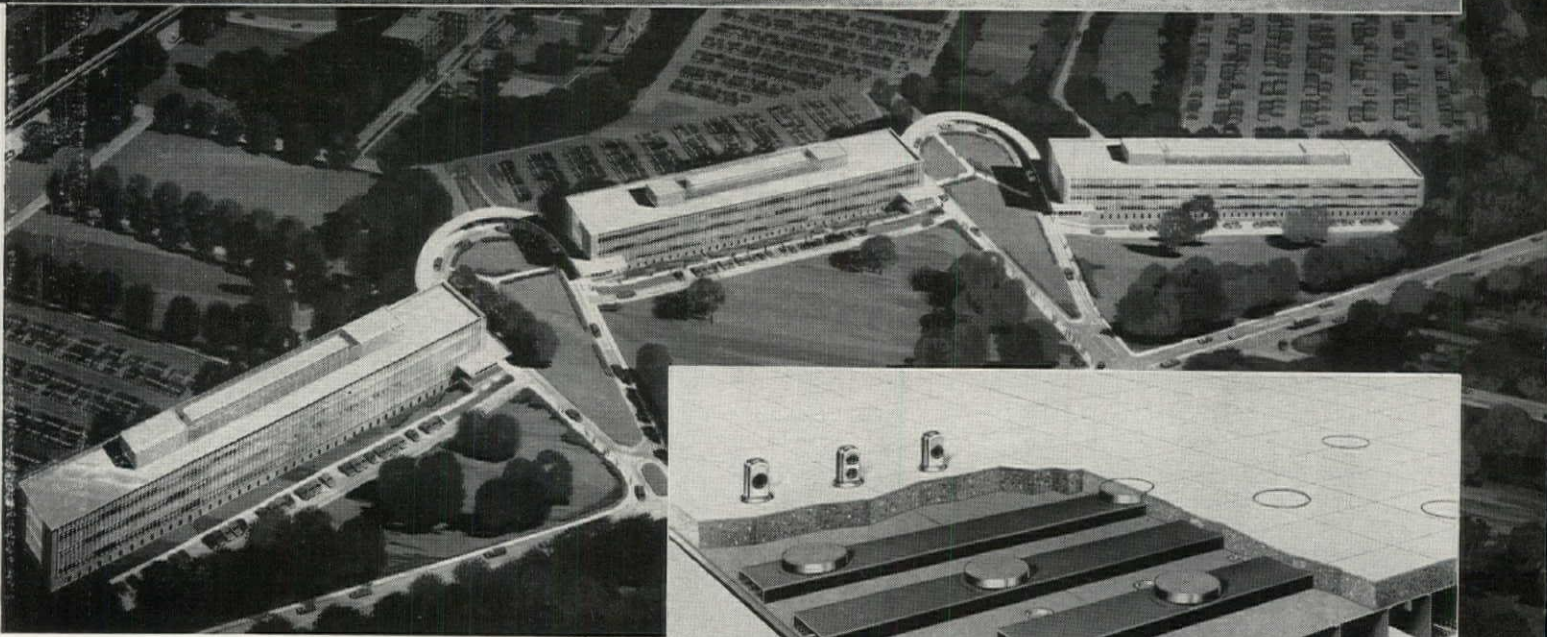
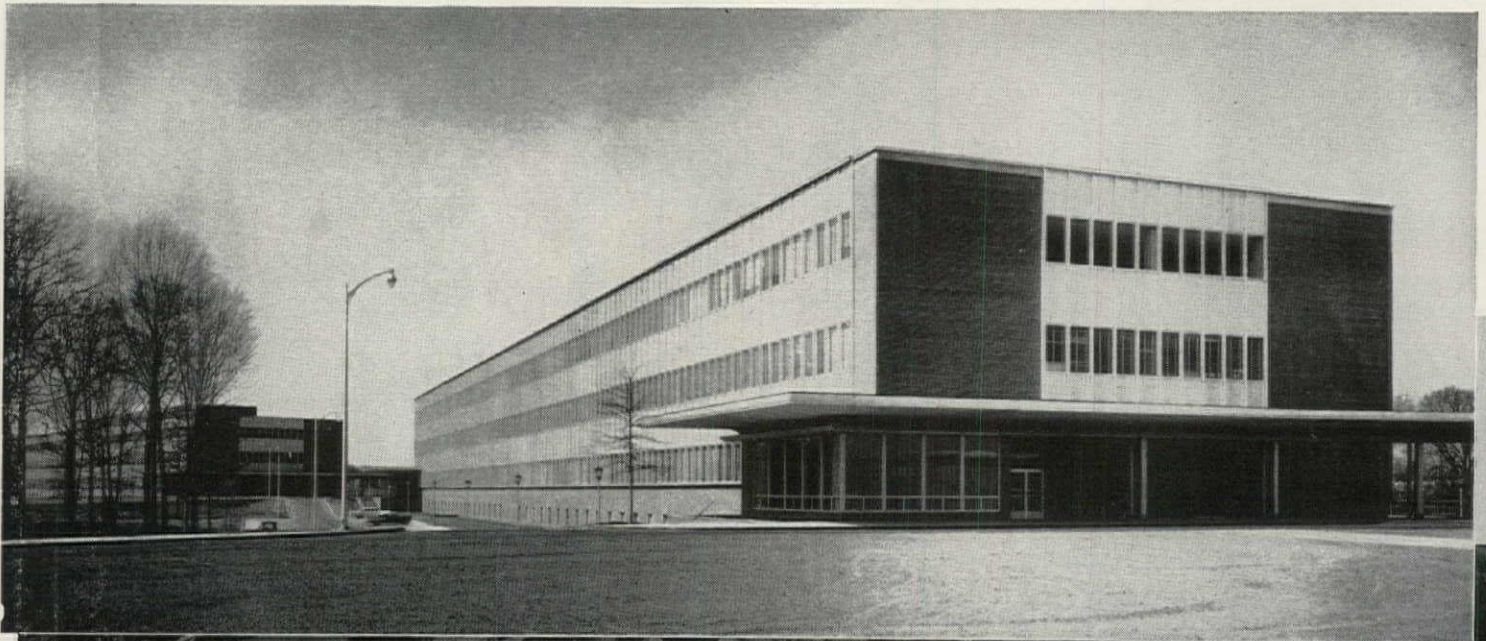
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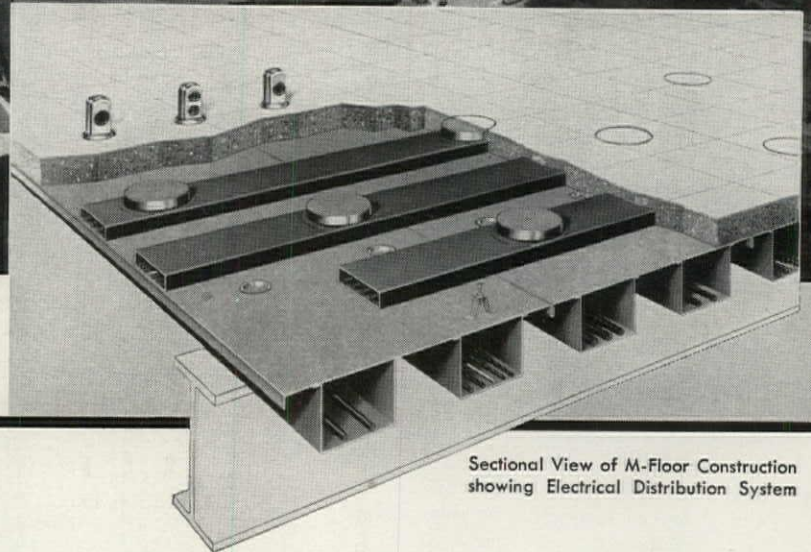


