

THE MAGAZINE OF BUILDING MARCH 1962

# FORUM





## THE CHALLENGE TO THE CONSULTING ENGINEER

By Harold P. King, President, Consulting Engineers Council

*Unparalleled scientific contributions, greater in the past 50 years than during mankind's entire previous existence, presage almost incomprehensible developments and still more demanding problems for the engineering profession.*

Technological developments have come with such breathtaking speed and have affected so many areas of mankind's comfort and well-being as to all but bewilder the many professions, arts, and crafts which must keep pace.

As a member of the design team, working in liaison with the architect, the consulting engineer is called upon to relate these new developments to the hard facts of valid interpretations and complex mathematical solutions — applying an imaginative concept that translates space and form into a usable entity.

Consulting engineers are now in a position to prove their value, not only as a very important segment of our private enterprise system, but also as the technical experts — the originators of new, unique designs and applications, not only for earth-bound projects, but also for space exploration.

Consulting engineers are the recognized source for procuring qualified engineering services, whether they be required by private citizens, industry, or public groups. Consequently, there has been a rapid growth of engineering services and a phenomenal increase in the numbers of established Consulting Engineering firms during the past two decades. The era in which we are living is one of specialization and advancing technology.

Never before, since engineering won recognition as a profession, has there been such an insatiable demand for constant expansion of our knowledge. In many areas the engineer is confronted with the need for fresh schooling simply to keep pace with developments, so that intelligent interpretations can be made and translated to the drawing board.

Where all this will lead no one actually knows. An engineering mind, brilliant enough ten years ago to conceive the developments which are commonplace today, and courageous enough to predict them, would have been faced with blank disbelief.





Today, who can predict what energy will come from untapped sources — what solar energy, or even the heat pump, will do to form and structure now regarded as standard?

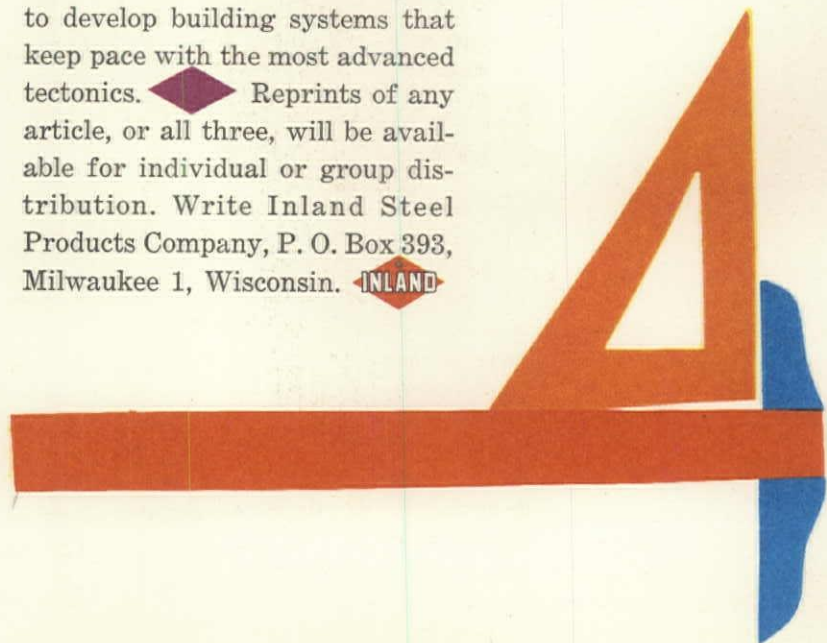
Because he is the technical member of the team, the consulting engineer must find the answers to these questions and many others. He must master the still amorphous technology dealing with a vast array of new products and materials. It may be that he will have to come up with an *entirely new technology* before another decade has passed.

I believe that consulting engineers, individually and collectively, are ready and willing to accept this challenge. They are proving it daily.



chloé

In its series of three related articles on subjects of immediate concern to the building industry, Inland is proud to present the second, "The Challenge to the Consulting Engineer," by Mr. Harold P. King, President, Consulting Engineers Council.  Primarily engaged in interprofessional practice, Mr. King is intimately aware of the problems of architect-engineer relationships. He has worked for an architectural firm, has been a partner in an architect-engineer firm, and at present is a principal in a practice that specializes in structural engineering.  The third article, to appear in a future issue in 1962, will explore the problem of outmoded building codes. This will complete the current series in which we at Inland are trying to be of service. At the same time, we are aware of our continuing responsibility as producers to develop building systems that keep pace with the most advanced tectonics.  Reprints of any article, or all three, will be available for individual or group distribution. Write Inland Steel Products Company, P. O. Box 393, Milwaukee 1, Wisconsin.  INLAND



*Urban Affairs Department shelved (below)*  
*The Nation's shortest work week (page 11)*  
*Recognition of slurbs (page 11)*  
*Study of U.S. recreation space (page 13)*

## CONGRESS KILLS CABINET SEAT FOR CITIES



"Both equity and common sense require that our Nation's urban areas . . . sit as equals at the Cabinet table." With these words, President Kennedy touched off one of the biggest domestic arguments of the postwar years. It concerns, fundamentally, the role the federal government should play in the rampant growth of America's urban areas.

Although a Department of Urban Affairs and Housing was suggested during terms of other Presidents (the last proposals being made to Eisenhower in 1956 and 1957), the subject was never pushed with such vigor and political gamesmanship as now. Neither vigor nor gamesmanship, however, proved sufficient.

After announcing his plan on January 11, the President moved fast, had an appropriate bill introduced in the House; but, on January 24, the House Rules Committee refused by a vote of nine to six to clear this bill for floor action. Then, under the executive powers granted him in the Reorganization Act of 1949, Mr. Kennedy responded the same day: "I am going to send it to Congress and give every member of the House and Senate an opportunity to give his views and work his will on this." And he added, at the same news conference, that he had every intention of making Robert C. Weaver, the able Negro administrator of the HHFA, head of the new Department of Urban Affairs if and when it was established.

### Slow burn leads to political fireworks

The reaction among some members of Congress was predictable and, in part, unprintable; for, by linking the establishment of the Urban Affairs Department with the step of putting the first Negro into a U.S. Cabinet, Mr. Kennedy had put the Repub-

licans in a highly uncomfortable position. If they helped veto his plan, they would be accused of a) being anti-Negro and/or b) anticity (which is like being anti-voter) and of c) having reneged, in a little over a year, on the promise of their own 1960 na-

tional ticket (Henry Cabot Lodge had pledged that a GOP cabinet would contain a Negro member).

This, however, was not all. The President had also succeeded in tying in knots one of his potential 1964 opponents, Governor Nelson Rockefeller, who had originally coauthored a very similar suggestion submitted to President Eisenhower in 1956, and who was now reversing himself for what his critics felt was personal, political advantage.

Predictably, southern Democrats were opposed to the Weaver appointment and would therefore vote against it. Southern Democrats from rural areas, however, would probably have voted against it anyway.

### Congress on the spot

Mr. Kennedy sent the plan before Congress on January 30. Under the reorganization strategy, the President's proposal could have been vetoed by a simple majority in either chamber; if not, then the plan would have gone into effect after 60 days. Moreover, Congress could not amend the plan, as it can ordinary legislation.

After holding hearings, the House Government Operations Committee approved the bill for possible floor action on February 8 by a reported vote of 17 to 8. Meanwhile, the controversy was growing, and several angry Republican voices were heard.

House GOP leader Charles A. Halleck, nonurbanite from Rensselaer, Ind. (population 4,740), denounced the plan as "sham tactics," covering up the Democrats' civil rights shortcomings.

The arguments—both pro and con—thus became hopelessly enmeshed in partisan politics. What was being proposed, however, should have been considered on

its practical merits. Was it a streamlining of Weaver's present 13,600 man "administrative monstrosity," the HHFA, and its transformation into an eleventh Cabinet level department, to cover only present PHA, FHA and FNMA functions? Or was it part of the "alarming trend toward an all-powerful, central government," as the U.S. Chamber of Commerce put it?

### The pros and cons

Those who favored the Kennedy proposal said, in effect, that a federal Urban Affairs Department was needed because a) urban problems cut across state lines; b) cities are not adequately represented in state legislatures; and c) a single federal Urban Affairs Department would increase the efficiency of various housing and renewal efforts now being made by separate agencies.

Among those who have taken this line are the AIA, the American Municipal Association, and the mayors of literally hundreds of cities who hope for federal funds to supplement revenue from real estate taxes and contributions from state legislatures.

Those who opposed the Kennedy proposal ranged all the way from those who have a vested interest in the present imbalance between country and city on state and federal level, to those who agree that a federal effort is, indeed, needed to help the cities, but doubt very seriously that creating still another federal agency, with cabinet status at that, would produce anything except more red tape. Among those who opposed the Kennedy plan, for one reason or another, were the U.S.C.C., the N.A.M., and NAREB, which held that the proposal was "a grand design to elevate housing to the Cabinet

*continued on page 7*

# NOW...FROM RUBEROID/MATICO

## 57 Handsome Colors and Styles in Vinyl Asbestos!

A Complete New Color Line Meeting Every Demand and Specification in Top Quality Vinyl Asbestos Floor Tile

Here in shining array is the handsomest, most up to the minute line of Vinyl Asbestos colors available. All the popular styles are included; marbled, confetti, tweed, cork tone, wood hue and Lode O'Gold patterns. Ruberoid/Matico's new Vinyl Asbestos gives you smooth, tight surface, ease of cleaning, long wear, added flexibility. It resists grease and acids;

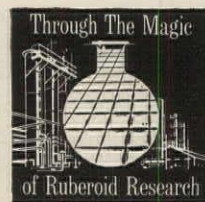
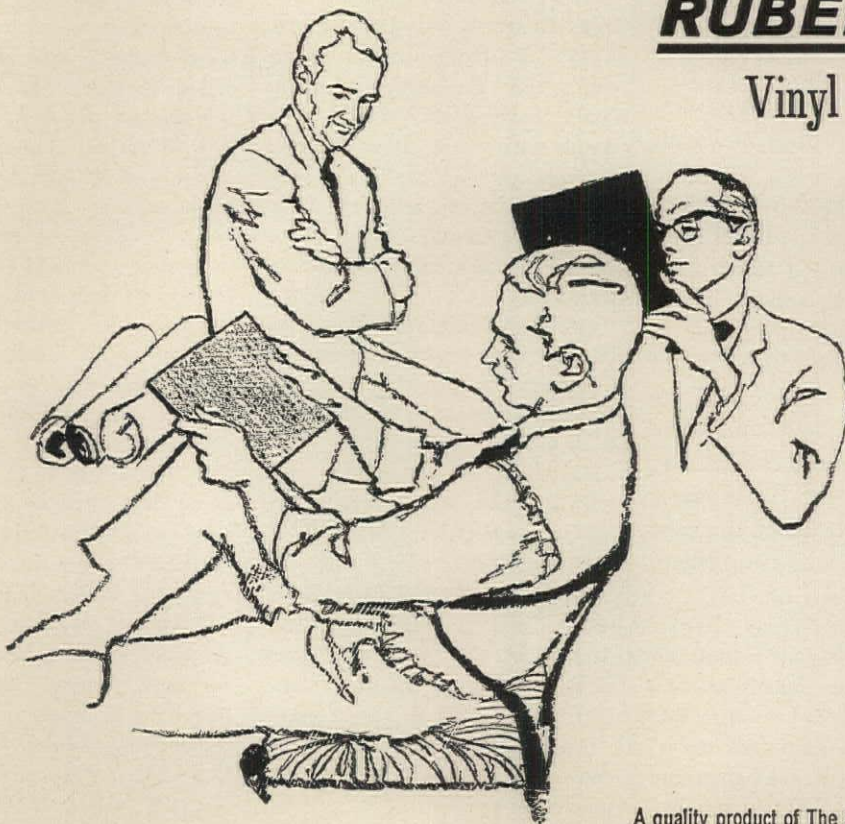
has greater indentation resistance too! True dimensions, sharp clean corners, assure flawless installation.

Check Ruberoid/Matico's improved, revitalized Vinyl Asbestos line for unexcelled quality and value! 57 colors—9 x 9— $\frac{1}{8}$ ,  $\frac{3}{32}$  and standard gauge.

Ask your Ruberoid/Matico distributor or representative for further information

### **RUBEROID MATICO**

Vinyl Asbestos Floor Tile



A quality product of The RUBEROID Co., 733 Third Avenue, New York 17, N.Y.

Continued from page 5

level"; NAHB contended that the reorganization would discourage home construction by relegating housing agencies to a less important place.

While Congress was preparing to vote, the predictions as to the outcome varied considerably. Senator Hubert H. Humphrey predicted that the Senate would approve the plan on February 19 by a vote "in the neighborhood of 52-47." He was wrong: a move to force a quick Senate floor test

on the proposal was defeated on February 20 by a vote of 58 to 42—thus paving the way for the House vote which then decisively vetoed the plan. In this way, a Senate coalition of Republicans and southern and western Democrats won its battle; whether or not it also won the war remains to be seen. For the need for increased efforts to help the cities at federal level remains, and even Governor Rockefeller seemed to concede that point.

### FEDERAL HOUSING BUDGET SETS A RECORD

As part of his \$92 billion budget, President Kennedy has called for record expenditures on housing programs administered by the Housing & Home Finance Agency. For fiscal 1963, nearly \$2.5 billion in "new urban activity" has been provided—more than one-third more than the \$1.8 billion slated for spending in fiscal 1962.

**Urban renewal:** Although most of last year's \$2.3 billion authorization is still uncommitted, the renewal program is beginning to move more quickly. In fiscal 1963, 155 new projects are expected to reach the execution phase, a 24 per cent increase over the number that will be started in fiscal 1962. About \$600 million of capital grant funds will be earmarked in 1963, down slightly from the \$700 million in this fiscal year. But the growing pace of actual building under the program is better reflected by the disbursement figures, which will rise from \$211 million in 1962 to \$325 million in the next fiscal year.

FHA mortgage insurance in renewal areas will likewise rise in the next fiscal year. An estimated 20,000 units of Section 220 housing are expected to be underwritten in fiscal 1963, compared to 7,314 units in 1961, and an estimated 10,000 this fiscal year. But the most spectacular increase is anticipated in the new Section 221d3 program for relocation housing in renewal areas. The gimmick that makes this program so popular is a below-market interest rate feature (see page 9 for first results of the program).

By 1963, some multifamily relocation housing may be built under this section. The success of the program will depend on continuing authorizations for the Federal National Mortgage Association's special aid functions. These are to be more than doubled, from \$145 million of net expenditures in 1962 to \$310 million next year.

**Public housing:** An estimated 35,000 new units of public housing of all types are expected to go under contract in fiscal 1963, compared with 30,000 this year. Actual spending for new public housing in fiscal 1963 will total \$192 million.

**Other programs:** Rehabilitation housing will be increasingly important, and budget estimates show Section 220 (urban renewal) rehabilitation housing rising from a present 10,000 units to 15,000. But FHA's standard apartment program, Section 207, will experience some decline in that period, from 36,000 units down to 31,000 units. Total multifamily applications estimated under FHA programs will rise from 132,000 to 150,000.

The Administration has also requested \$100 million for an urban transportation program, which will be announced with the release of a study now being completed by the Department of Commerce and the HHFA. Likewise, a request has been made for \$1.5 million of additional funds for urban studies and housing research, a program which is expected to cost about \$375,000 in fiscal 1962.

### YEAR'S NATIONAL AIA AWARDS ANNOUNCED

Out of a total of 382 designs considered this year, only one has received an AIA First Honor Award: Foothill College, by Architect's Ernest Kump and Masten & Hurd, featured prominently in last month's FORUM.

The jury, composed of Chairman Arthur G. Odell (Charlotte), Karl Kamrath (Houston), Paul M. Heffernan (Atlanta), Paul Hayden Kirk (Seattle), and Charles R. Colbert (New York) stated flatly that the "fundamental logic so basic to architecture was often ignored (in the non-award entries). Superficially, the

patent solution, and the lack of individuality and artistic expression were strikingly obvious. We call for our colleagues to reexamine the basic doctrine of simplicity and human need, and to strive through their works to give a greater essence to the environment they create."

Awards of Merit went to a housing group in Berkeley, Calif., by Roger Lee Associates; to a residence for a developer, La Jolla, Calif., by Killingsworth-Brady-Smith, as well as to the buildings pictured below (dates refer to publication in FORUM).



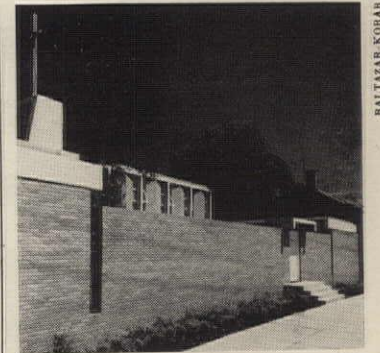
Foothill College, Calif.; Ernest J. Kump; Masten & Hurd (Feb. '62).



Tennis Pavilion, Princeton Univ.; Ballard, Todd & Snibbe (July '61).



St. John's Abbey, Collegeville, Minn.; Marcel Breuer (Nov. '61).



Convent of the Immaculate Conception, Pa.; Deeter & Ritchey.

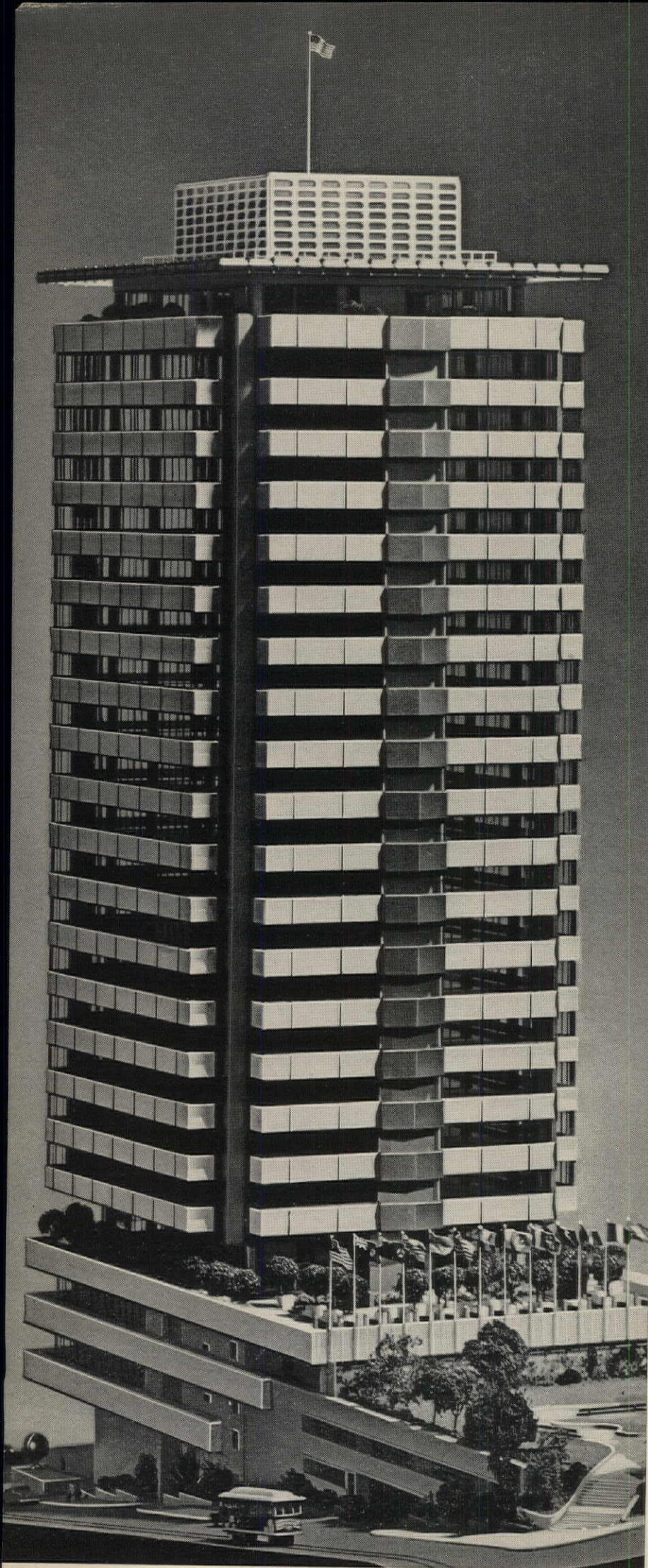


New Sarasota High School, Sarasota, Fla.; Paul Rudolph (May '60).