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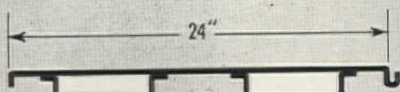
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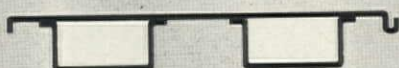
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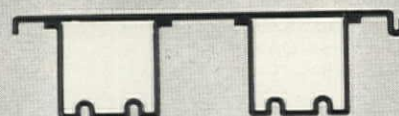
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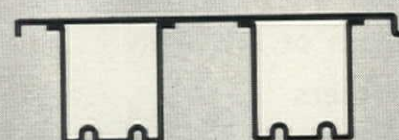
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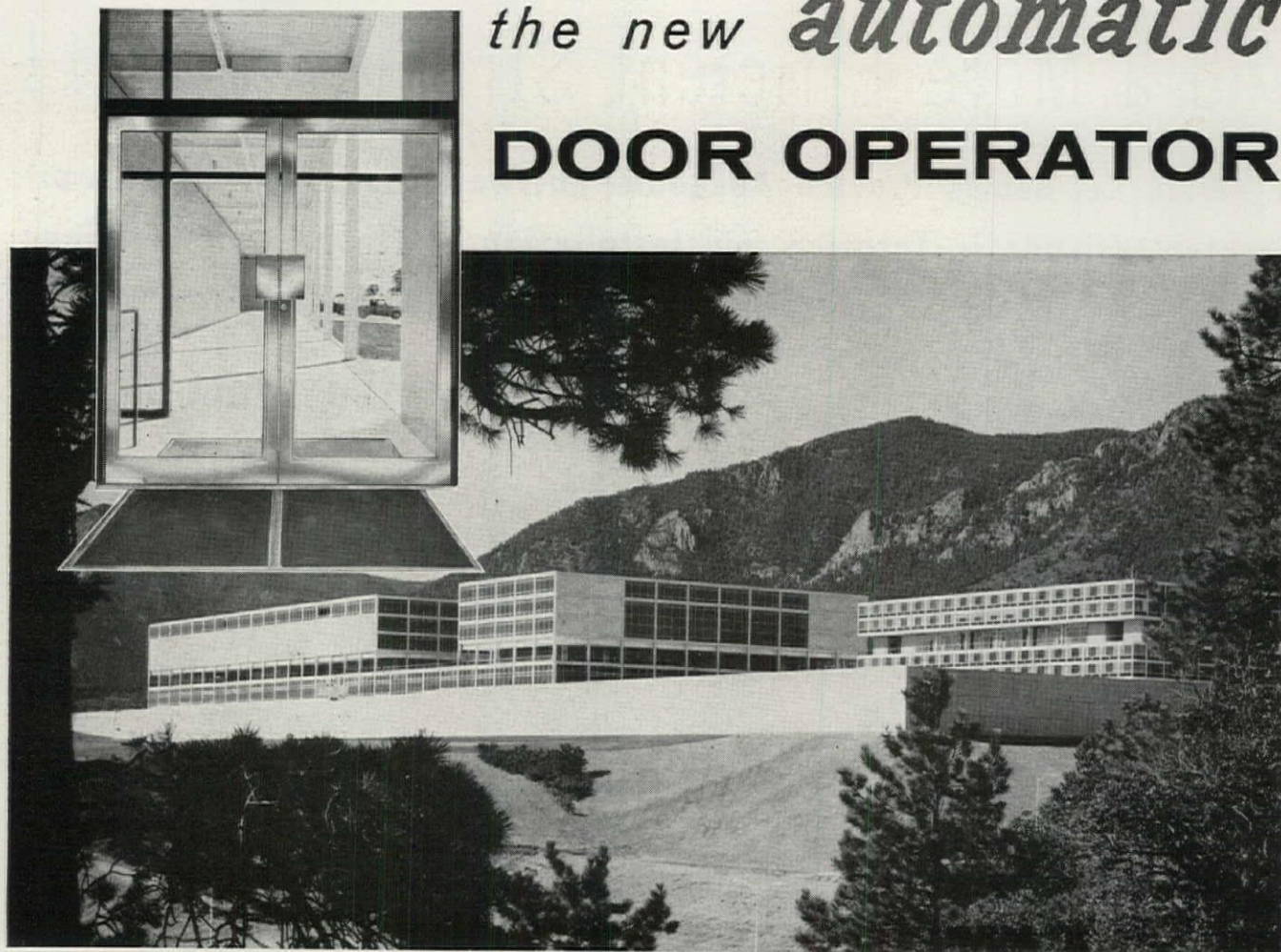
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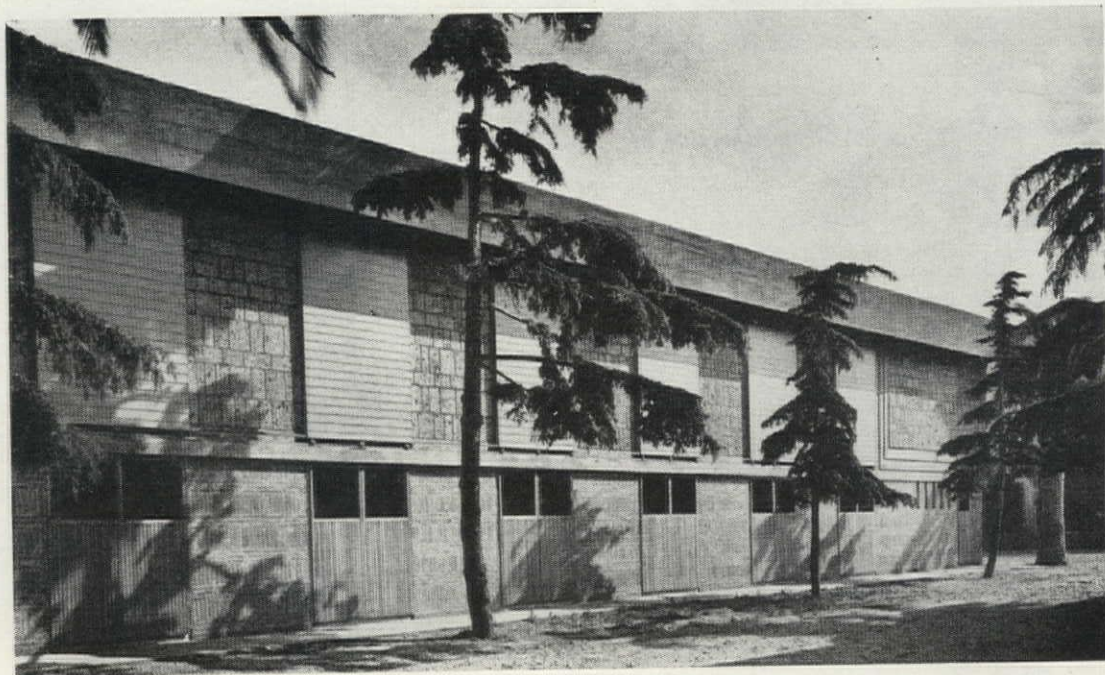
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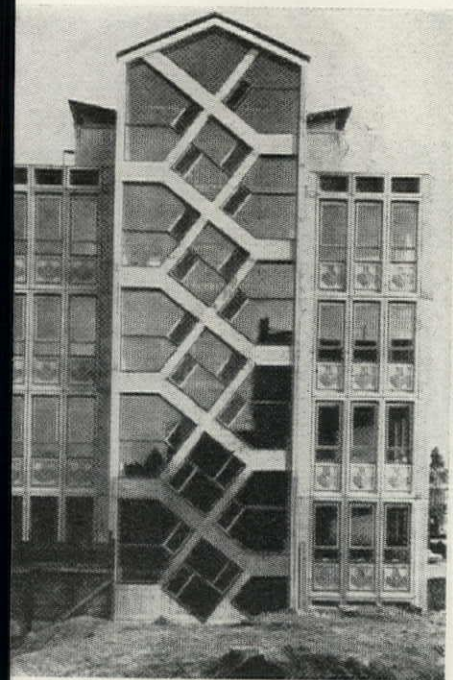
ROMAN OUTPOST