Towers residence, Essex, Conn.; Ulrich Franzen (March '60).

continued on page 9

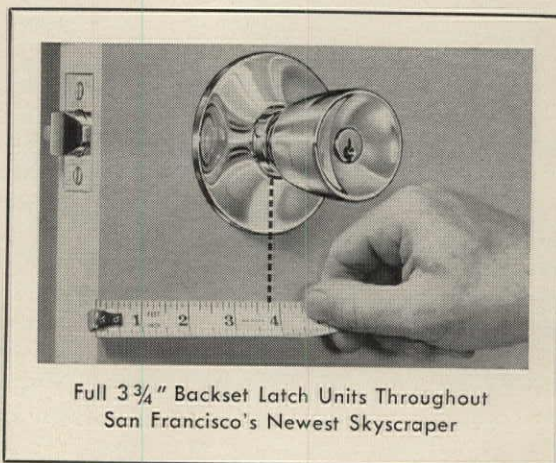


OPEN any door in San Francisco's newest skyscraper—the International Building—and you'll be in touch with Schlage's Tulip design lock in stainless steel installed with the modern full 3 $\frac{3}{4}$ " backset.

Schlage recognizes that proper *backset* is a most important consideration for ease of operation and truly *panic-proof* installations. Schlage incorporates a full 3 $\frac{3}{4}$ " backset in a *latch unit* that installs within the lock block. Architects have greater freedom of design and can be assured of ample space between knob and doorjamb.

Architects have *many* reasons for choosing Schlage. Beauty of design, durability of stainless steel, the staunch dependability of the cylindrical mechanism which Walter Schlage invented many years ago.

For commercial projects where door hardware must be beautiful — as well as of the highest quality — you're wise to specify Schlage on the modern 3 $\frac{3}{4}$ " backset.



Full 3 $\frac{3}{4}$ " Backset Latch Units Throughout San Francisco's Newest Skyscraper

**SCHLAGE**<sup>®</sup>  
CYLINDRICAL LOCKS

*Beauty where it shows . . .  
quality where it counts*



Schlage Lock Company  
San Francisco • Los Angeles • Chicago  
New York • Vancouver, B.C.



Continued from page 7

### FHA'S SECTION 221d3: CHEAP MONEY NEEDED

As a minor element of last year's housing act, Section 221d3 hardly met the eye. It seemed like just another subsidized program for getting relocation housing built in urban renewal areas. And, since it was available only to certain rather specialized groups (e.g. non-profit or limited dividend corporations, and local public agencies), it was not regarded as a potentially strong factor in the rental housing market.

However, Section 221d3 contained a key gimmick, which has proved instrumental in making it the unexpected hit of the 1961 Housing Act. The gimmick: FHA mortgage insurance was provided at an interest rate of  $3\frac{1}{8}$  per cent—the lowest interest rate available anywhere—and all FHA servicing fees, generally running to  $\frac{1}{2}$  of 1 per cent, were waived. The idea behind this was to get some renewal area housing built for relocation families at more reasonable cost than had hitherto been possible. (Hence, the program is often called "the below-market interest rate program.")

#### A money shortage

The low-interest program has now become so popular that it has already outstripped available funds. Because lenders would not ordinarily make loans at  $3\frac{1}{8}$  per cent, the Federal National Mortgage Association (Fannie Mae) was empowered to purchase all 221d3 mortgages from lenders at face value, thereby assuring lenders of not being stuck with low-interest bearing paper. But Congress, evidently unaware of how popular cheap building money would make the program, only allocated \$30 million of Fannie Mae's special assistance money for this purpose. When applications built to \$250 million by the end of 1961, another \$60 million was released. Now applications have soared to a whopping \$500 million—and Fannie Mae has only \$1 billion in its pot for all its special assistance programs of which 221d3 was intended to be only a small part.

If more money is appropriated for 221d3, it will make even more

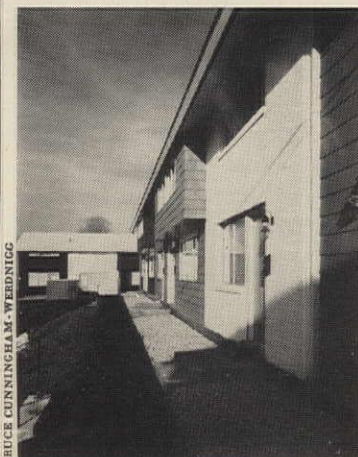
news than it has to date. Take the case of New Haven, Conn., where the first 221d3 project was occupied last month (see picture below). Originally an ordinary Section 221 relocation project, it was refinanced through a local non-profit corporation as a 221d3 so rentals could be further cut.

#### Three bedrooms: \$96

And the reduction is startling: A three-bedroom unit in the Fairway Gardens project rents for \$96 per month, including heat and hot water. This is some 20 per cent lower than rentals would have been under Section 221, and at least one-third lower than rentals for comparable space in the New Haven area. The 104 houses, designed by Carl Koch & Associates, not surprisingly, are already fully rented. Three other 221d3 projects are now in planning stages in New Haven.

From the sponsor's point of view, the program is ideal, too, so long as he does not care about a profit. In New Haven, a non-profit group, Fairway Gardens, Inc., got a 100 per cent mortgage for the full \$979,000 cost (including builder's profit, although there can be no ties between builder and sponsor). Annual debt service under 221d3 is the real payoff—\$42,900 vs. \$66,082 under the straight 221 program, which has a higher interest rate and servicing charges.

The non-profit aspect does, of course, rule out speculative builders, but FHA still expects much greater participation by limited dividend corporations, which can



BRUCE CUNNINGHAM, WEIDING

get 90 per cent insured mortgages at the  $3\frac{1}{8}$  per cent rate and a guaranteed six per cent return.

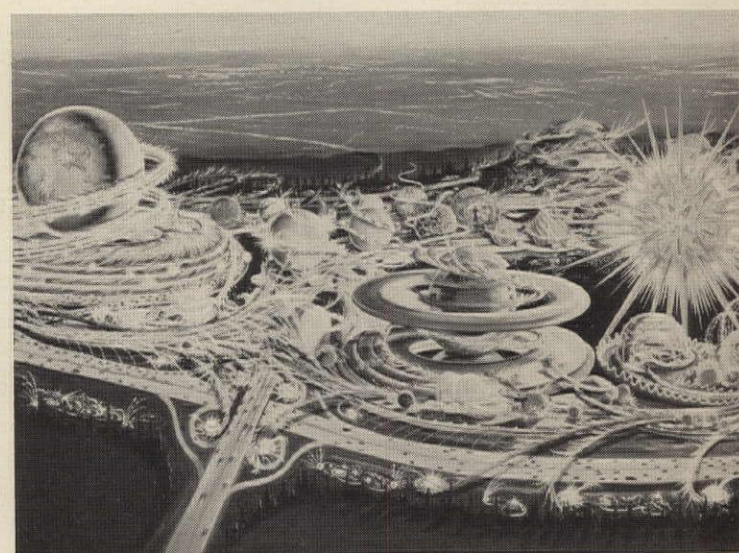
#### So far, little high-rise

Most units projected under the program to date have been low-rise because of another unique aspect of the 221d3 program: to build high-rise, multifamily buildings, a sponsor must be assured of tax abatement from the city so that desired rental levels can be reached and maintained. While New York, New Jersey, and some other states provide for such relief by law, other states have not yet acted under this provision.

Thus, few high-rise units have been built under 221d3.

The oddest feature of this increasingly popular program is the proviso that FHA must establish income limits for families in the projects, in the same manner as local public housing agencies set such limits for public housing. FHA has so far handled this problem gingerly, using median family income figures (as determined by census data) for the city as its ceiling.

If Fannie Mae assistance can be sustained, 221d3 may become a key solution to the problem of relocation housing.



### "AMERICA GIFT WRAPPED"—WHEN AND HOW?

This rather fanciful concept of the solar system and its attendant sidereal phenomena is a rendering by Artist Bernard Thomas of a proposed "United States Show." A brainchild of John Harkrider, originator of many musical spectacles for Hollywood, this show may just possibly be constructed adjacent to the 1964-65 New York World's Fair at Flushing Meadows. Or it may not.

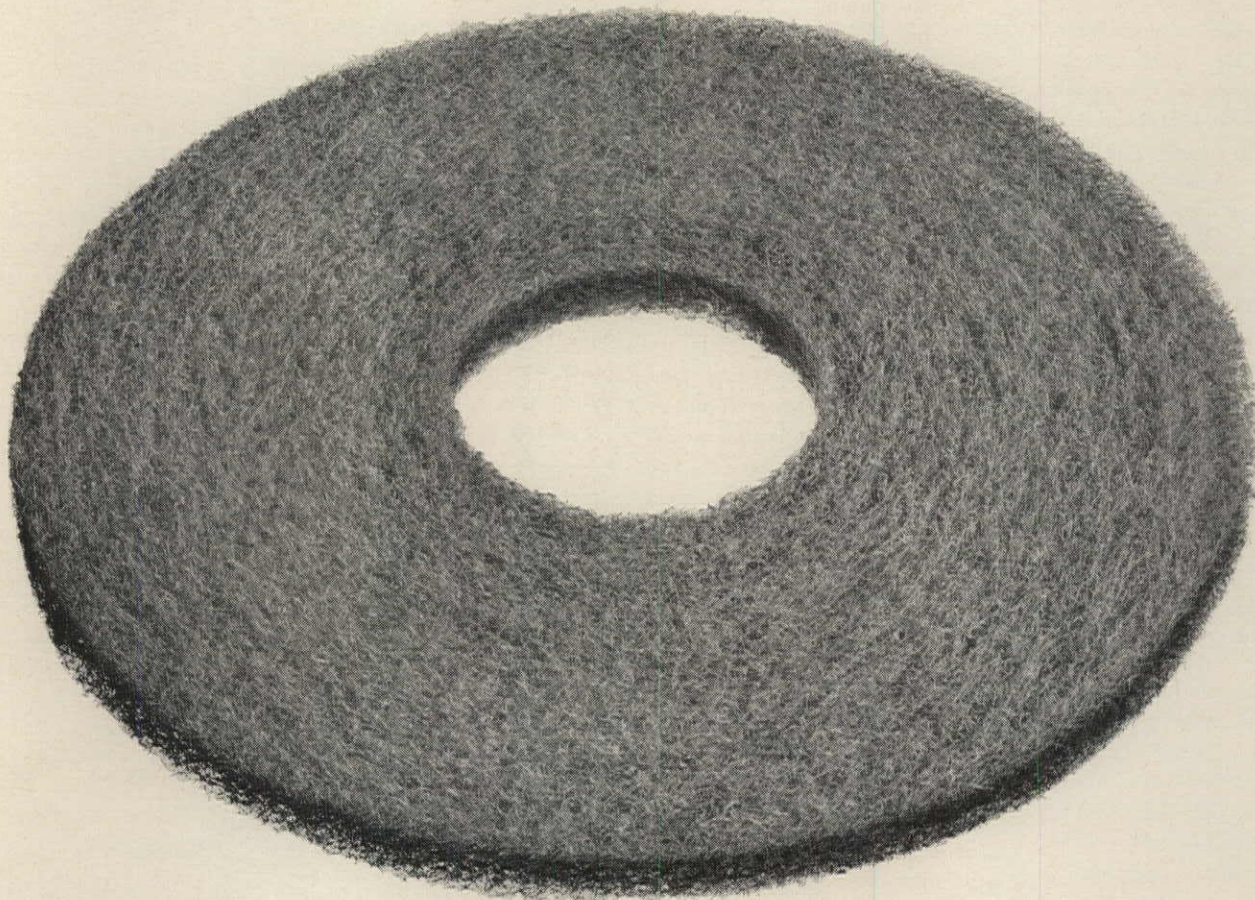
The show was conceived to win the cold war by bedazzlement—that is, by demonstrating and dramatizing the United States' material and spiritual accomplishments. Mr. Harkrider feels that the show might mobilize our creative and productive agencies during its perpetration.

Easily recognizable in the picture above is "Earth." In this

globe a two-hour movie would present the panorama of America today. "Jupiter," the large sphere on the right, would house a "surgical stadium with skilled surgeons performing operations made possible by advanced medical research." "Halley's Comet," not distinguishable in the rendering, would provide "complete facilities for rest and relaxation." In short, the United States show, as described by its originators, would be "America Gift Wrapped."

As an architectonic entity, its plans call for construction using semitransparent glass over metal frames. In view, however, of the project's estimated cost (\$50 billion supplied by private enterprises), the show may have to renounce its physical aspirations and remain sadly all soul.

continued on page 11



## This pad is all it takes to polish Goodyear DeLuxe True Vinyl Floor

This homogeneous vinyl floor is so tough and wear-resistant—it doesn't require waxing. You can count on continued good looks with simple polishing brush or buffer pad.

*And DeLuxe True Vinyl sells now at a new low price — the lowest ever for a homogeneous vinyl floor.*

The solid quality and the beautiful patterns go all the way through. Their lasting good looks and low

maintenance cost will be testimony to your good judgment.

DeLuxe True Vinyl is available in new multicolored marbled colors. In  $\frac{1}{16}$ " gauge for residential use and  $\frac{1}{8}$ " for commercial and heavy traffic use, both in 9" x 9" tiles. For specifications, see your nearest Goodyear Floors Distributor, or write: Goodyear, Flooring Dept., Akron 16, Ohio.

**GOODYEAR**  
FLOORING PRODUCTS

Continued from page 9

## N. Y. ELECTRICIANS WIN A 25-HOUR WEEK

The most surprising thing about the New York electrical workers' strike was that it happened at all.

The electricians were already receiving \$4.40 an hour for a 30-hour week, with a guaranteed additional five hours at time and a half. According to contractors, the average electrician made \$42.90 per day, counting in all benefits. Moreover, there was so much work for the electricians that the union was forced to recruit 2,250 men to keep construction going in New York's \$1.25 billion annual building program.

### Was this strike necessary?

But the strike took place nevertheless, and the reason was the threat of automation. Harry Van Arsdale, business manager of Local 3, International Brotherhood of Electrical Workers, convinced his members that the best defense against the amorphous onrush of automation would be a shorter work week without any reduction in wages. Van Arsdale was undeterred by the conspicuous lack of support from other labor leaders and from politicians, and the strike began on schedule on January 11. Local 3 demanded a 20-hour week with a \$.40 increase in hourly pay, ten paid holidays (including the worker's birthday), with all other fringe benefits to remain unchanged. Management refused even to discuss the proposals, and so the electricians did not need to justify their tenuous position.

Five days later, the Building Trade Employer's Association (which represents over 1,000 general and specialty contractors responsible for 80 per cent of New York's buildings), made plans to layoff 200,000 construction work-

ers. Reason: without the electricians, light and power were maintained at minimum levels and could be dangerous. This announcement, instead of putting union pressure on Local 3, caused construction unions to threaten suit if there were an "illegal lockout."

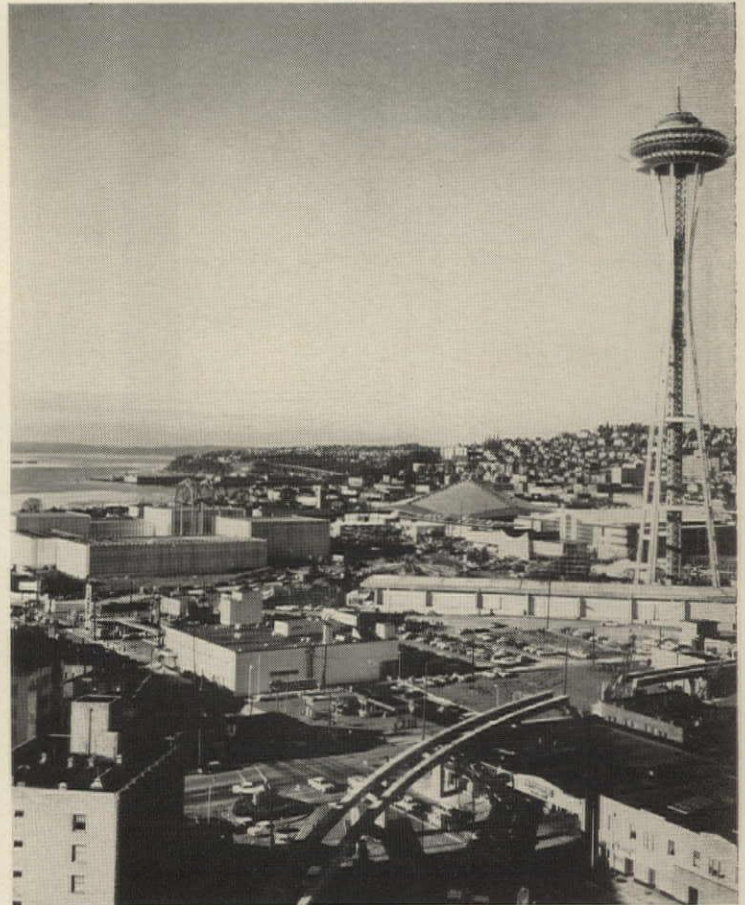
Within 24 hours, however, one of the four groups of electrical contractors had agreed to a five-hour day and to a \$.56 hourly wage increase, effective July 1. The other three groups soon followed suit. Two days later, everybody was back at work.

Local 3 had, to all intents and purposes, won its case. For the shortest work week in the nation, the electricians will receive \$4.96 an hour with time and a half for another overtime hour; if they worked a 30-hour week, they would earn \$161 instead of the old wage of \$165 for a 35-hour week. With construction booming, however, and with no unemployment in Local 3, the electricians may have to put in a harsh seven-hour day—if only to keep pace with other construction workers—and thus earn a weekly \$198, plus benefits.

Outside Local 3, the successful strike did not cause much elation. President Kennedy and his Council of Economic Advisors expressed their concern over possible inflationary trends. Moreover, the short work week has very little to do with full employment—it should be cut only when necessary to provide jobs. Even in the labor camp, the unions saw no precedent in Local 3's victory: many unionists pointed out that the new contract does not provide new jobs, only hedges against a vague, long-term threat of unemployment.

### ROW HOUSES FOR PHILADELPHIA

An estimated 10,000 people came to see the first five model houses in the Towne Gardens section of the \$300 million Eastwick redevelopment project in Philadelphia during the first week they were opened. Designed by Doxiadis Associates, the nation's biggest development will contain 10,000 houses, including others like those pictured.



### SEATTLE WORLD'S FAIR PREPARING FOR APRIL OPENING

As evidenced by the missing links in the two monorails (foreground), the Seattle World's Fair is not quite completed—but it is getting there fast; the much-publicized Space Needle, the Federal Science Pavilion (left) and the four-acre Coliseum Building (center background) need only finishing touches before opening day, April 21.

Costing about \$80 million, the fair will run for six months. Its theme—"Man in the Space Age"—is carried out by the exhibits, especially in the \$10 million science pavilion by Minoru Yamasaki. Several of the other buildings are visible in the photograph, including Bell Telephone's and the framework for the Electrical Utilities exhibit.