This fortresslike movie theater, located in a swamp 18 miles west of Rome, was built to withstand the assaults of extreme humidity. Except for an occasional decorative loophole (photo above) the thick, brick side walls are breached only

by emergency exits and ventilating windows. The windows are sealed extra tight by means of electrically operated shutters (rolled down in photo below). Inside, no plaster relieves the starkness of the brick vaults, for plaster would

deteriorate in an atmosphere so unrelievedly damp. The wonder is that under these rugged conditions and within the limits of a meager budget, Architect Eugenio Rossi was able to give the natives such a handsome cultural outpost.

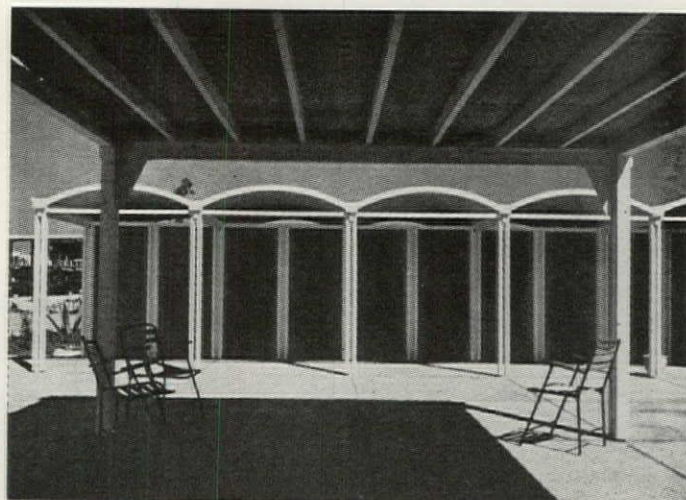




COURTESY "BOUW"

DUTCH PUZZLE

For the Dutch firm of Asmsterdamsche Ballst, Architect H. T. Zwiers has designed an office building that gives its owners the noteworthy headquarters they wanted but that sometimes puzzles design-conscious passers-by. The puzzle: which diagonals of the highly decorative stair well (left) are functional and which are purely design elements? Presumably the solution is easier to find from within.

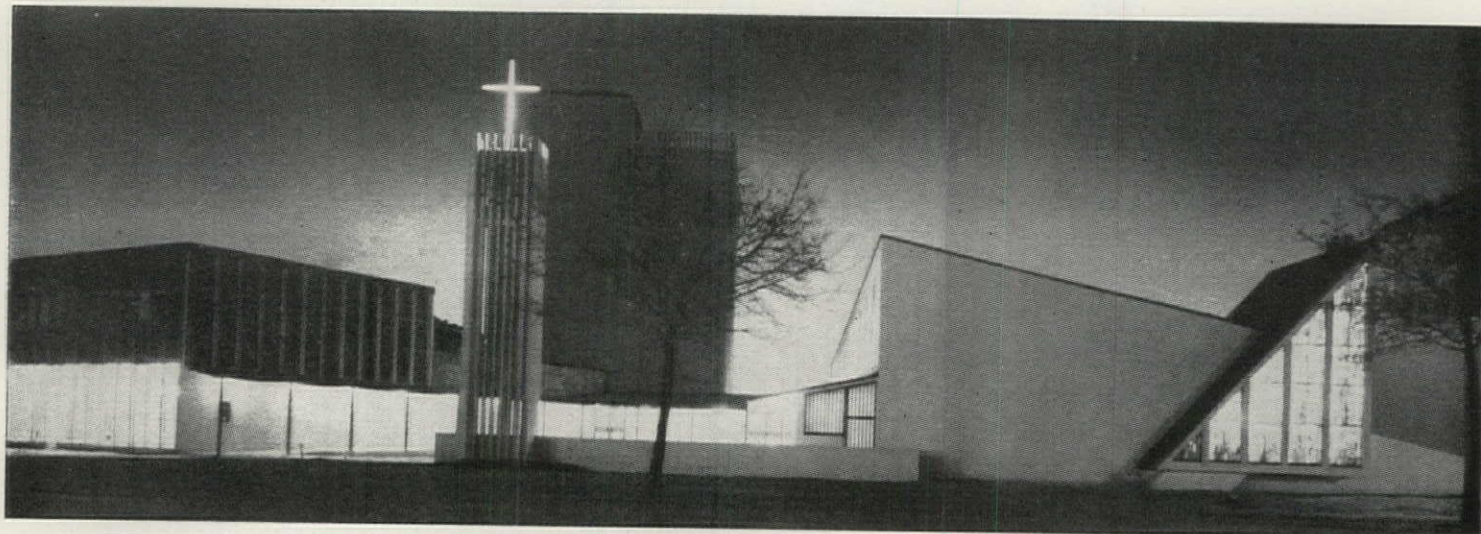


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GREEK PAVILION

The bath pavilion pictured above is part of a 72-acre resort that opened near Athens last summer, the first attempt to provide modern facilities for Greek beachgoers. The pavilion, designed

by Architects Vourekas, Sakelarios & Vassiliades, has a salty, international air; it is framed in Swedish timber and roofed over by hardwood vaults that recall recent Florida structures.

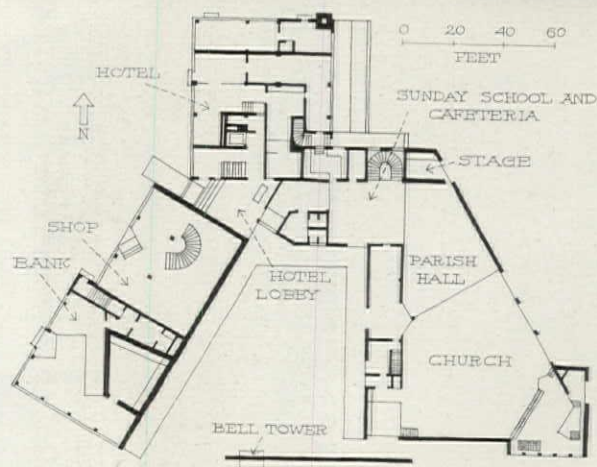


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SWEDISH PARTNERSHIP

On a triangular site outside Stockholm the multipurpose building shown above has been erected as a result of an unusual partnership between a hotel, a bank, and a church. The bank (at left in photo above) and the hotel (background) jointly financed con-