### ANTISLURBS ON THE MARCH IN CALIFORNIA

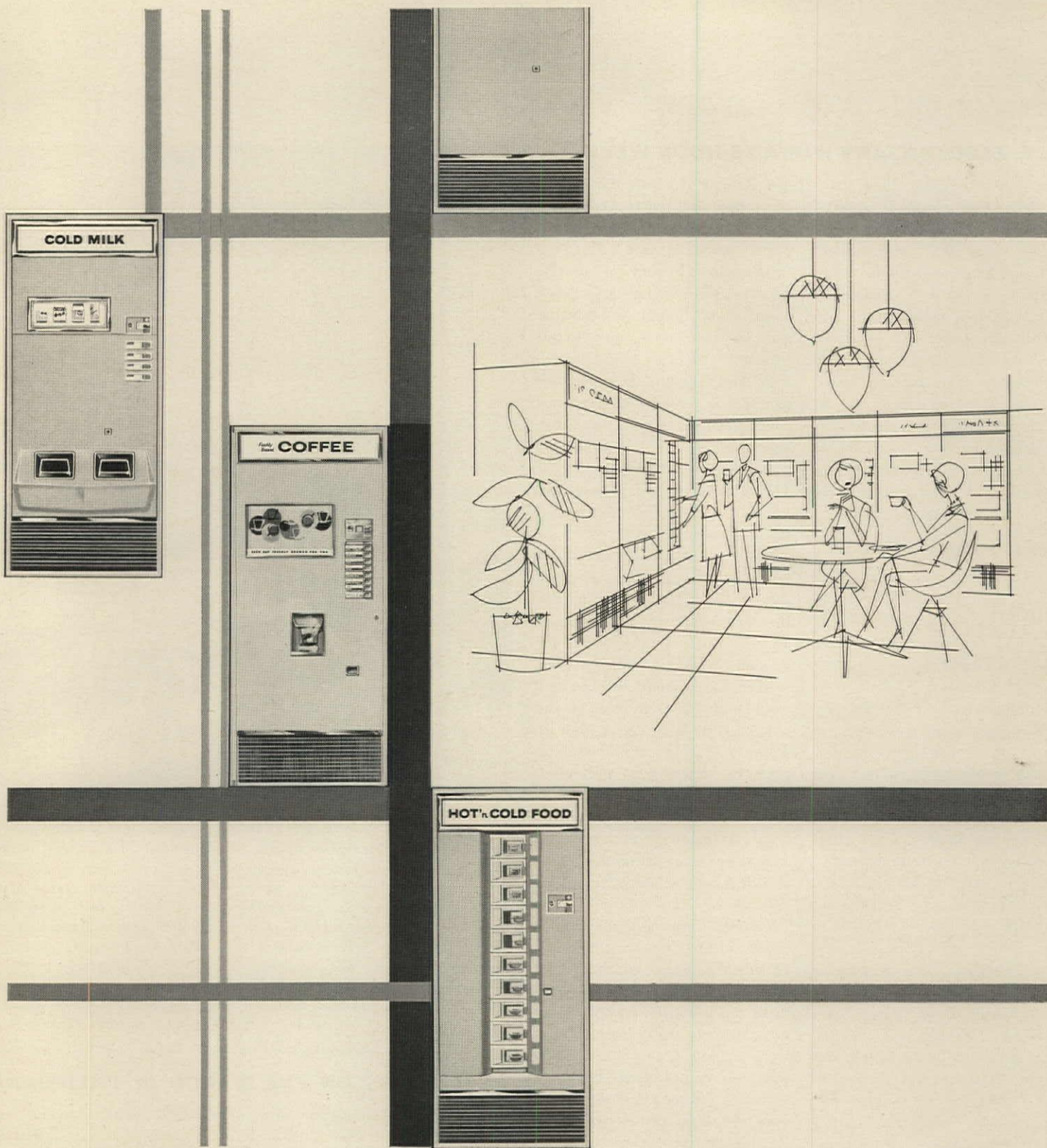
For lack of an effective state planning and policy agency, California—like many another state—shambles along toward a future of ugliness and waste. Calling on the evidence of the wildfire spread of "slurbs," i.e., neither suburbs nor cities, but "sloppy, sleazy, slovenly, semicities," a non-profit organization called California Tomorrow has published a booklet, "California—Going, Going . . ." to report the facts and urge a "grand, almost utopian effort at harmony and cooperation" to save the Golden State.

The facts are impressive. Every day 375 acres, mainly of the best agricultural land, are bulldozed

for roads, industry, subdivisions, public and private facilities. Every day the state's population increases by 1,500 immigrants or babies, so that by 1963 California will surpass New York as the nation's most populous state. And population not only consumes land; it also brings the machines that cause the water and air to become contaminated; it places tremendous demands on California's limited drinking water supplies; and it introduces more automobiles.

Nothing really effective is being done, Authors Samuel E. Wood and Alfred E. Heller point out. Not because there are no

continued on page 13



Vendo modular concept provides  
more food and refreshment per square foot

Here's the answer for clients whose plans call for volume feeding in a minimum of space. Vendo equipment is designed to save space...make layout easy and simplify feeding problems. The need for manual service counters and extensive kitchen facilities on the premises is eliminated with the installation of this clean, functional-looking automatic vending equipment. Investigate its many possibilities—mail the coupon today!

Refer to Sweet's Catalog File 25a/Ve for details and specifications on the complete line of Vendo equipment.

**Vendo**<sup>®</sup>  
World's largest manufacturer of  
automatic merchandising equipment

(attach to your letterhead)

AF-3

THE VENDO COMPANY  
1221 Baltimore Avenue, Kansas City 5, Missouri  
Please send me more information on Automatic Food  
Service Installations.

Name \_\_\_\_\_

Company \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

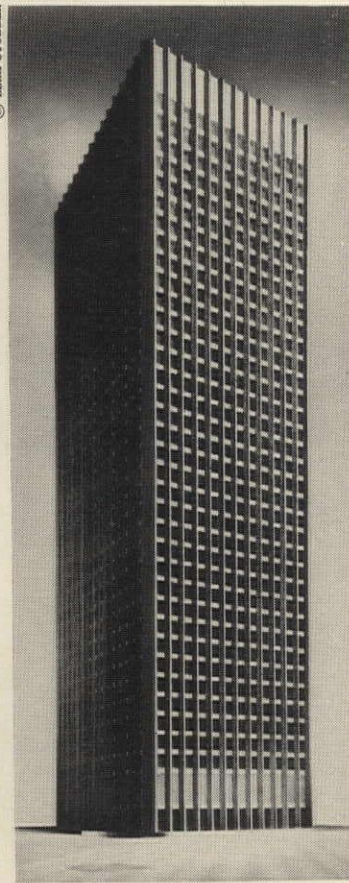
Continued from page 11

planning agencies, but because there is no unified coordinating agency that would direct work on all levels of government—local, state, and federal. The problems involved in most cases outrun the jurisdictions of the many, overlapping units of government. "With growth problems that dwarf those in every other state, California spends less per capita on statewide physical and economic planning than every state and possession of the Union, with the exception of Indiana." And the result of this policy is the slurbs—"wasteful of money, wasteful of lives, wasteful of the bright land that makes life possible."

The booklet has already caused a stir. Architect George T. Rockrise, a planning commissioner in San Francisco, has called for "a single department of planners—engineers, hydrologists, conservationists, agronomists, all kinds, all working under a coordinated and clear image of what the state needs." He feels that the issue should be introduced into the gubernatorial campaign later this year. Soon after, Governor Pat Brown spoke in Sacramento to the Metropolitan Policy Committee of the League of Californian Cities, a strong lobby group. While not mentioning the report, he seems to have adopted its idea of regional planning sessions aimed at overall coordination. Mr. Nixon, who will probably oppose Governor Brown in November, has not come out for or against slurbs so far.

### BOSTON CITY HALL COMPETITION FINALISTS

Two hundred and fifty designs from all over the nation were entered in the competition for Boston's new city hall, one part of the city's new government center. Last month, the jury (Architects William W. Wurster, Walter A. Netsch, Ralph Rapson, and Pietro Belluschi, plus Board Chairman Harold D. Hodgkinson of Filene's, Boston) spent three days to pick the eight finalists, each of whom is to receive \$5,000 to prepare a finished scheme. The finalists: Joseph F. Schiffer, Concord, Mass.; James B. Zwack, Wilbert O. Ruster & Lloyd Gadau, Apple-



SAARINEN'S CBS SKYSCRAPER

The late Eero Saarinen's first and only skyscraper, designed for CBS, is scheduled for completion in 1964. It will be centered on a spacious, granite-paved plaza slightly lower than street level. The triangular structural columns will house wiring, heating, air-conditioning ducts and, will, according to the architects, "keep glass areas to a desirable minimum." Of the building Saarinen wrote: "It will be the simplest skyscraper in New York."

ton, Wis.; F. Frederick Bruck & Ervin Y. Galantay, Cambridge, Mass.; Mitchell and Giurgola, Philadelphia; Edward F. Knowles, R. M. McKinnell, & G. M. Kallman, New York City; Y. C. Wong, T. C. Chang, Gertrude Kerbis, Otto Stark & S. Chan Sit, Chicago, Ill.; Arthur G. Waterman, Tsiung, Johnson and Ruffing of Waterman, Page & Associates, Inc., Boston, Mass.; Progressive Design Associates, St. Paul, Minnesota. From this group, a winner will be selected in May by the same jury (augmented by two nonarchitect members).

### WANTED: BETTER USE OF OPEN SPACE

Contrary to a good deal of popular opinion, the United States is not running out of land for outdoor recreation. Most of the land, however, is not where the people are.

This, in effect, is what prompted Congress in 1958 to authorize the Outdoors Recreation Review Commission, headed by Laurance S. Rockefeller.

The result: a 246-page report entitled "Outdoor Recreation for America." Projecting to the year 2,000, the study calls attention to the demand for outdoor life, to the present limited supply of recreational areas, and to the need of providing an organization to reconcile the two, and suggests ways of financing to accomplish an effective program.

#### A plan for America's future recreation needs

In brief, the Commission recommended:

- ▶ The establishment of a Bureau of Outdoor Recreation in the Department of the Interior.
- ▶ A new system of classifying recreational lands by characteristics of location, use, and accessibility.
- ▶ The development of a consistent national outdoor recreation policy through the cooperation of all levels of government and private initiative.
- ▶ The immediate expansion of present programs, especially with a view towards acquiring additional shoreline areas near large urban centers.
- ▶ And a federal grants-in-aid program, to be administered by the Recreation Bureau, and designed to assist and stimulate the states in meeting the demand for outdoor recreation.

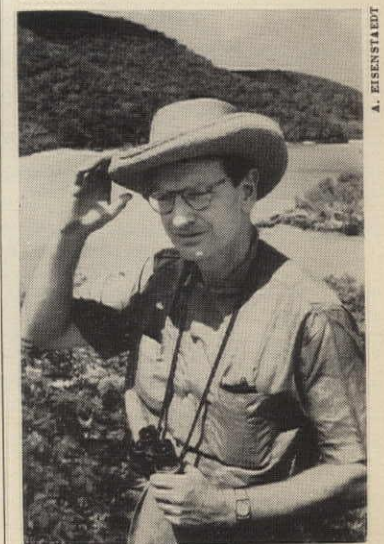
At present, some 90 per cent of all Americans indulge in relatively simple outdoor recreations: walking, swimming, driving, picnicking. The areas where these basic pleasures are possible are usually not near population centers, and desirable waterfront locations are particularly scarce. The Commission also points out that recreation is not for the exclusive use of an area, and good planning is therefore always necessary.

A realistic program must have organization and finance, says the report. It recommends that more states use general obligation and revenue bonds as a means of financing capital investments in outdoor recreation lands (as have New York, New Jersey and Pennsylvania). A system of user fees should also be set up to ease the

burden of acquiring and maintaining the open-space lands. In addition, the study draws attention to the economic benefits of open-space areas: they can enhance land values, aid local economies, and provide a basis for an estimated \$20 billion spent annually on recreational goods and services.

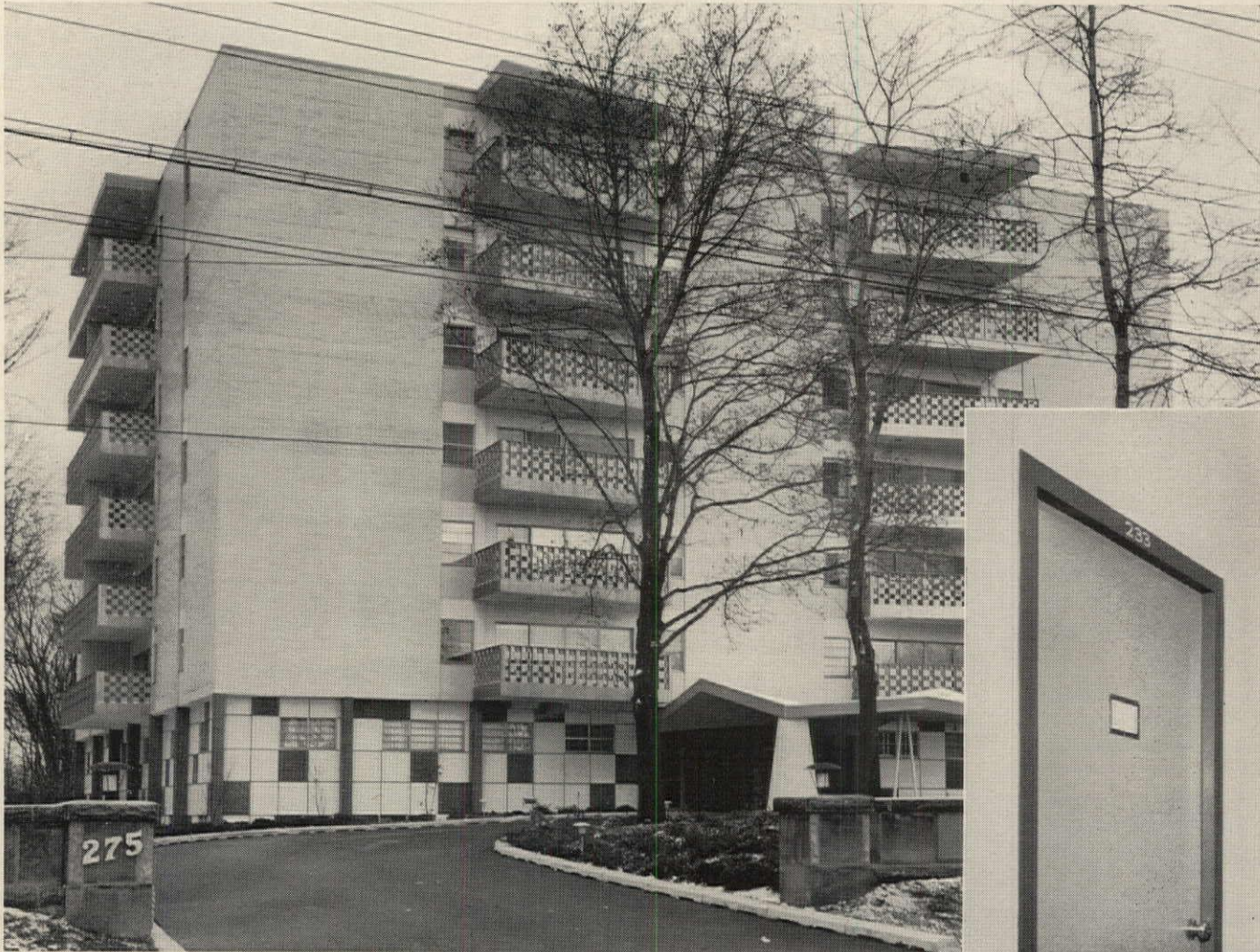
Up to the present, Title VII of the Housing Act of 1961 provides the only source of financial assistance to urban communities wishing to acquire open-space land. Taunton (Mass.) and Madison (Wis.) have been the only recipients of federal open-space grants. As a result of the Commission's recommendations, however, it is probable that much more federal aid will be devoted to conservation and recreation. Already, Secretary of the Interior Stewart L. Udall has hailed the Commission's findings as "new, farsighted conservation proposals."

Conservationist Rockefeller



continued on page 15

# Amweld Doors proven nationally in thousands of apartment buildings!



The Carleton House, Akron, Ohio. Architect: Rosenstock-Rush & Associates, Akron.  
General Contractor: D'Alessio Construction Co., Akron.

**These important reasons are why Amweld Steel Doors and Frames meet national approval by architects and building owners alike**

**FOR ARCHITECTS:**

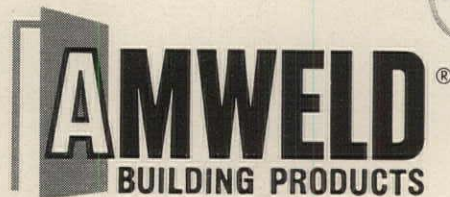
- Lifetime beauty and appearance
- Economy of a standard line
- Immediately available locally
- Full line for every building requirement
- Minimum maintenance

**FOR BUILDING OWNERS:**

- Economy of a full, standard line
- Lifetime beauty and appearance
- Minimum maintenance
- Assured durability

*See our full line catalog in Sweet's File 16-B for complete details - or write us for your personal copy.*

AMWELD STEEL DOORS & FRAMES, the Distributors' Line.  
Amweld Building Products, Plant Street, Niles, Ohio  
A division of American Welding & Mfg. Co., Warren, Ohio



Continued from page 13

## PEOPLE



## USED-PLANT DEALER

"It makes me ill to think of the many useful factories that have already been razed in Detroit and other cities," said, as well he might, one of the innovators in the used-space business, EDWARD LAND. Not only has he been highly successful himself in his field, but small industries have also profited by contacting him.

The Land success story started in December of 1957, when he was called from his Miami Beach real estate office to look over the huge, vacant complex of buildings that formed an obsolescent part of the Packard Motor Car Co. Housing some four million square feet, the buildings were antiquated, but sturdy. Land, with his friends, bought the property (and a \$250,000 tax burden) for a million dollars. "I had a feeling I was right," he said at the time.

And, of course, he was. Small industries around Detroit soon bought up parcels of floor space for between 40 and 55 cents per square foot, next to good parking and railroad facilities—all of it in the middle of the city.

Each section of the old factory buildings was remodeled by Land to the tenant's specifications. Today, over 75 per cent of the Packard complex is occupied by 49 concerns which employ about 8,000 people and gross in the neighborhood of a quarter of a billion dollars a year.

This was only the beginning. Land has repeated his initial success elsewhere in Detroit, and in Toledo. His latest acquisition, a Chrysler Imperial plant, will soon

announce the leasing of one quarter of its 1.2 million square feet to a large discount store chain, Arlan's of Boston.

"A city's best asset can be its vacant industrial property," Land says, "If it will only realize how it can capitalize on it . . . I can save some of these properties but local and state governments should help by reducing taxes on unused factories and encouraging industries to occupy them."

## AIA GOLD MEDAL TO SAARINEN

The 1962 Gold Medal of the American Institute of Architects will be posthumously awarded to EERO SAARINEN at the AIA's 1962 convention in Dallas in May. He succeeds Le Corbusier (1961), Mies van der Rohe (1960), and Walter Gropius (1959) as well as his father, Eliel Saarinen (1947), in receiving this coveted award.

Other recipients of the 1962 AIA Gold Medal will be: for Fine Arts, Stuart Davis; for Industrial Arts, Sundberg-Ferar, Inc.; for Architectural Photography, Ernst Haas; for Allied Professions, Othmar H. Ammann and the late Charles S. Whitney. The Architectural Firm Award is going to Skidmore, Owings & Merrill while a Citation of Honor for his monumental book *The City In History* will go to critic Louis Mumford. The Edward Kemper Award, given for significant contribution to the Institute and the profession, will go to Harry D. Payne, who heads the AIA's Committee on Professional Insurance.

*Eero Saarinen*



JOHN ZIMMERMAN



SERGE CHERMAYEFF

## CHERMAYEFF TO YALE

SERGE CHERMAYEFF, one of the pioneer modernists in England in the 1930s, has been appointed the new professor of architectural design at Yale University. The Russian-born architect and artist will leave Harvard's Graduate School of Design, where he has been a professor of architecture since 1953, this coming July. Noted as an architect and teacher, Mr. Chermayeff is also well-known for his painting and industrial design. In his new job, he will do advanced work with students and will also have time to teach and lecture outside of Yale. His book on principles of urban living will be published shortly.

## N.Y.C. HOUSING OFFICIAL RESIGNS

One of New York City's most controversial posts, that of chairman of the Housing and Redevelopment Board, was vacated last month by J. CLARENCE DAVIES JR. He held the position for over a year, during which his name appeared frequently in the local news. Most recently, he was involved in the battle over the urban renewal project in west Greenwich Village. Although Mr. Davies was for declaring the district a blighted area suitable for renewal, residents' efforts were finally supported by Mayor Robert F. Wagner, and the project was called off. For the record, Mr. Davies announced that his resignation was dictated solely by reasons of family obligations. He has formed a new realty company with J. M. BROWN, which will serve on a national scale as real estate and investor counselors.

Mayor Wagner, who appoints the chairman, has chosen MILTON MOLLEN to be Mr. Davies' successor. Formerly general counsel

to the Housing and Redevelopment Board, Mr. Mollen is known and respected in city government circles. The 42-year-old lawyer took office on February 15.

## OBITUARIES

HAROLD CHARLES PRICE died last month at the age of 73. President of the H. C. Price Company, one of the nation's largest pipeline construction firms, he liked his community of Bartlesville, Oklahoma so well that he commissioned Frank Lloyd Wright in 1953 to build "a structure which would be a credit to our city." The result: the Price Tower.

JEAN TSCHUMI, 57, Swiss architect and professor of architecture at the University of Lausanne, died last month on a Paris-Lausanne train. He achieved international recognition in 1960 when he won the competition for the \$9.3 million headquarters of the United Nations World Health Organization and the Reynolds Memorial Award for his Nestle international headquarters building at Vevey (below).



HUGH FERRISS, 72, died last month in New York, a city he both criticized and admired. An architect who romanticized the ziggurat skyscraper shape which is still prominent in New York, and he, more recently, served as special consultant for the U.N. building and Idlewild airport.

**NOTE:** At press time, the Washington Fine Arts Commission killed, by a vote of 4 to 3, Pedersen & Tilney's proposed F.D.R. Memorial. Details next month. END

# Glass Doors that "belong"—by PPG

... they give you a skillful balance  
of good looks, performance and cost

The door you select from PPG's wide range of styles just naturally fits in with today's architectural requirements and over-all design plans.

Crisp, simple lines give PPG glass doors a look that is as handsome as it is distinctive. And the wide-open quality appearance of these doors is friendly and inviting.

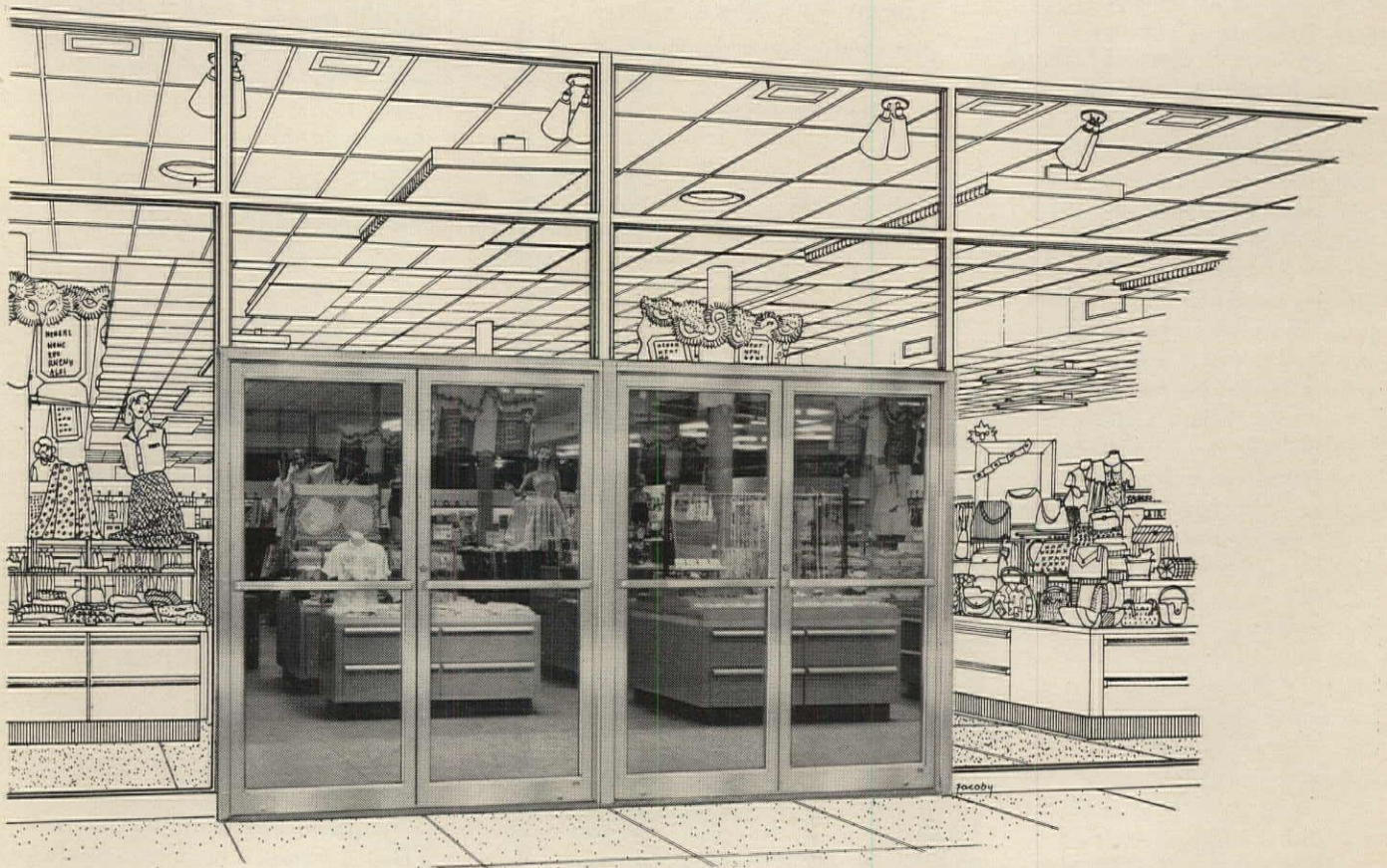
The easy operation of PPG glass

doors helps extend your clients' welcome. And when installed with the PITTCOMATIC®—PPG's automatic door operator—they provide ultimate convenience with their instant and gracious response.

Rugged construction makes all PPG glass doors wear well and long. The characteristics carefully built into each PPG glass door all say

"quality"—and each door proves it!

When you're looking for a door that isn't just an entrance, but an integral part of your over-all design, consider quality glass doors by Pittsburgh Plate Glass Company. For further details on a complete doorway package, consult your PPG Architectural Representative, or look through Sweet's Architectural File.



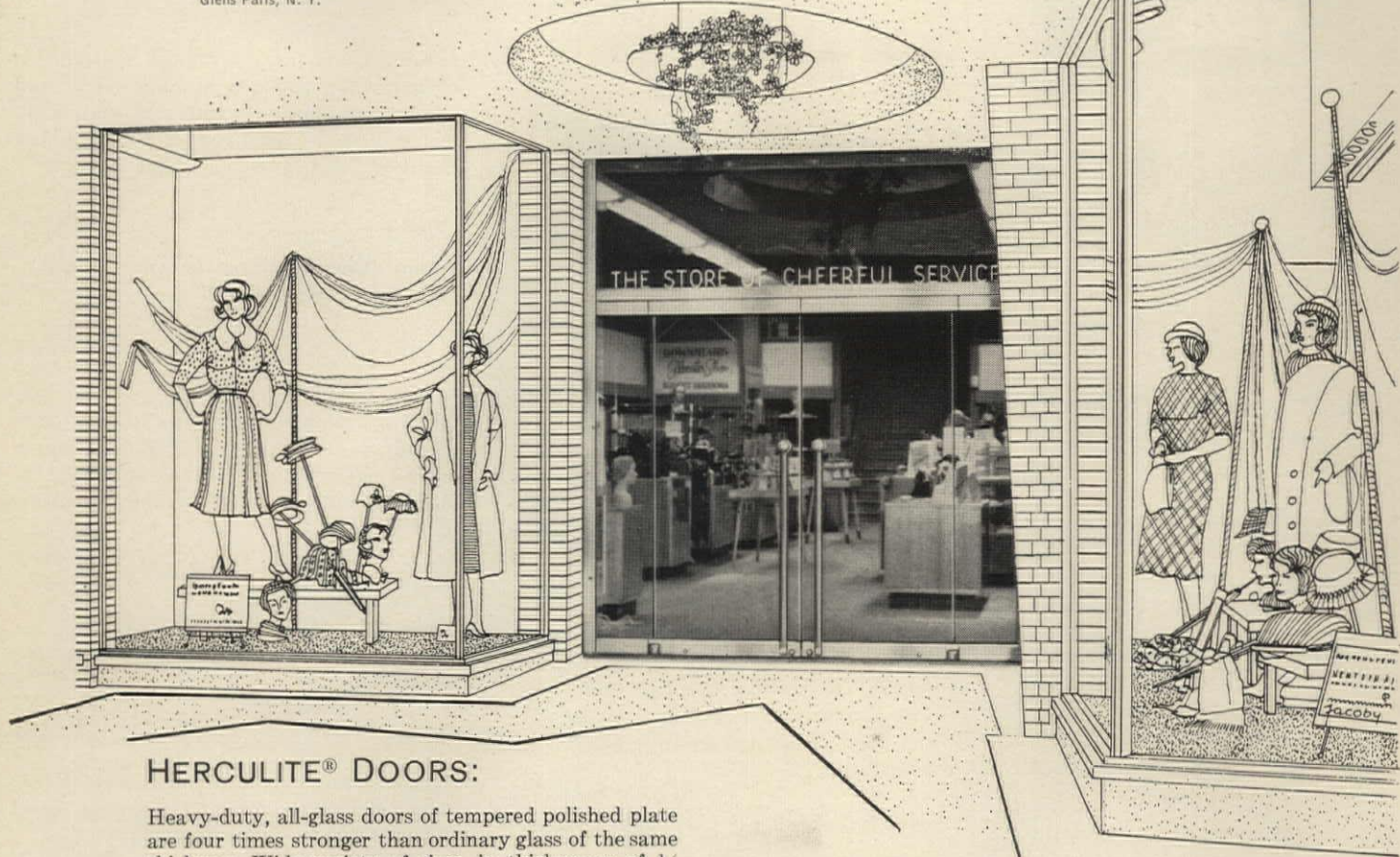
## TUBELITE® DOORS:

Exclusive interlocking feature insures the rigidity of these aluminum-framed doors. Exposed seams and fastenings are eliminated by dovetailed, hollow construction. When required, a reinforcing structural steel channel is available.

J. C. Penney Company, Inc.—Longview, Texas  
Architect: Wilson, Morris & Crain—Longview, Texas  
Contractor: Wilmoth Construction Co.—Longview, Texas  
Installed by: Jno. C. Murphy Glass Co.—Longview, Texas

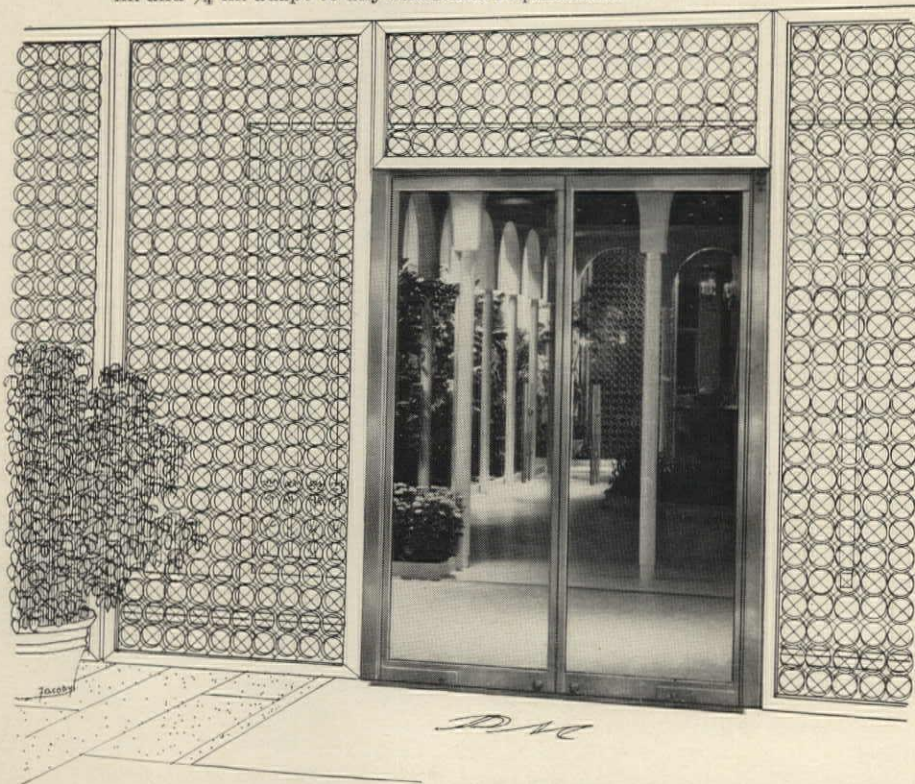


Merkel & Gelman, Inc.—Glens Falls, N. Y.  
 Architect: Milton Lee Crandell—Glens Falls, N. Y.  
 Contractor: Adirondack Construction Corp.—  
 Glens Falls, N. Y.



### HERCULITE® DOORS:

Heavy-duty, all-glass doors of tempered polished plate are four times stronger than ordinary glass of the same thickness. Wide variety of sizes, in thicknesses of  $\frac{1}{2}$  in. and  $\frac{3}{4}$  in. adapt to any structural requirement.



### WEST DOORS:

Slender frames of aluminum, bronze or stainless steel provide a clean, modern look of quality. Strength comes from  $\frac{1}{2}$  in. glass held under compression by the thin metal frame. Result: a solid unit that does not sag, rack, or get out of alignment.

Patricia Murphy's Candlelight Restaurant —  
 Fort Lauderdale, Fla.  
 Designer: Edmund Motyka — New York, N. Y.  
 Architect: Leavitt & Henshell — New York, N. Y.  
 Contractor: Caldwell-Scott Engineering & Construction Co.  
 —Fort Lauderdale, Fla.



## PITTSBURGH PLATE GLASS COMPANY

Paints • Glass • Chemicals • Fiber Glass

In Canada: Canadian Pittsburgh Industries Limited



## An intimacy to share

Her thoughts might influence yours, if you will come along with us, *Réalités* Magazine, inside Europe...into a World that tourists seldom discover.

*Réalités* takes you on the Continent with professional camera and pen: through the arts, current events, fashion, food, philosophy, politics, travel—always the things that make European living all-enveloping.

Be intellectually engrossed...be entertained by France's foremost commentators and journalists. Enjoy the valuable collection of paintings and photographs ingeniously reproduced on heavy varnished paper. You might agree with the critics who call this "The Most Beautiful Magazine In The World."

Mailed from Paris each month, *Réalités* is available in English-language or French-language editions. Treat yourself and others to "living in Europe" ... for a year.

\$15.00 a year (12 issues)

# Réalités

REALITES in America, Dept. 34  
301 Madison Ave., New York 17, N. Y.

Please enter my subscription to REALITES:

English edition       1 year \$15.00  
 French edition       2 years \$25.00

NAME: \_\_\_\_\_

STREET: \_\_\_\_\_

CITY: \_\_\_\_\_ ZONE: \_\_\_\_\_ STATE: \_\_\_\_\_

Above subscription is a  Gift  My own  
 Payment enclosed.       Please bill me.

### FORUM'S "NEW LOOK"

Forum: As an old subscriber, may I join many of my architect friends in praising your beautiful format for FORUM. I have always felt the architectural magazines didn't quite, in the past, come up to the fresh and functional development of our American architecture, but FORUM is really giving it the proper editorial atmosphere.

MARIO BIANCULLI  
Architect  
Chattanooga, Tenn.

Forum: I find your new layout much more expressive of what the magazine is than any thing you have had in the past—particularly the tactile quality of the cover stock and the well-articulated use of typography.

Your grasp of what is vital and worth presenting in your magazine is evident in the fact that you offer more than just a collection of so-called "new" buildings. The regard for details in articles such as "Criticism" and "Who designs our building products?" is much needed and appreciated.

Congratulations, especially to Art Director Paul Grotz, for sensitive handling of the magazine.

FRANK DI GAUDIO  
Graphics designer  
Milwaukee

Forum: The new FORUM deserves commendation; the larger photos, the fewer words, the concise reporting, the improved design are a joy.

CRAIG ELLWOOD  
Architect  
Los Angeles

Forum: Congratulations on your bright new format, in particular the knowledgeable article, "The booming office planners."

There are always more opportunities for bad interiors than good. Once the client has been set upon by oddballs in and out of his organization, it is too late. The architect must campaign actively against mediocrity and disorder from the outset of each project. One excellent strategy is to find a good interior designer and sell the client interior design as part of the total architectural package during early negotiations.

Thank you for this fine piece. We would like about a zillion reprints. In the meantime, can we have about 50?

CRAWFORD DUNN  
Ikonogenics Inc.  
Dallas

Forum: I've always enjoyed reading FORUM. The new changes made it easier and more enjoyable.

R. A. LUNDGREN  
General Electric Co.  
Nela Park, Ohio

Forum: The new format is terrific, functionally and otherwise. Don't be surprised if a number of readers compare Art Director Paul Grotz to Mies van der Rohe.

HENRY WRIGHT  
Architectural Consultant  
New York City

Forum: I very much favor the new reduced column width and new headline type. I am particularly impressed with the comprehensive treatment of "The Booming Office Planners," both as to copy and layout.

KENNETH S. DRAKE  
Detroit

Forum: Congratulations on your most outstanding January issue.

PETER W. BEACHAM  
Boston

Forum: Please return to the style you had. I find the four-column "News" section more difficult to read than your former three-column style. "Projects" are also hard to read in that you have separated captions from drawings.

DAVE ROGIR  
Indianapolis

Forum: I wish to compliment you on the February issue... it looks professional and competent.

D.B.V. TRAVERS  
Architect  
Chicago

Forum: I am very much impressed. I like the cover, and the inside of the cover seems to flow a whole lot better.

PAUL J. DIETERLEN  
Advertising manager  
The Cincinnati Time Recorder Co.  
Cincinnati

Forum: While the building industry and architecture seem to be proceeding on an evolutionary basis, magazine graphics are moving at a revolutionary pace.

A very pleasant change.

HARRY J. MILLER  
Planning consultant  
Camden, N.J.

Forum: I am disappointed in the new format of some of your articles. "The booming office planners" seems to be more capriciously cut up than a lot of modern offices themselves. Cutting off the tops of peoples' heads and yet leaving the top quarter of each of the pages blank seems like an attempt to be different at any cost. The abbreviated photo of Mr. Snaith makes me curious to know what he really does look like.

FRED C. DUNLAP  
Yellow Springs, Ohio



JOHN JOYCE, INC.

■ Herewith the rest of Mr. Snaith—ED.

Forum: ... a tremendous improvement in appearance and easier reading.

WILLIAM L. PULGRAM  
Architect  
Atlanta, Ga.

Forum: ... an outstanding job.

A. QUINCY JONES  
Architect  
Los Angeles

#### GOOD BUILDING PRODUCTS

Forum: The feature on fine building products (FORUM, Jan. '62) is of very special interest. I hope that it may be repeated in the future.