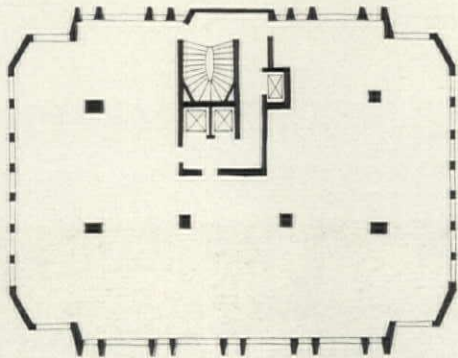
struction of the church (right). The church, whatever its incorporeal contribution to the grouping may be, makes a definite physical contribution; its bell tower of prestressed concrete beams and its glazed gable serve as the dominant design factor.



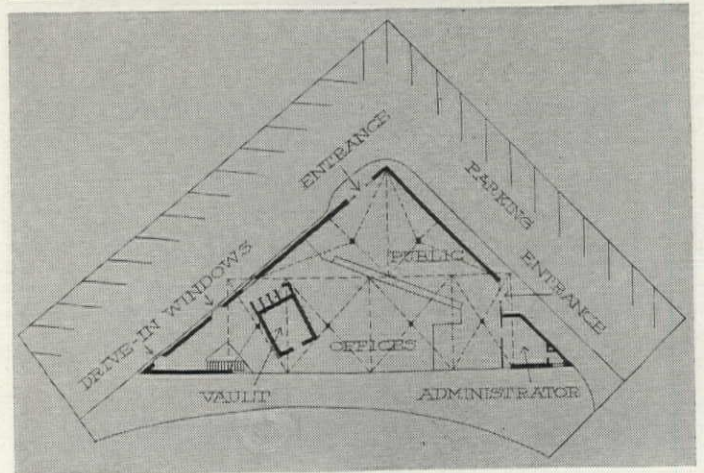
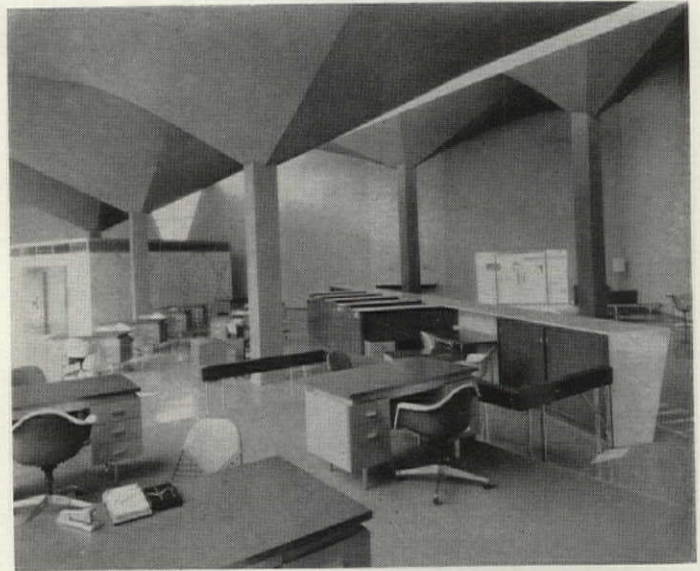
ITALIAN TOWER

That the art of trying to look taller and slimmer is practiced as finely in Italy as anywhere is illustrated by this ten-story office and apartment building in Milan. Architects Eugenio and Ermenegildo Soncini devised a structure that seems to soar because of its divided, tapered exterior columns. As seen in the plan (below), the

tile-faced columns also serve as vertical sun breakers. There is a remarkable, though accidental, resemblance of this "tower" to U.S. Architect Paul Rudolph's Blue Cross Headquarters in Boston (FORUM, August 1958), a building which integrates a complicated duct system with its structure to achieve a similar façade effect.



COURTESY "L'ARCHITETTURA"



CUBAN UMBRELLAS

Imaginative Caribbean Architect Max Borges Jr. decided to invert the standard layout when planning the Banco Nuñez, a drive-in bank in Havana. That is, he gave the employees the better part of the floor (see plan, above), while restricting customers to left-over areas. The architect also decided to roof over the

triangular floor by means of a series of square-topped umbrellas. The result is that the corners of the squares project out at two points (see plan) beyond the bank's walls. These unusual features are not evident at night, however, when the bank looks as slick as anything on Madison Avenue (middle photo).