DON WROBLESKI  
*Bannockburn, Ill. Architect*

Forum: I found the first of this new series both interesting and well done, and look forward to seeing others.

WILLIAM HUTTON  
*Toledo, Ohio Assistant curator  
Toledo Museum of Art*

Forum: What a pleasant surprise to see the nice things Mr. Ellwood had to say about the cellular ceiling on page 98. Actually it was designed as a joint project between our firm and Integrated Ceilings Inc. of Los Angeles (who were credited in your article) and is made by both companies.

Many thanks for your continuing interest in the good design of building products.

ROBERT A. D. SCHWARTZ  
*Oakland, Calif. President  
United Lighting and Ceiling Co.*

Forum: Thank you for bringing to our attention good products well designed. We look forward to future articles.

K. H. CANDY  
*Toronto Architect  
Hydro-Electric Power Commission of Ontario*

#### VIRGINIA'S CAMPUS

Forum: Knowing the standards which FORUM demands, I had fully expected an excellent article on the University (Feb. '62). But I frankly was not prepared for the almost unbelievably superb job that you did. I think your story caught better than any article I have read the spirit of what Mr. Jefferson was trying to do.

BEVIN ALEXANDER  
*Director of Information Services  
Charlottesville, Va. University of Virginia*

Forum: We were most impressed by George Cserna's photographs of the University of Virginia. Also, the new format of FORUM has a freshness about it that is impressive.

GEORGE W. QUALLS  
*Philadelphia Architect*

#### CLASP VS. CROSSOVER

Forum: I should like to congratulate you on a very interesting enquiry into school construction (FORUM, Nov. '61).

In view of the fact that markets in your country are so large, it would appear that you could reasonably have a number of building-component systems competing against each other, as opposed to this country where we work together to use one system.

However, I was surprised to see it suggested that one answer might be "universal" or "cross-over" systems, in which architects

would pick items out of existing markets. I think the success of CLASP in this country has been due to the fact that each component was designed for the system, as opposed to using standard products which are on the market.

A. G. SMITH  
*West Bromwich, England General manager  
Brockhouse Steel Structures, Ltd.*

#### ARCHITECTURE AT CORNELL

Forum: There are many of us Cornellians who are quietly aware of the "unfortunate architectural episodes" you mentioned ("Cornell rediscovers architecture," Feb. '62).

It is understandable that a magazine of your high caliber must speak out when an architectural blunder has been made. However, I wonder if it was proper for FORUM to use this one building as means to architecturally rape the whole Cornell campus. If you were going to open up, why didn't you go all the way? There's the recent modern engineering complex, the new athletic buildings, women's dormitory, agriculture school additions, etc.

HERBERT F. LUND  
*Norwalk, Conn. Cornell BME, 1950*

#### THEOLOGY AND DESIGN

Forum: Dr. Hart's article "The search for Protestant form" (FORUM, Dec. '61) is one of the most illuminating and informative statements I have ever read on the theology of church architecture.

TRUMAN B. DOUGLASS  
*New York City  
United Church Board for Homeland Ministries*

#### THE OFFICE PLANNERS

Forum: Thank you for the article on the "Booming office planners" (Jan. '61). The choice of the interior consultant should be made by the architect, not the owner. Owner's choices in this field are made only too frequently on the bargain, or friend, or relative-in-the-business basis. Most busy architects subcontract their engineering specialties; if they can't or don't want to do the interiors themselves, they should subcontract those too—but always keep them under control.

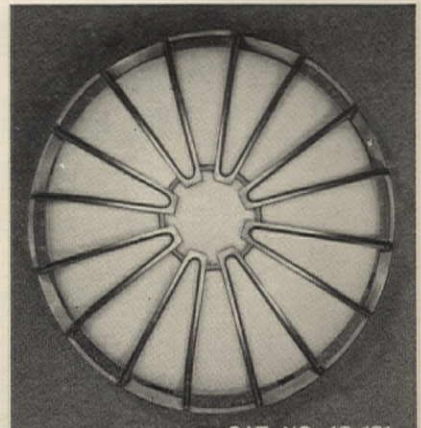
EDWARD F. GUNNILL  
*Pittsburgh Interior designer*

#### WASHINGTON, 2000 A.D.

Forum: We were pleased to have FORUM devote space to a critique of the "Year 2000 Plan" for the nation's capital (Dec. '61).

Mrs. Moholy-Nagy's intimation that our corridor plan is unworkable does not seem to square with the fact that two-thirds of the region has already given nodding assent to it, and the other one-third is expected to come along in the near future. We are gratified with the author's favorable com-

*continued on page 20*



CAT. NO. 43-101

CONSULT  
**BME**  
SPECIFY

another fine example  
of  
styled lighting design  
with  
cast aluminum Quality



CAT. NO. 43-100

**43-100**  
line

by mcPhilben®

weatherproof  
surface downlights

DOWNLIGHT applications for... Covered Walkways • Canopies • Marquees • Wash Rooms • Shower Rooms • Outdoor Stairways Ramps • Loading Platforms • Open Garages FLAT WALL applications at Entrances and in Corridors and Exterior Passageways.

• enclosed and gasketed... for exterior weathertight, vaportight, bug tight operation • everlasting cast aluminum construction... high stress alloy, 1/8" min. wall thickness, corrosion resistant • satin anodized finish... for permanent beauty • glareless white shallow globe • available with one-piece hinged guard... designer styled, functional: dimensions... globe dia: 12 1/2", depth: 5"

Consult 32a Sweet's Architectural File

Contact your mcPhilben Representative or ask for complete specification data Sheet Section A page 7a of Catalogue

**mcPhilben**

LIGHTING

1329 Willoughby Ave., Brooklyn 37, N.Y.

## Truly Great Architecture, Enhanced by...

Now, more than ever, architects depend upon SOSS Invisible Hinges to help them create smooth, unmarred openings so important in today's functional architecture.

In the Board Room of the National Bank of Detroit, below, architects from the staff of Albert Kahn, A.I.A., specified SOSS Invisible Hinges on the entrance doors, the two doors on the paneled wall within the room and in several other executive office areas.

Discover how SOSS Invisible Hinges can fit your requirements, both in wood and metal.

# SOSS

## INVISIBLE HINGES

For complete information & prices, write:

### SOSS MANUFACTURING CO.

AF-103 P. O. Box 38, Detroit 13, Michigan



Continued from page 19

ments on our concepts for Metro-Center. However, such improvement could never be accomplished without continuing demand for land which, in turn, will only result from the continued expansion of the region, which she decries.

W. E. FINLEY

Washington, D.C.

Director

National Capital Planning Commission

#### 100 BIGGEST

Forum: In 1959 you published three articles on the 100 largest architectural firms, contractors, and clients in the U.S.

They were most informative and I have looked for them in issues since.

J. W. DESMOND

Manager, Government Projects Development  
Oakland, Calif.

Kaiser Engineers

■ FORUM will publish its 100 Biggest lists again this year: architects in May, contractors in June, clients in July. Whether or not they have yet received FORUM's questionnaire, FORUM requests that all architects responsible for more than \$5 million of construction, and contractors doing more than \$10 million volume in 1961, submit their figures so that lists will be complete.—ED.

EDITOR'S NOTE: Lest readers misinterpret the photographic chart which introduced FORUM's December article on architectural glass, it was made with overlays of different densities to portray (as the caption stated) light reduction values of different types of glass. It was not intended to show what the eye actually sees from inside out, a condition which was illustrated elsewhere in the article.

ARCHITECTURAL FORUM is published monthly by TIME INC., Time & Life Building, Rockefeller Center, New York 20, N. Y.

SUBSCRIPTION SERVICE: Address all subscriptions and correspondence concerning them to: ARCHITECTURAL FORUM Subscription Dept., 540 N. Michigan Ave., Chicago 11, Ill. Subscription rates: in U.S., U.S. Possessions and Canada, one year \$6.50; elsewhere, one year, \$12. Single copies, if available, \$1.

CHANGE OF ADDRESS: Four weeks is required for change of address. When ordering a change please name magazine and furnish a label from a recent wrapper. If no label is available please state as exactly as possible the address to which magazine has been sent. Changes cannot be made without old as well as new address.

EDITORIAL CORRESPONDENCE should be addressed to ARCHITECTURAL FORUM, Time & Life Building, Rockefeller Center, New York 20, N. Y. FORUM will not be responsible for unsolicited manuscripts or illustrations submitted, and it will not return such material unless accompanied by postage.

ADVERTISING CORRESPONDENCE should be addressed to the advertising director, ARCHITECTURAL FORUM, Time & Life Building, Rockefeller Center, New York 20, N. Y.

TIME INC. also publishes TIME, LIFE, FORTUNE, SPORTS ILLUSTRATED, and HOUSE & HOME and with its subsidiaries the international editions of TIME and LIFE. Chairman of the Board, Andrew Heiskell; Chairman, Executive Committee, Roy E. Larsen; Chairman, Finance Committee, Charles L. Stillman; President, James A. Linen; Executive Vice President and Treasurer, D. W. Brumbaugh; Senior Vice President, Howard Black; Vice President and Secretary, Bernard Barnes; Vice Presidents, Edgar R. Baker, Clay Buckhout, Arnold W. Carlson, Allen Grover, C. D. Jackson, Arthur R. Murphy, Ralph D. Paine, Jr., P. I. Prentice, Weston C. Pullen, Jr.; Comptroller and Assistant Secretary, John F. Harvey; Assistant Treasurer, W. G. Davis; Asst. Comptroller and Asst. Secretary, Charles L. Gleason, Jr.



*Memo:* to the person\*  
 with a closed mind  
 about Metal Closet Doors.

(\*who is losing money by  
 missing rentals or sales, and  
 opportunities for construction  
 savings, by not using  
 Float-Away Metal Closet Systems)

Open your mind by taking a fresh look at Float-Away Closet Systems—name the problem; see how Float-Away has solved it.

Only Float-Away assures you of all these problem-solving features:

**UNLIMITED FLEXIBILITY**—Any width, any height

**WARP PROOF**—Dimensionally stable under all conditions

**RUST PROOF**—Zinc coated and bonderized 24 gauge steel

**INSTALLATION SAVINGS**—Hardware complete and pre-assembled

**PAINT SAVINGS**—Superior prime coat may be left for later redecoration

**TRIM SYSTEM**—All trim furnished—no door frames necessary

**SHHH**—Unique sound-proofing system

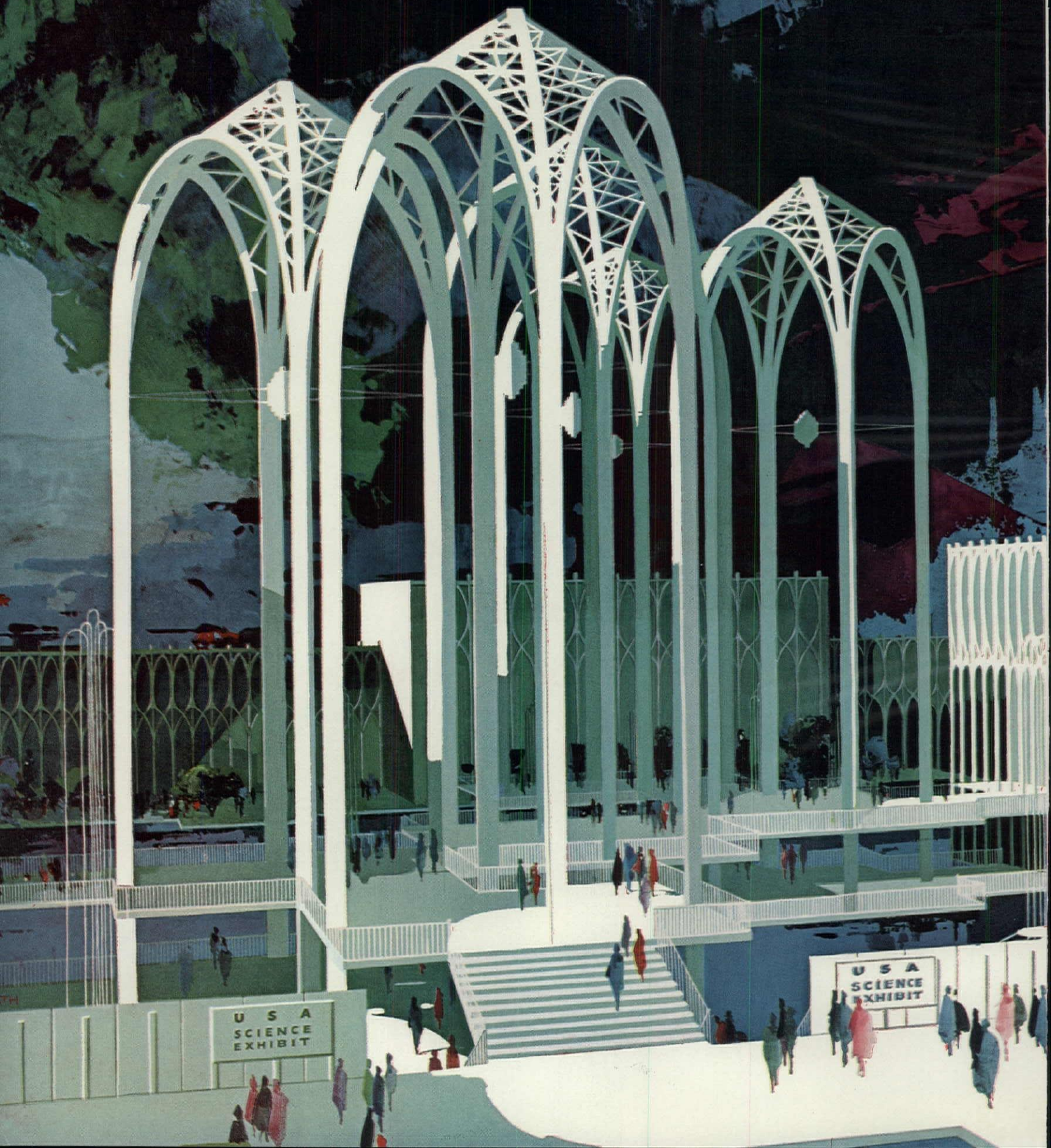
**CONSUMER APPEAL**—Full access, wall to wall, floor to ceiling—extra storage—perfect answer for apartments or homes

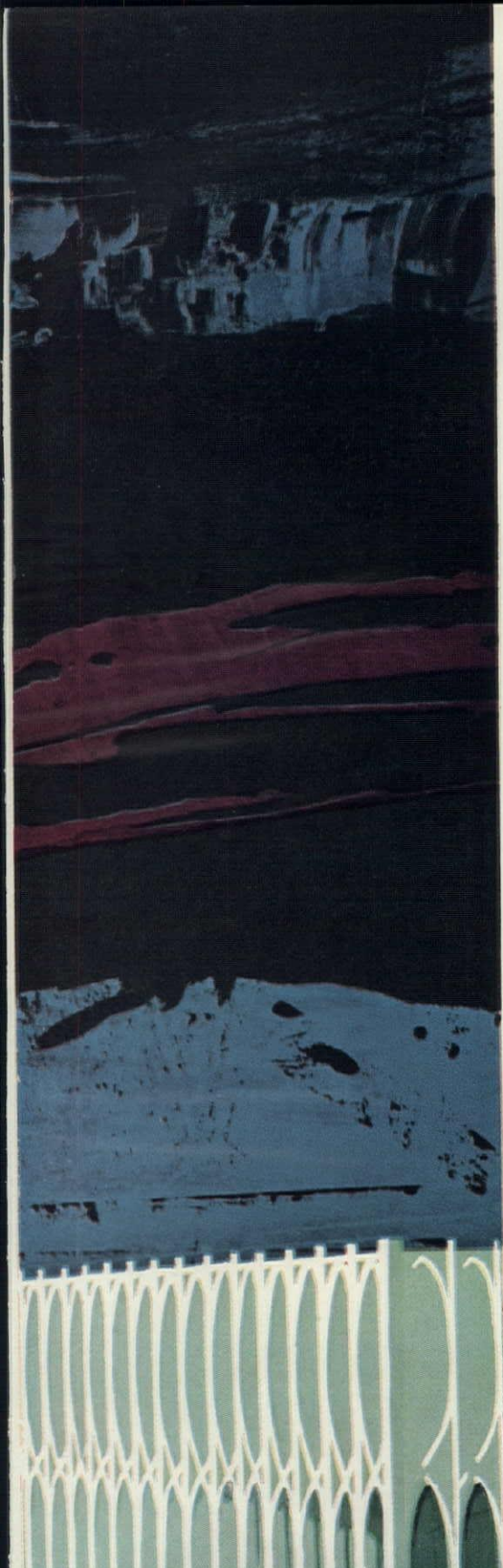
Write for 12-page catalog and architectural tracing details.

**FLOAT-AWAY DOOR COMPANY**  
 1173 Zonolite Road, N. E.  
 Dept. A.F.-362, Atlanta 6, Georgia



The best ideas are more exciting  
in **Concrete**





## *At Seattle's Century 21 World's Fair*

# Space Age meets neo-Gothic in a pavilion of prestressed concrete!

Soaring 100 feet above Seattle's 1962 space age world's fair, 5 modern Gothic arches of concrete give visual focus to the buildings of the United States Science Pavilion.

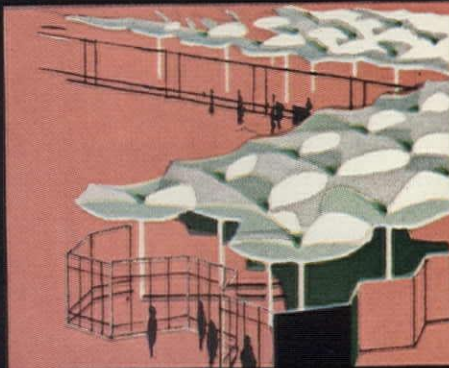
Here again, concrete effects striking beauty, as well as an advanced building technique. All the major components of the buildings are of concrete that has been precast and prestressed.

The T-unit roof beams reach spans of up to 112 feet. And exposed aggregate concrete wall panels rise as high as 52 feet. On two sides of the buildings, repeating the Gothic motif, they serve as load bearing stud walls. With their facing of white cement and quartzite, the panels give the entire complex a look of gleaming freshness.

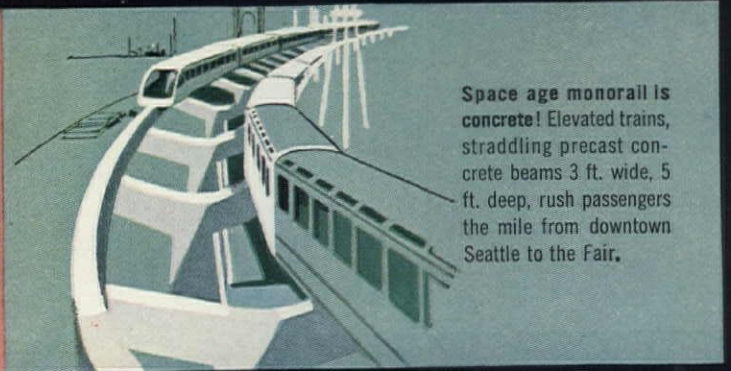
Concrete was chosen for most of the Exposition's permanent buildings . . . added recognition of its practicality and design versatility.

## PORTLAND CEMENT ASSOCIATION


*A national organization to improve and extend the uses of concrete*



The newest forms of concrete everywhere mark the Exposition. Typical are the petunia-petaled roofs of shell concrete for the International Exhibits buildings.



Space age monorail is concrete! Elevated trains, straddling precast concrete beams 3 ft. wide, 5 ft. deep, rush passengers the mile from downtown Seattle to the Fair.



*U.S. Science Pavilion comprises 6 buildings. Architects: Minoru Yamasaki & Associates, Detroit, Mich., with Naramore, Bain, Brady & Johanson, Seattle, Wash. Engineers: Worthington, Skilling, Helle & Jackson, Seattle, Wash. Precast and prestressed concrete: Associated Sand & Gravel Co., Inc., Everett, Wash. General contractor: Purvis Construction Co., Spokane, Wash.*



Corning Glass Works, Martinsburg, W. Va.

## Hard-working building keeps its luxury look with Alcoa Alumalure finish

This building works hard for a living. But you can be sure that it will keep its fresh, trim beauty for a good many years to come.

This Corning Glass Works plant is smartly turned out in Alcoa® Aluminum Siding with a Polar Blue Alumalure® finish. Plain-finish aluminum fascia gives sparkle and high light to the color areas.

Alcoa Alumalure finish has already passed a 16-year exposure test that proves its unusual durability. It's tough enamel, baked onto lightweight aluminum sheets

that go up fast to save you construction dollars. The cost is low, too. Maintenance is something you can almost forget. A rainy day takes care of most of the upkeep.

You can pick from 12 Alcoa Alumalure colors on ribbed, corrugated or V-beam aluminum roofing and siding. Order it through any Alcoa jobber or your nearest Alcoa office. For specifications, design details or a brochure with color swatches, write: Aluminum Company of America, 818-C Alcoa Building, Pittsburgh 19, Pennsylvania.

Entertainment at Its Best . . . **ALCOA PREMIERE**  
with Fred Astaire as Host . . . Tuesday Evenings, **ABC-TV**

ARCHITECT AND ENGINEER: Day and Zimmerman, Inc., Philadelphia, Pa.  
GENERAL CONTRACTOR: George A. Fuller Co.  
ALUMINUM SUBCONTRACTOR: Elwin G. Smith & Co., Inc.

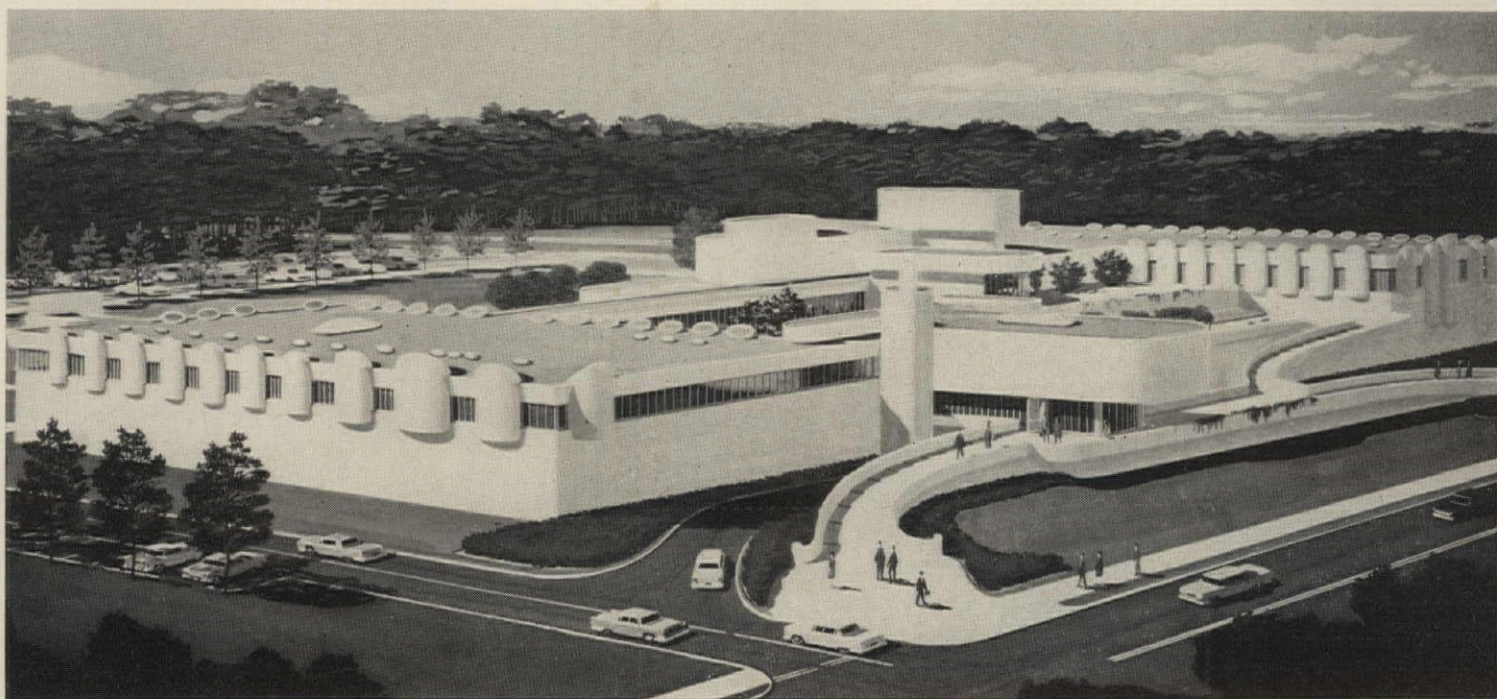
 **ALCOA ALUMINUM**  
THE ARCHITECT'S METAL



Drug factory by Paul Rudolph (below)

Cloud club over Houston (page 37)

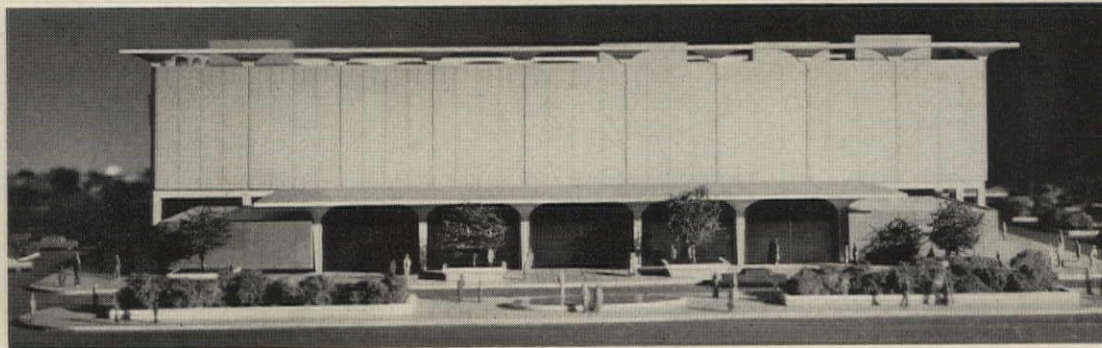
Two West Coast centers for air research (page 39)



1



2



3

**1. TURRETED PILLWORKS.** A pharmaceutical company that wanted to make its new research and manufacturing quarters unique seems likely to achieve its objective. Shown above is Endo Laboratories' projected new building, designed by Architect Paul Rudolph. Its turrets, curved ramps, and oval skylights are distinctive enough to make it a landmark, both for the architect and for the client. To stand on an 8-acre site across from the Roosevelt Raceway in Garden City, N. Y., the building will have

ramps leading gently into the central section, where pain-relieving tablets and liquids will be manufactured. Cast-in-place concrete, with a pale aggregate exposed, surrounds storage and manufacturing operations on the first two floors. Bands of glass and turretlike outcroppings march around the third floor's perimeter. The oval turrets and their skylights will not be uniform: some have room for just one office; others have space for more. Top-floor offices and the cafeteria will face a central roof garden.

**2. OFFICES IN KANSAS CITY.** Pushing 19 stories into the air above a large raised plaza on the city's highest point of land, this new office building will qualify as the tallest in Kansas City, Mo. Skidmore, Owings & Merrill designed it as a new home office for the Business Men's Insurance Company of America. In a strong expression of structure and sunshading, the steel frame, clad in white marble, will stand 6 feet out from the glass walls.

**3. SLEEK SUBURBAN STORE.** The sophistication that has won Ohr-

bach's awards for its retail advertising is echoed in this sleek design for the company's first suburban New York store, in Westbury, L.I. To create a smart showcase for merchandise, Charles Luckman Associates placed tall windows at ground level to give shoppers a clear view inside. The second and third stories, of masonry panels, will be topped with a continuous canopy on columns, repeating lower canopies on two sides of the store. Entrances on the opposite sides are covered by arcades running the store's width.

*continued on page 37*



**THIS KEY WORKS . . . UNTIL YOU USE THIS ONE!**

## **Unique New Russwin Construction Key\* System offers quick, easy way to insure building security!**

**No lock cylinders to change! Simply turn a key to introduce permanent key system**

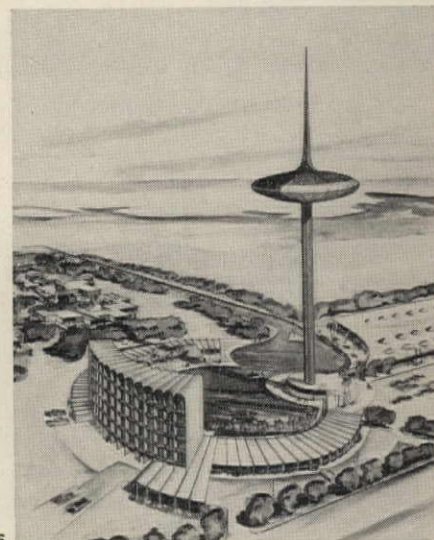
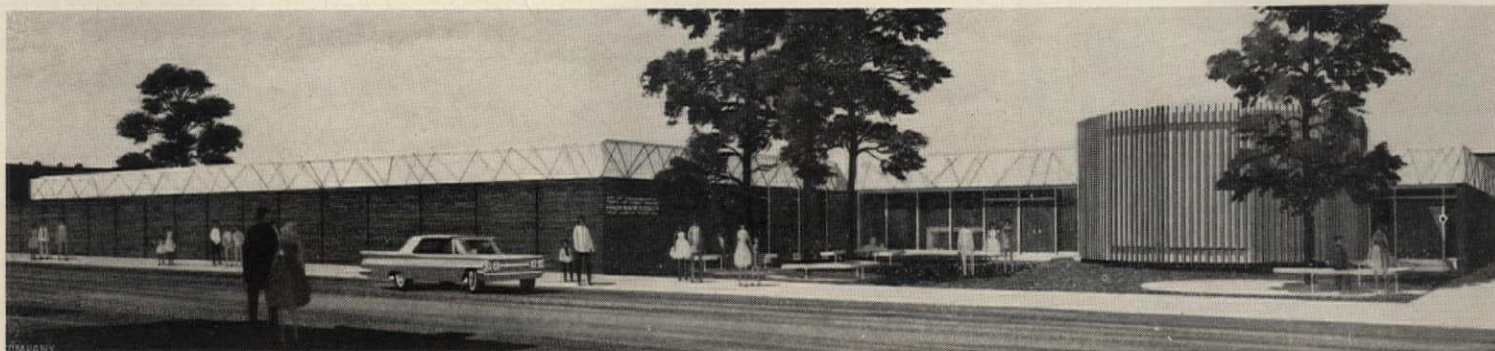
One set of keys operates locksets during building construction. Another set is issued after work is completed. *Initial use of this second set automatically cancels out the first set!* No lock cylinders to change. Security is insured with the turn of a key when permanent key system is introduced.

The unique Russwin Construction Key System offers the simplest, quickest, most practical way to provide protection and peace of mind for *any* building owner. Have your Russwin hardware consultant demonstrate this remarkable new development. Or write for details to Russell & Erwin Division, The American Hardware Corporation, New Britain, Connecticut.

\*Pat. appl'd. for

**RUSSWIN**

Continued from page 35



**4. HEALTH IN PHILADELPHIA.** Replacing a police station which had been turned into a makeshift public health center, the City of Philadelphia starts construction of an entirely new center this month. It will be a long, low building with two courtyards in the middle and a circular auditorium in front. Architects and engineers: The Ballinger Co.

**5. NEW JERSEY TEMPLE.** A glass corridor topped with a fascia of lead will link Edgar Tafel's Temple Israel in South Orange, N.J. with an old addition to a McKim,

Mead & White mansion (left in rendering), built when the congregation bought the house and property several years ago. The exterior of the new sanctuary (far right) will be of limestone panels. At the center is an auditorium seating 800, to be faced in brick.

**6. CLOUD OVER TEXAS.** A high-flying restaurant shaped to look like a nuclear cloud impaled on a space needle will set the tone of the "Moon Glow" development 25 miles southeast of Houston. In keeping with its theme, and perhaps because it adjoins NASA's

Manned Space Flight Center, the space needle will be anchored in a fallout shelter underground. The restaurant, more optimistically, will be named for the "Sea of Serenity" on the moon. The \$3 million project will also boast a seven-story motel. Architects: Lloyd, Morgan & Jones.

**7. THIN SHELL-ROOFED THEATER.** Touching ground only at two corners, a hyperbolic-paraboloid shell of reinforced concrete will swoop over the heads of moviegoers in this Perkins & Will design for the Edens Theater in Northbrook, Ill.

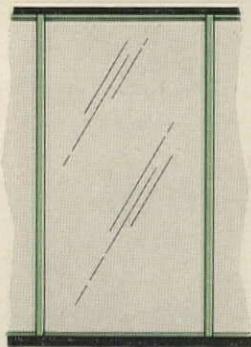
**8. VIRGINIA APARTMENTS.** While Mrs. John F. Kennedy is refurbishing The White House, Washington developers are planning to put up high-rise apartments on the estate which was her girlhood home, "Merrywood," near Washington, D. C. The plan, created by Architects Corning, Moore, Elmore & Fischer for the Magazine Brothers, developers, is to concentrate three apartment towers and two rows of town houses on a small portion of the estate, keeping the house, roads, and landscaping largely as they are.

continued on page 39

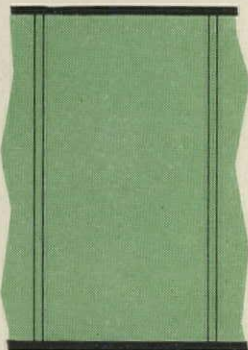
**The International Building, San Francisco**  
Architects: Anshen & Allen



Interior walls can give individualized substance and shape to space within the discipline and economy of an essentially standard product... if the product is versatile enough to provide the architect with design freedom.



Signature Wall by Hauserman... slimness uncluttered by non-functional lines on forms... full lights with a choice of glass patterns or solid panels in a wide selection of striking colors.

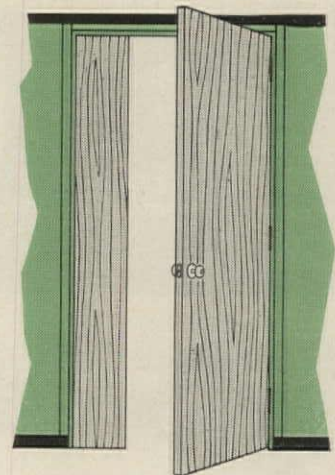


**Discipline and Economy...  
AND MOVABLE WALLS  
BY HAUSERMAN**

Your freedom to design interior space division is unhampered... Hauserman Movable Interior Walls have thousands of combinations and permutations. Basic structural elements, glass and metal combinations, surface finishes and materials... all are readily coordinated to your concepts of function and beauty.

All this creative freedom is possible without affecting the first-cost economy and efficient reusability of The Hauserman Movable Wall System concept. Includes single-responsibility erection and later-date relocation by Hauserman's own crews.

*Call your local Hauserman sales office, or write us.*



Signature door units in the International Building, San Francisco, combine the luxury of rare woods with the practicality of a movable steel interior partition system.

Simple, elegant... interior wall systems can be either, or a combination of both, with highest-quality Hauserman Delineator Movable Walls. Delineator Wall offers complete freedom of design and decor, widest choice of materials. The black reveal is an integral part of the interior design, a linear articulation of the interior, a recurring restatement of the module.



**MOVABLE  
INTERIOR WALLS  
by  
HAUSERMAN**

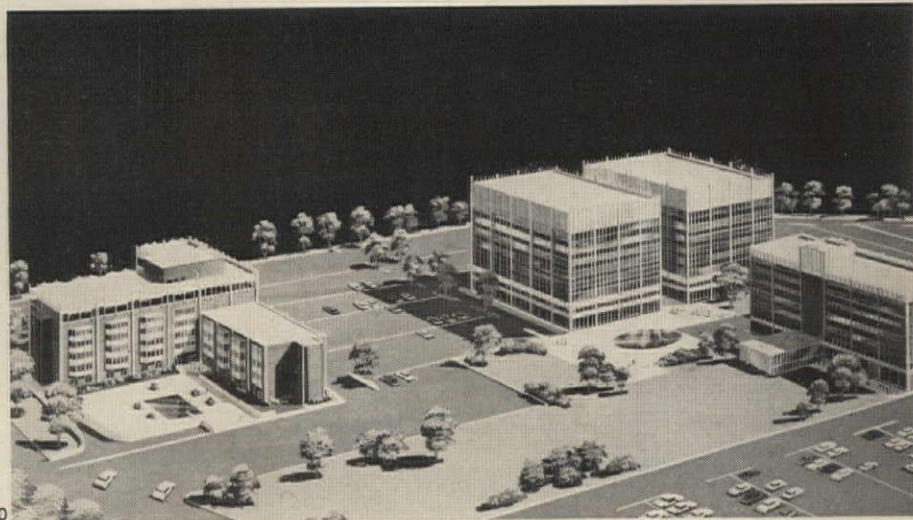
The E. F. Hauserman Company  
7586 Grant Ave., Cleveland 5, Ohio

Branch Offices in 19 cities,  
and Hauserman Ltd., Toronto

Continued from page 37



9



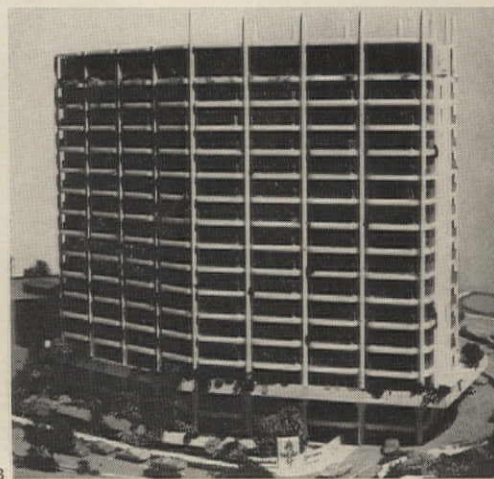
10



11



12



13

**9. WINGED CHURCH.** This arresting little church, planned for Rocky Point, N.Y., will soar from reinforced concrete buttresses up to a fish-tailed spire. The roof is a series of wood trusses exposed inside above the altar, changing to a warped plane of cedar-board sheathing above the nave. Architect: Edward W. Slater.

**10. NORTHLAND ANNEX.** On the outer fringes of Northland Center, Detroit's famed shopping complex, a new commercial development is taking shape. First element in the Northland Point Project

will be the 200-room Northland Inn (left; to be run by Stouffer's and furnished in "Tudor Pub" style). Other buildings are a medical center (right) and twin office towers. The development is a joint venture of Northland Center Corp. and the H. L. Vokes Co., Cleveland engineers.

**11. AIRCRAFT TESTING CENTER.** Next October the Bechtel Corp., designers and builders, expects to finish this engineering and product development center in Long Beach, Calif. for the Aircraft Division of Douglas Aircraft Co. Set

uncomfortably close to testing facilities, the building will rely for noise control on walls of solid masonry and windows with an extra sound-deadening layer of glass.