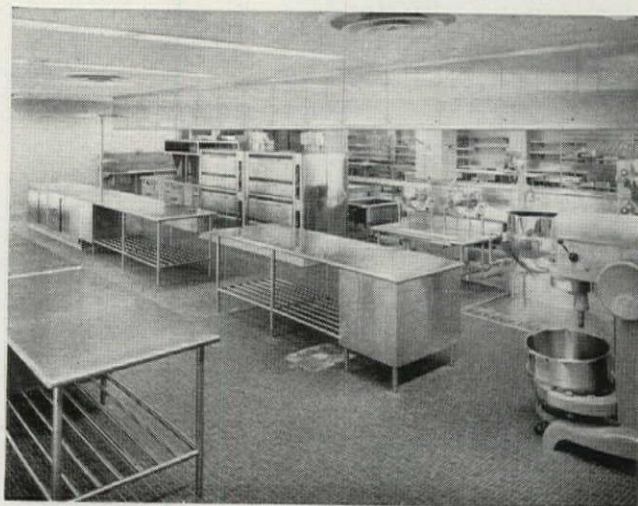
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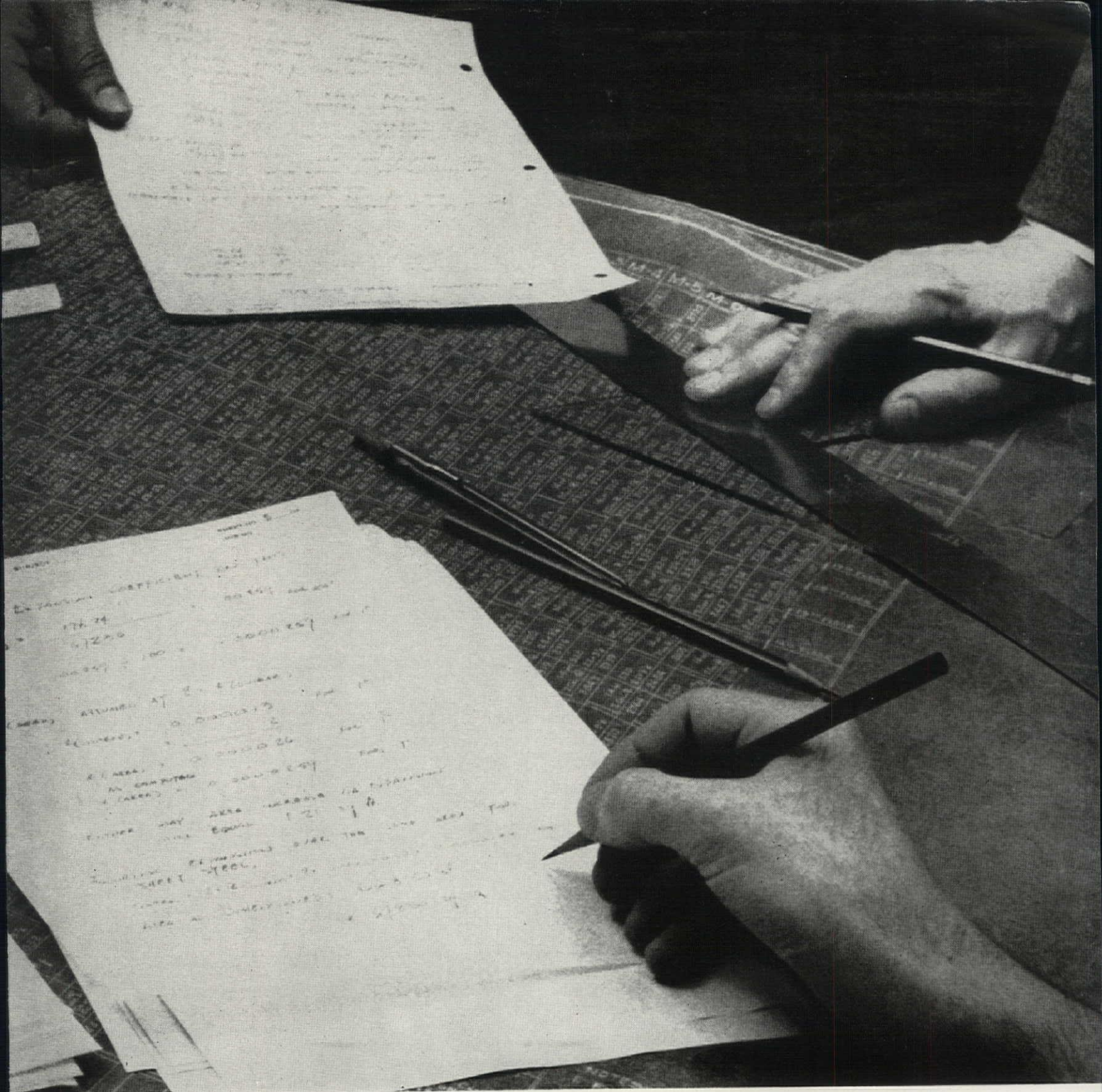