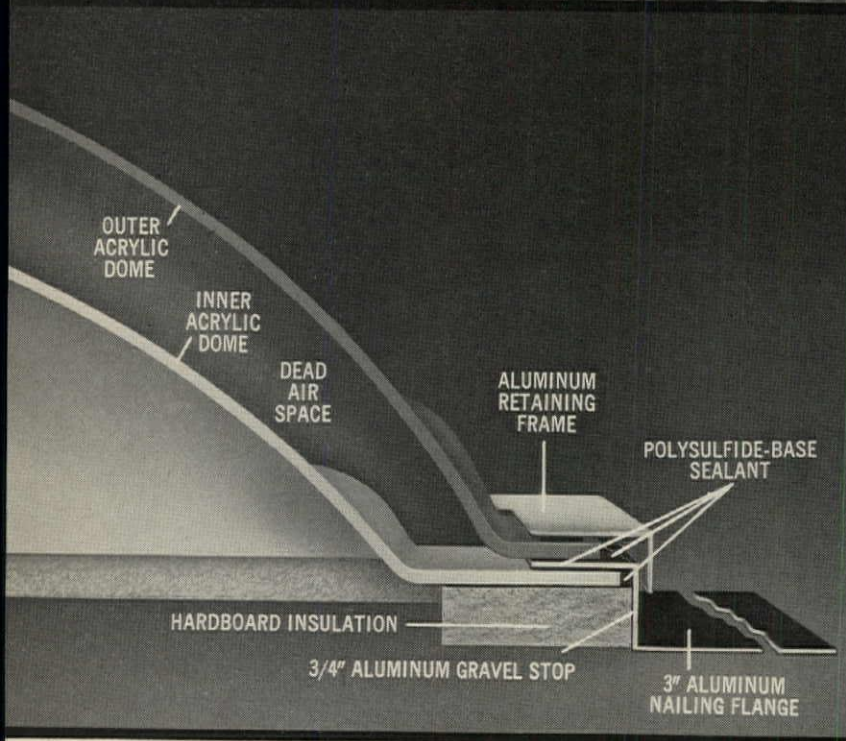
**12. AEROSPACE RESEARCH.** In Irvine, Calif., Astropower, Inc., a subsidiary of Douglas, will begin its own 50-acre research center with a large flat-roofed concrete office building and a cluster of research units under pyramidal sandwich-panel roofs. Later on, these combinations will be repeated in four new groups. Cen-

tral to William L. Pereira & Associates' master plan is a five-story administration building.

**13. LAKEFRONT TOWER.** This 17-story tower in Oakland, Calif. will have something for everyone: parking, services, and shops on the first three floors, a hotel on the fourth, 100 "town house" apartments on the remaining 12 floors. Topping off the tower will be a restaurant and swimming pools. Yet another magnet for tenants: a marina on Lake Merritt, virtually at the door. Architects: Simpson, Stratta & Associates. **END**

# GUARANTEED AIRTIGHT, WATERTIGHT...PERMANENTLY

## New Wasco Twin Dome<sup>®</sup> Insulates as it Daylights



Cutaway Section — New Self-Flashing Wasco Twin Dome

N. Attleboro (Mass.) Jr. H.S.—Arch: Haldeman & Jacoby, Brockton, Mass.

Wasco's field-proven self-flashing Twin Dome enables the architect to make fuller use of evenly-diffused, glare-free natural daylighting without concern as to heat gain or loss, or condensation.

This first totally-proven dome-within-dome design uses a permanent polysulfide-base sealant to bond an inner and outer acrylic dome to an aluminum nailing flange. The uniform, hermetically sealed 1-inch dead air space between the domes acts as a highly efficient thermal barrier and eliminates condensation. The U-factor remains constant at 0.57 in any geographic area regardless of light level.

A complete range of 19 self-flashing and curb-mounted sizes permits the architect to blend Twin Domes with any

roof or building style. Choice of clear, white translucent or dense white inner and outer domes allows him to regulate light levels. Twin Domes are shatterproof, maintenance-free and weather-perfect. The self-flashing model can be installed in 15 minutes.

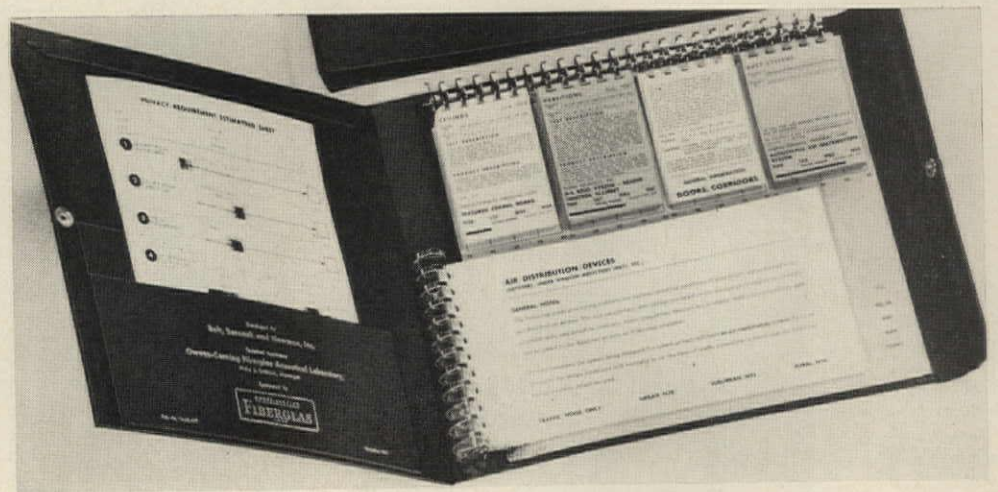
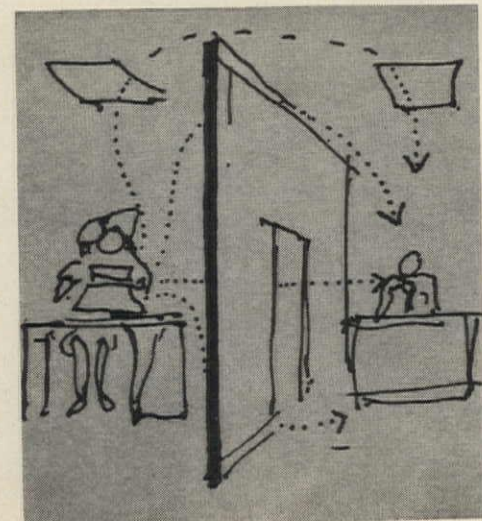
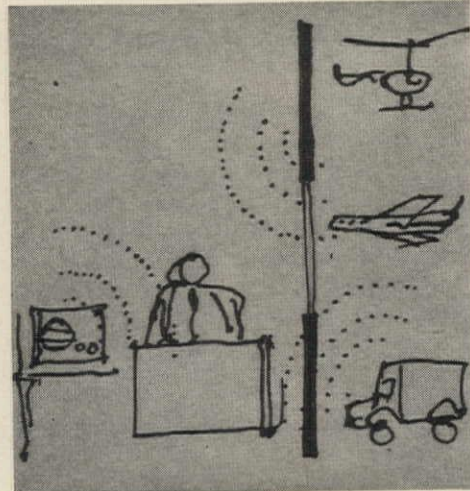
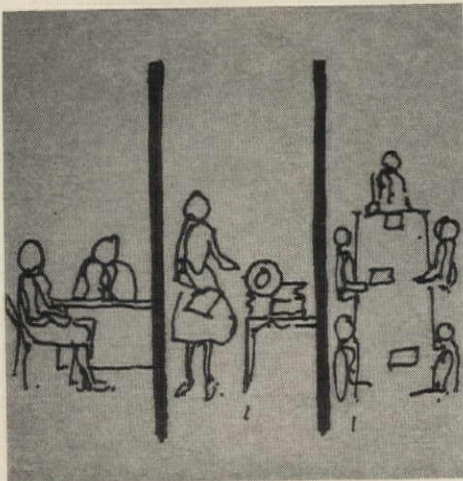
For full details, see Sweet's Architectural File 20a/Wa or write Wasco.



Solved: the case of the noisy room (below)

Digging with sound waves (page 42)

Sleek folding table (page 43) and chair (page 44)



**ACOUSTICAL GUIDE**

Of all the acoustical problems in today's buildings, none is more critical than that of providing relief from the distractions of other people's conversations. This is true in offices, dormitories, apartment houses, motels and hotels, and it becomes more acute with the steady increase of lighter-weight building materials.

To provide a tool for architects to predict how voiceproof a given design will be, Owens-Corning Fiberglas and Acoustical Consultants Bolt, Beranek & Newman Inc. spent five years developing the *Speech Privacy Analyzer*. With this kit, the architect can select the building components that will give him the acoustical atmosphere he wants. It contains basic data on components, clear instructions, and a block of work sheets for computations, the most arduous of which requires adding five numbers. Owens-Corning sells the kit for \$18; the initial sum also guarantees the purchaser that he will receive additional data on new building materials as they are developed and evaluated.

With Bolt, Beranek & Newman's instruction booklet in hand, it is hard to go astray:

First, the architect fills in a Privacy Requirement Estimating Sheet (at left in kit), an estimate of the problem's difficulty which is then expressed by a number called the Speech Privacy Requirement. To arrive at this number, he notes the size of the room, the level of speech noise intruding, the steady background noises such as traffic and air-conditioning sounds (sketches, left), and how quiet the room ought to be. The latter

is determined by the room's use: doctors, lawyers, and personnel interviewers must keep interchange confidential; less privacy may be quite adequate for others, who will be comfortable if conversations in the next office are audible but unintelligible.

Step 2 adapts the Speech Privacy Requirement to the geometry of the room and analyzes the paths sound takes between rooms. A Component Selection Sheet evaluates the performance of the ceiling, partitions, doors and corridors, and interconnecting air passages, translating the privacy ratings for each component. The rating source is a stack of loose-leaf cards for each component (at right in kit). By leafing through the "partitions" stack, say, an architect quickly discovers the rating number for the partition he wants to use, inserts its number, and decides whether this rating will give him the degree of privacy he wants when it is combined with other components.

Step 3 is to decide which components, used together, will meet both the budget and the requirements indicated on the Component Selection Sheet.

Despite the painstaking research and testing put into its development, the Speech Privacy Analyzer does not purport to be a panacea for all acoustical problems. In particularly difficult design problems, such as rooms with electronically amplified speech or music, the Analyzer has to be supplemented with expert help. But within its scope—purposely limited to what it can do accurately—it does a remarkable job.

Manufacturer: Owens-Corning Fiberglas Corp., 717 Fifth Ave., New York 22.

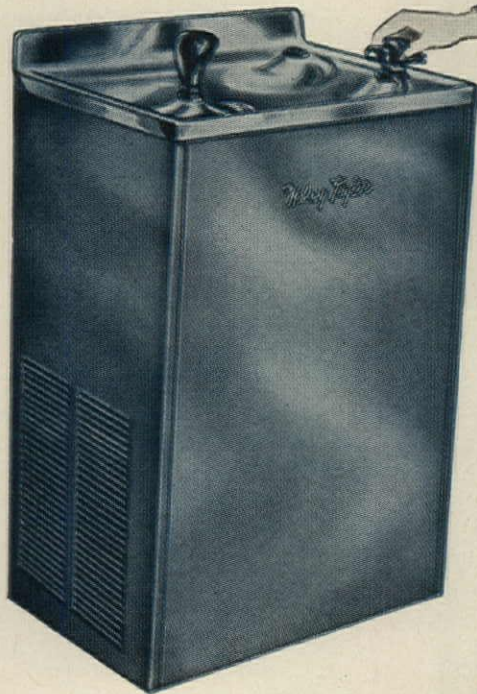
*continued on page 42*



# It started 50 years ago



Here's the patented Wall-Mount, a Halsey Taylor first... on the wall, off the floor. Cabinet of heavy, bonderized steel and Thermo-Sprayed for lasting finish. Taylor-made for long life and maximum performance!

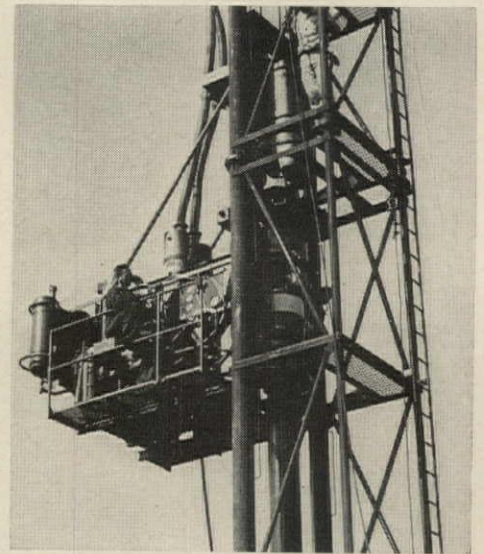


Back in 1912 Halsey Taylor first introduced a wall fountain with what was then a revolutionary new feature, an automatic pressure regulator, which made it possible to drink safely regardless of pressure variation.

Pioneering started even then with Halsey Taylor. And this same progressive pioneering prevails today. For example: the patented Wall-Mount cooler, shown here, a trend-setting style first by Halsey Taylor.

As in the past, so today you can count on Halsey Taylor for the newest concepts in fountains or coolers.

The Halsey W. Taylor Co., Warren, O.



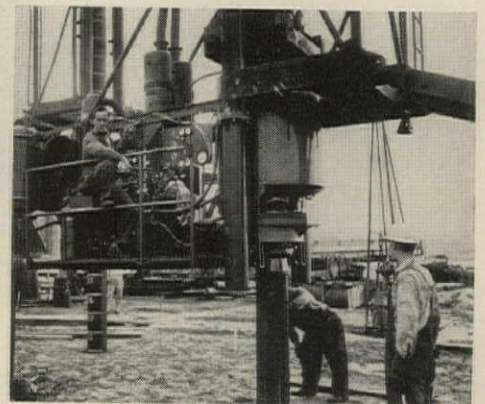
## SONIC PILE DRIVER

Last month sound waves were used to drive piles for bridge foundations along Route 95 in Providence, R. I., the first actual job done with the *Bodine Sonic Pile Driver*. In this new technique a 400-horsepower V-8 engine attached to the top of the pile makes it vibrate, temporarily displacing the earth at its tip so that the pile slips in with a minimum of friction. It goes in so fast, observers say, that it seems to be dropping into a hole. Construction men, some of whom have seen demonstrations, are watching the new technique with a good deal of interest.

Albert G. Bodine Jr. of Van Nuys, Calif., the sonic driver's inventor, gave the C. L. Guild Co. of Providence exclusive rights to development. Guild built the prototype, shown here, and is building eight others which differ in the placement of the vibrating engine platform, at the side instead of the front, and are controlled on the ground instead of by an operator riding aloft on the platform.

In the tests conducted so far, Guild says, the sonic rig works as well diagonally as it does vertically. Data is being collected now for load tables which would relate sonic driving to standard refusal-point evaluations in steam-hammer driving.

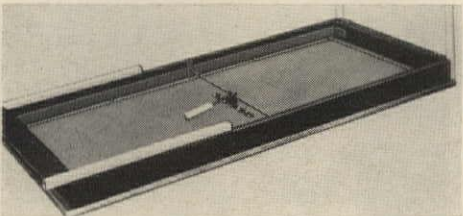
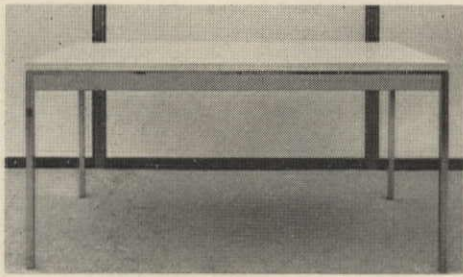
Manufacturer: C. L. Guild Construction Co., East Providence, R. I.



# Halsey Taylor®

QUALITY DRINKING FIXTURES FOR OVER 50 YEARS



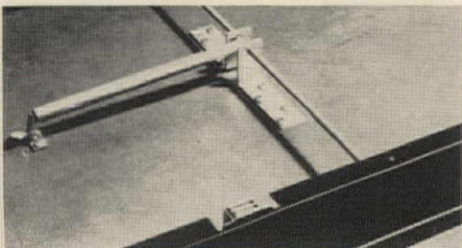


### FOLDING TABLE

Conference and training rooms are a natural habitat of the folding table, but until recently such tables, while utilitarian enough, did not contribute much to a room's design. For the carefully detailed Union Carbide Building in New York City, however, Skidmore, Owings & Merrill asked for—and got—a folding table stripped of cross bracing, rollaway legs, and curving supports.

SOM's simple design (top photo) conceals a folding and locking mechanism (bottom photo) engineered and patented by Howe Folding Furniture, which made the Union Carbide tables. Since then, the same design has become a permanent part of Howe's line, stocked in several sizes. All have Formica tops, black steel skirts flush with the top, and slim legs of square steel tubing which lock tightly in place to prevent wobbling.

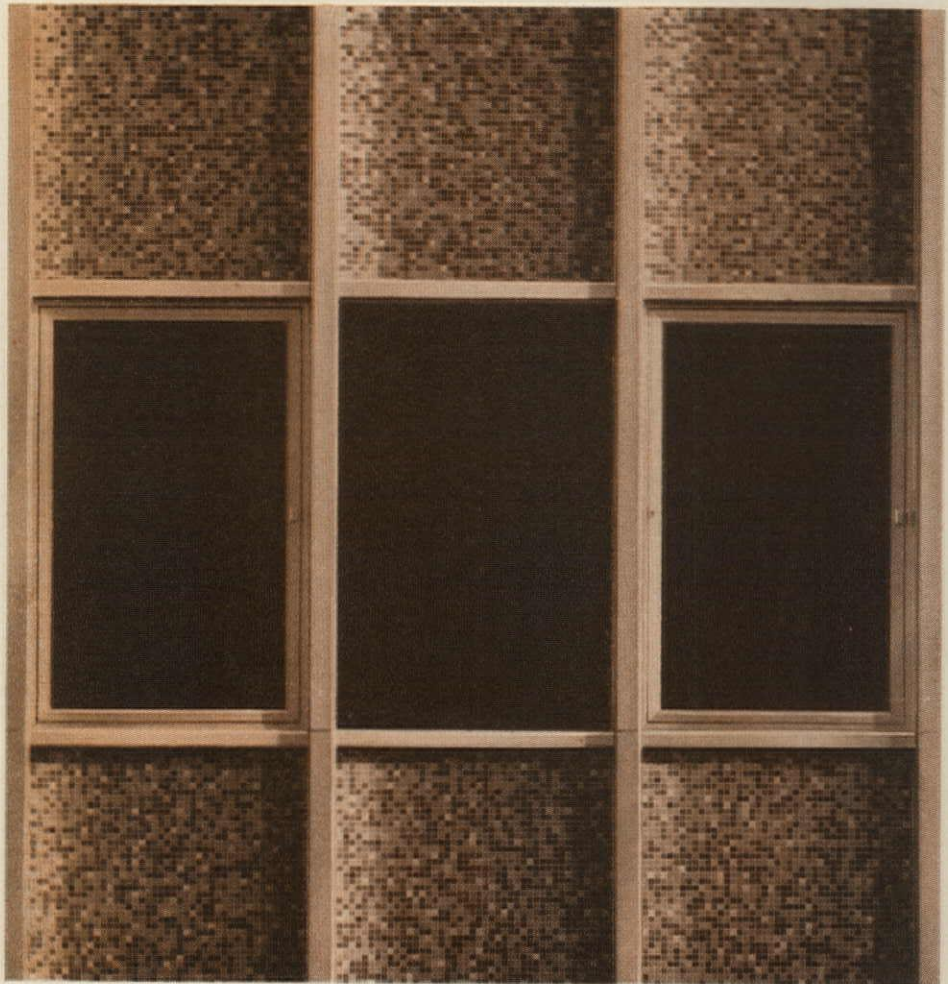
Folding the table is an easy operation: it is simply turned on its back, and the center lever rotated 180 degrees. This movement unlocks two pairs of cams so that the legs slide toward the center, released from heavy hinges at the four corners. In the folded position, with legs held by special magnets, the table is only 5 inches deep.



Howe calls this table design the *500 Series* and offers it in rectangular sizes ranging from 18 by 60 inches to 36 by 96 inches, and in three square models, 30, 36, and 42 inches across. Sample list price for an 18 by 60-inch table with black enamel leg finish: \$205; same size with satin chrome leg finish: \$224.