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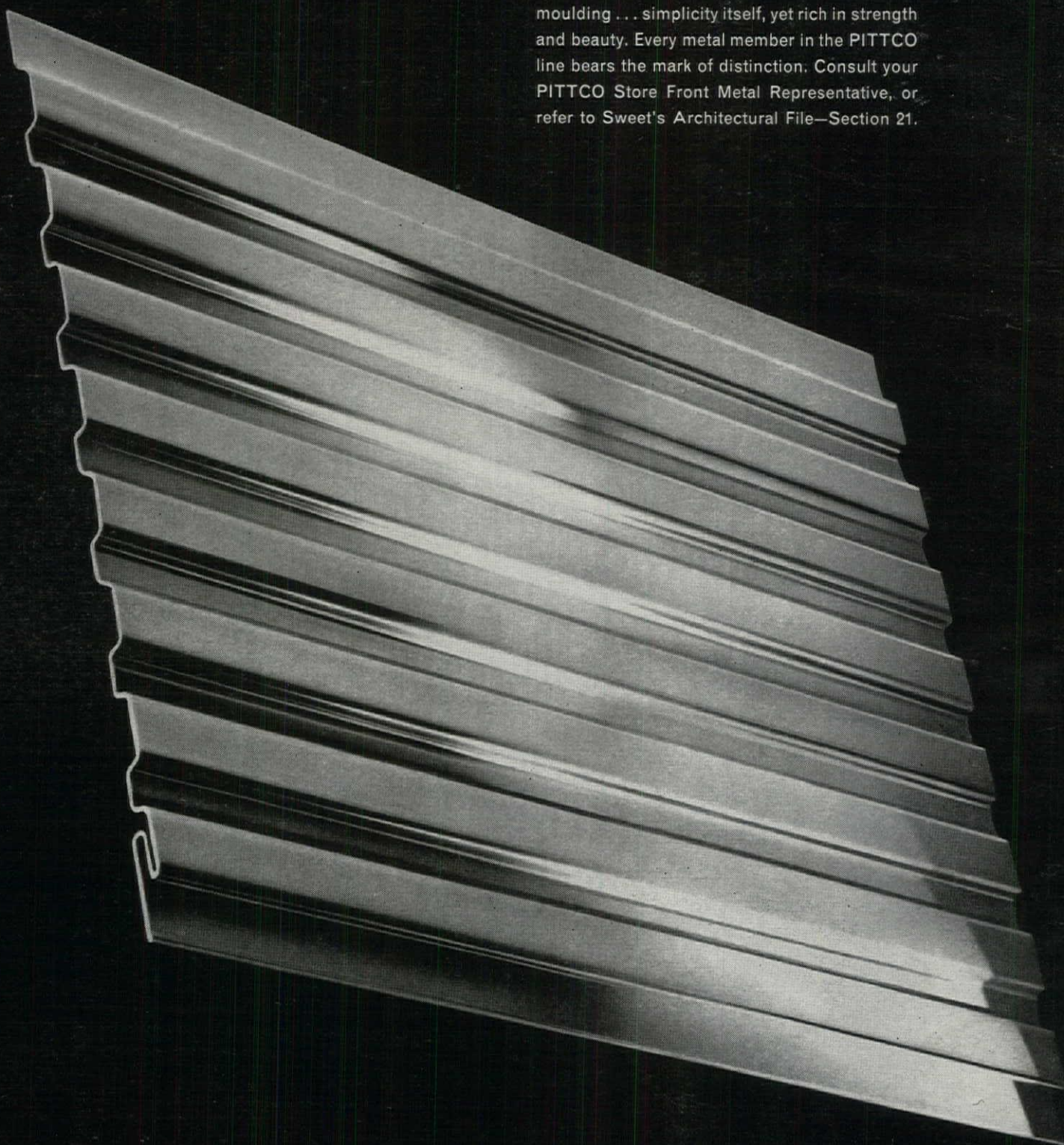
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