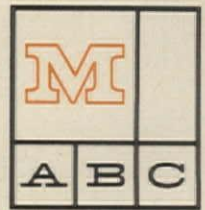
*Manufacturer:* Howe Folding Furniture, Inc., 1 Park Ave., New York 16.

*continued on page 44*



Inter-Ocean Insurance Co. — Cincinnati, Ohio — Samuel Hannaford and Sons, Architects

## CURTAIN WALLS



Standard or Custom? That's usually the big question when an architect is specifying or designing a metal curtain wall. What's the difference between the two? Quality and cost. Which is the cheaper? In the long run, the custom wall. Why? Because custom walls are more carefully detailed, more precisely engineered, more rigidly manufactured, more accurately finished — in other words, they're better built and easier to maintain! It's the old story about getting what you pay for. But with a Michaels custom wall, you pay only a little more to get a lot more in design, engineering, manufacture, and performance. Any more questions? Write us for the answers.

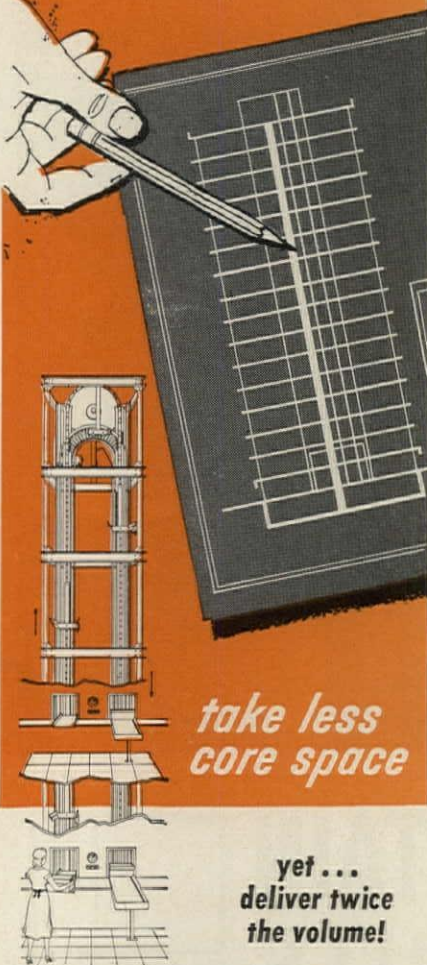
### THE MICHAELS ART BRONZE CO.

P. O. Box 668, Covington, Ky., Plant & Office: Kenton Lands Rd., Erlanger, Ky.

Metal Curtain Walls — Windows — Entrance Doors — Custom Store Fronts — Railings — Ecclesiastical Work — Bank Equipment — Tablets & Signs — Astragals — Exhibit Cases

# LAMSON

## NEW SELECTIVE VERTICAL CONVEYORS



take less  
core space

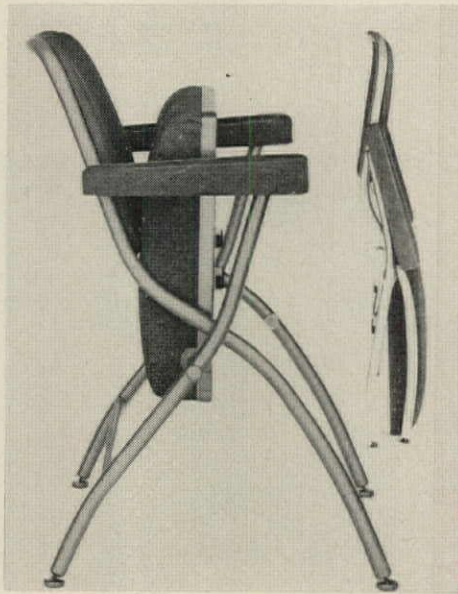
yet...  
deliver twice  
the volume!

New LAMSON SELECTIVE VERTICALS are slimmer and faster than ever. Improved design has reduced outside measurements and increased trayload service per floor from 8 to 16 per minute.

An integral linkage in the endless chain lift energizes each loading and unloading mechanism. This dependable, fool-proof action permits the easy integration of horizontal conveyors that extend the SELECTIVE VERTICAL SYSTEM to include automatic, inter-floor, station to station delivery of paper and small packages.

Check LAMSON before specifying paper flow systems for any new building. Just clip this advertisement to your letterhead and mail to 112 Lamson Street, Syracuse, N. Y.

**LAMSON CORPORATION**



### FOLDING CHAIRS

SOM also had a hand in the design of this plump-cushioned folding chair, suggesting some modifications to a pilot model Mayfair Industries was about to manufacture. SOM eliminated stretchers, squared the cushion contours, and straightened the legs. Like the Howe folding table (page 43), the design was developed for the Union Carbide Building and has since become part of the manufacturer's standard line.

A long-established feature of Mayfair upholstered chairs is that they not only fold but also stand alone, one reason why previous models appeared somewhat pigeon-toed. In this new model, the 3000 Series, the legs are bent, though considerably less than before, and yet spread enough so that the folded chair stands by itself. One version has a foam rubber cushion over a shaped seat pan; the other (shown above) has a full 5 inches of foam rubber plus springs. Folded and stacked, they take up little space: surprisingly, the thickly padded one is only 5½ inches deep when closed (see photo).

Chair frames are aluminum tubing, reinforced with steel at points of stress. Standard upholstery is General Tire & Rubber Co.'s Boltalex, but other fabrics or vinyl may be specified. Prices vary a little depending on the frame's finish, but the thickly padded chair, in the least expensive finish, costs \$86 (list); the thinner model, \$73.80.

Manufacturer: Mayfair Industries, Inc., 230 Park Ave., New York 17.

### SEALANT CALCULATOR

A handy gadget—and free besides—is the *Joint Sealant Estimator*, a slide rule that gauges the amounts of polysulfide-base sealants needed for specific jobs. By setting the joint's width against its depth, the estimator finds out 1) how many gallons are needed

If you like the sweet smell of success—you read your businesspaper carefully and regularly. You know there's no other place you can get so much of what you need to be outstanding in your job, or in your field, as the information you find concentrated in the advertising and editorial pages of your businesspaper.

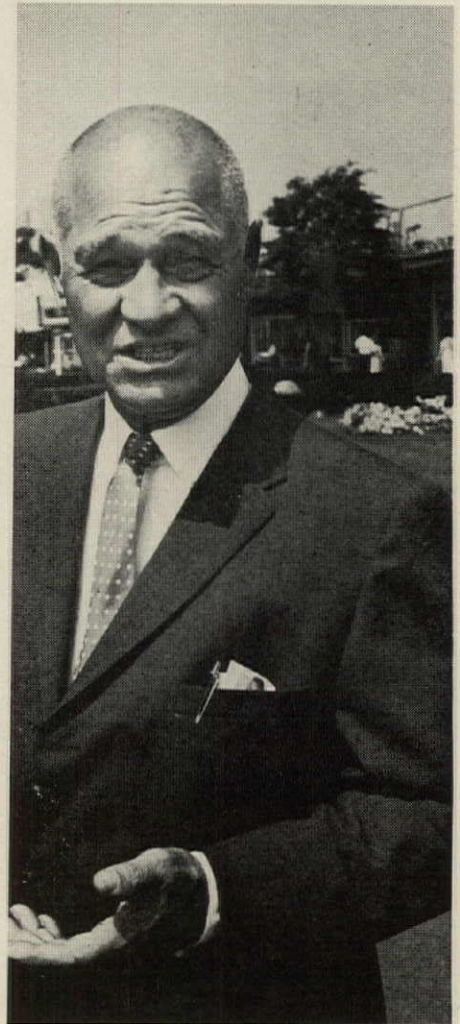


PHOTO ON LOCATION BY EHRENBURG

Where there's  
business action,  
there's a  
businesspaper

where there's building  
business, there's

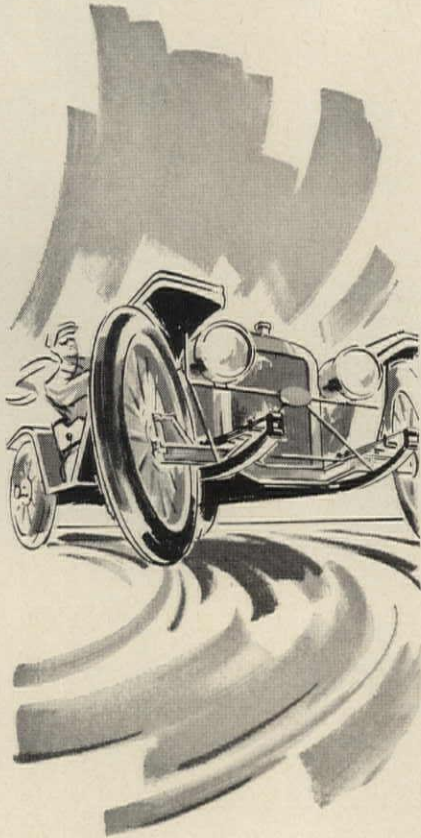
Architectural  
Forum



One of a series of advertisements prepared by the ASSOCIATED BUSINESS PUBLICATIONS

One of a Series

## ELEMENTS OF STRENGTH



**CORNERING.** Getting around corners has always been an engineering challenge. The first American car to do it at speed, and stay on four wheels, was the 1905 "American Under-slung." This legendary STUTZ had springs anchored over and outside of an inverted frame, elements of strength that today's racing cars rely on.

Getting around architectural corners with remarkable speed and smoothness is new Powell 4-X Bead. It gives all the strength of solid bead, all the flexibility of expanded bead. New butterfly perforations in flange permit plaster bonding right up to the nose. Diamond-shaped wing edge eliminates cracking problems. Powell 4-X is a flawless performer. Write for a sample and full information.

*Something's Always New at Powell.*

**POWELL**  
STEEL LATH CORPORATION  
3737 N. Powell Ave., Franklin Park, Illinois



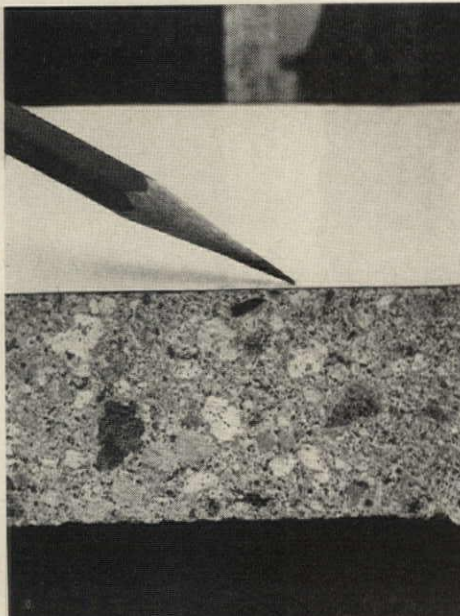
to fill 100 linear feet and 2) how many linear feet can be obtained from a gallon of sealant. The same information is given for standard 3/4-gallon packs of sealant. On the reverse side are tips for getting the best results in sealing several materials—the proper surface preparation, whether a primer is recommended, and other information.

Single slide rules are available free on request.

Manufacturer: Thiokol Chemical Corp., 780 N. Clinton Ave., Trenton 7, N.J.

### PREVIEW

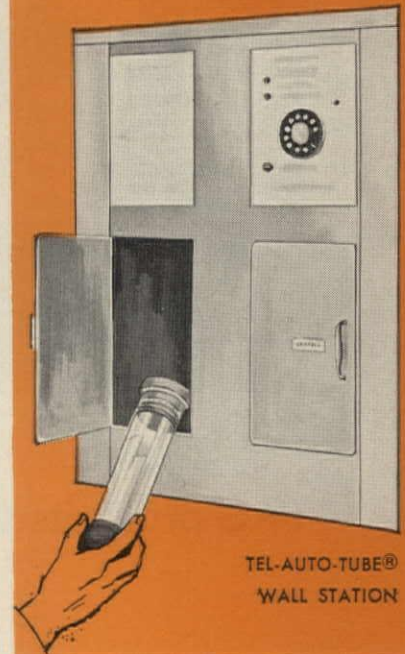
The glossy finish on top of this concrete block is a new polyester coating developed by Allied Chemical's National Aniline Division. Sprayed on the block to a depth of 1 to 5 mils, the new coating looks like a tiled surface, yet it adds very little to the cost of the block. This is only one of several uses to which Allied Chemical expects the new coating to be put; other possibilities are finishes for furniture (resistant to solvents, moisture, and scratches), steel, and laminates of paper and glass fiber. The raw material cost is so low—22 to 25 cents per pound—that it should compete favorably with conventional polyester coatings, furniture lacquers, and appliance finishes. END



## LAMSON

**AUTOMATIC AIRTUBE COMMUNICATIONS**

*stress simplicity*



*...that saves space!*

LAMSON has eliminated much of the bulk from its new paper handling systems.

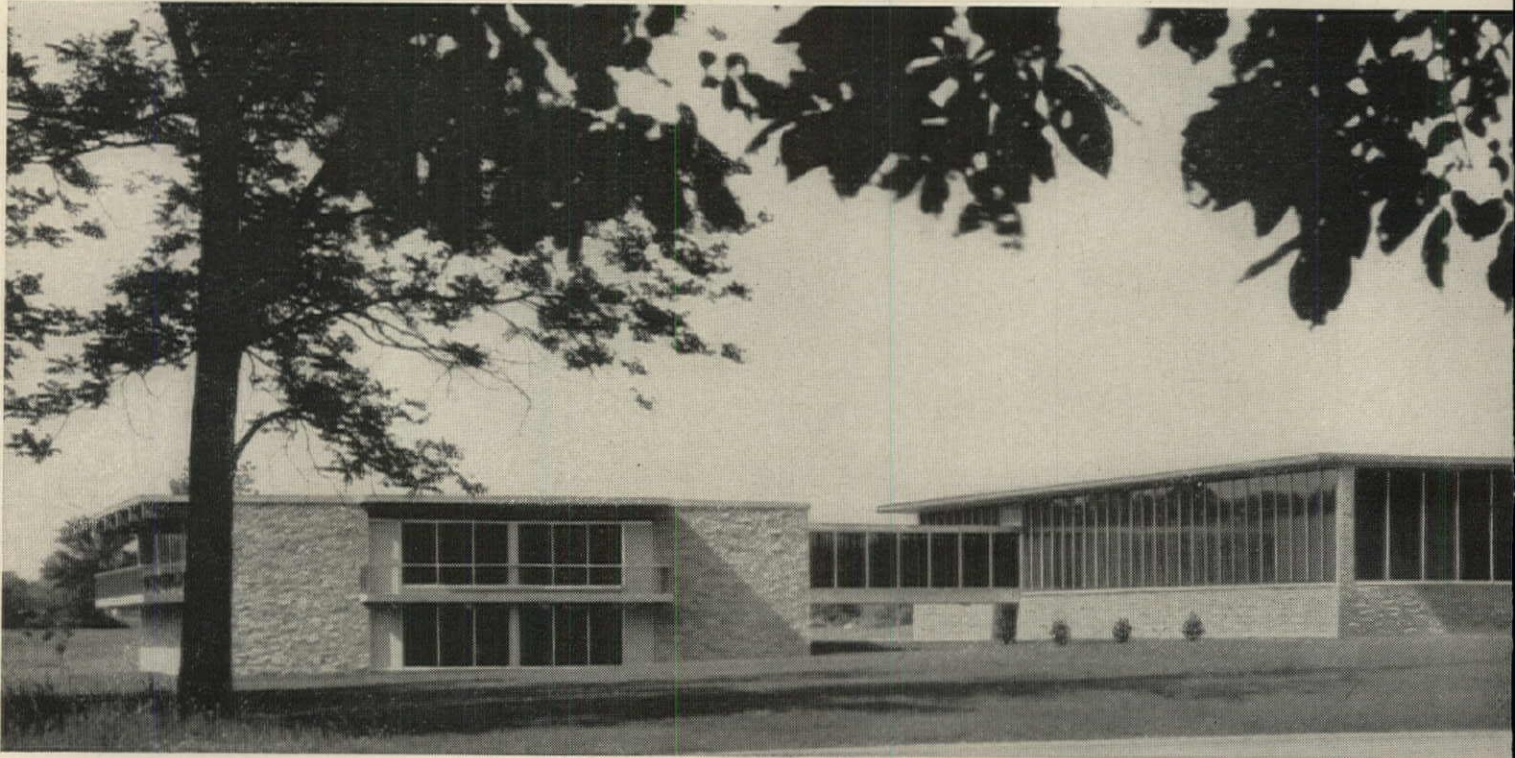
Compact Automatic Monitors replace cumbersome Central Stations and complementary control devices enable one set of AIR-TUBES to do the work of many.

Now it's possible for an operator to place any standard LAMSON carrier in a TEL-AUTO-TUBE sending inlet (as shown above), dial the desired station and let the system do the rest.

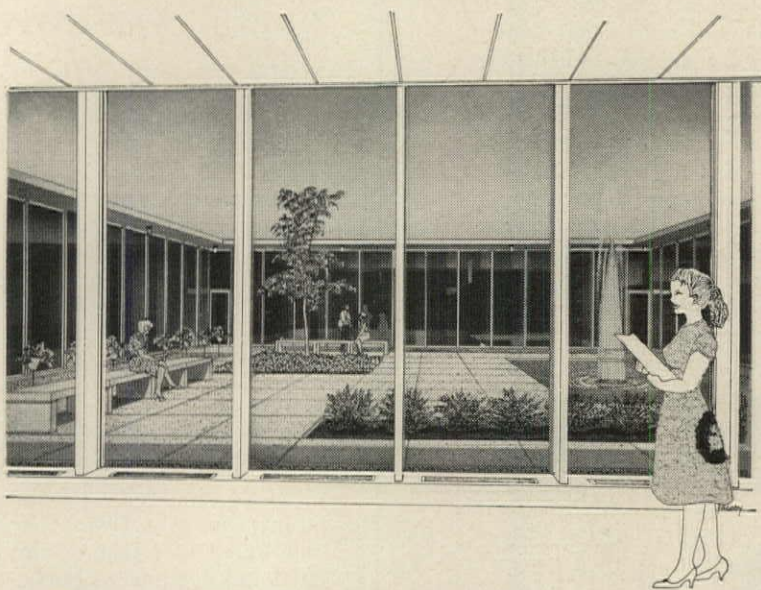
Such simplicity of operation stems directly from the space-saving, streamlined design of the system's component parts.

Installation takes much less time and space than ever before. Check LAMSON before specifying any other type. Send for the new AIRTUBE catalog. Write 112 Lamson Street, Syracuse, N. Y.

**LAMSON CORPORATION**

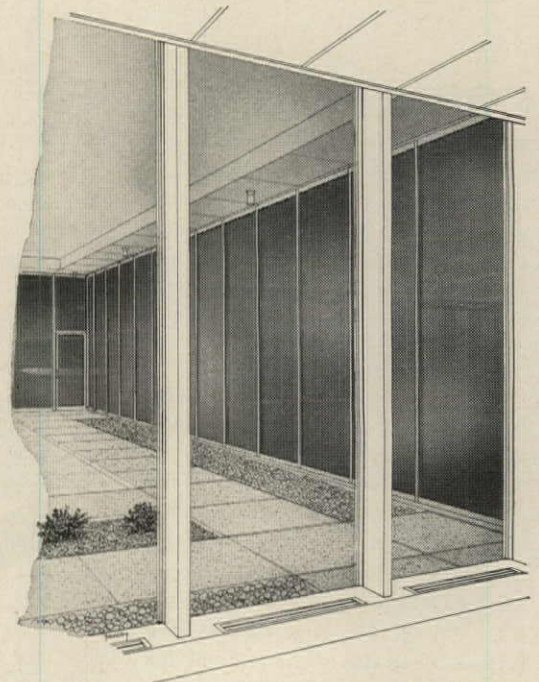


PPG products that insure comfort in any building:



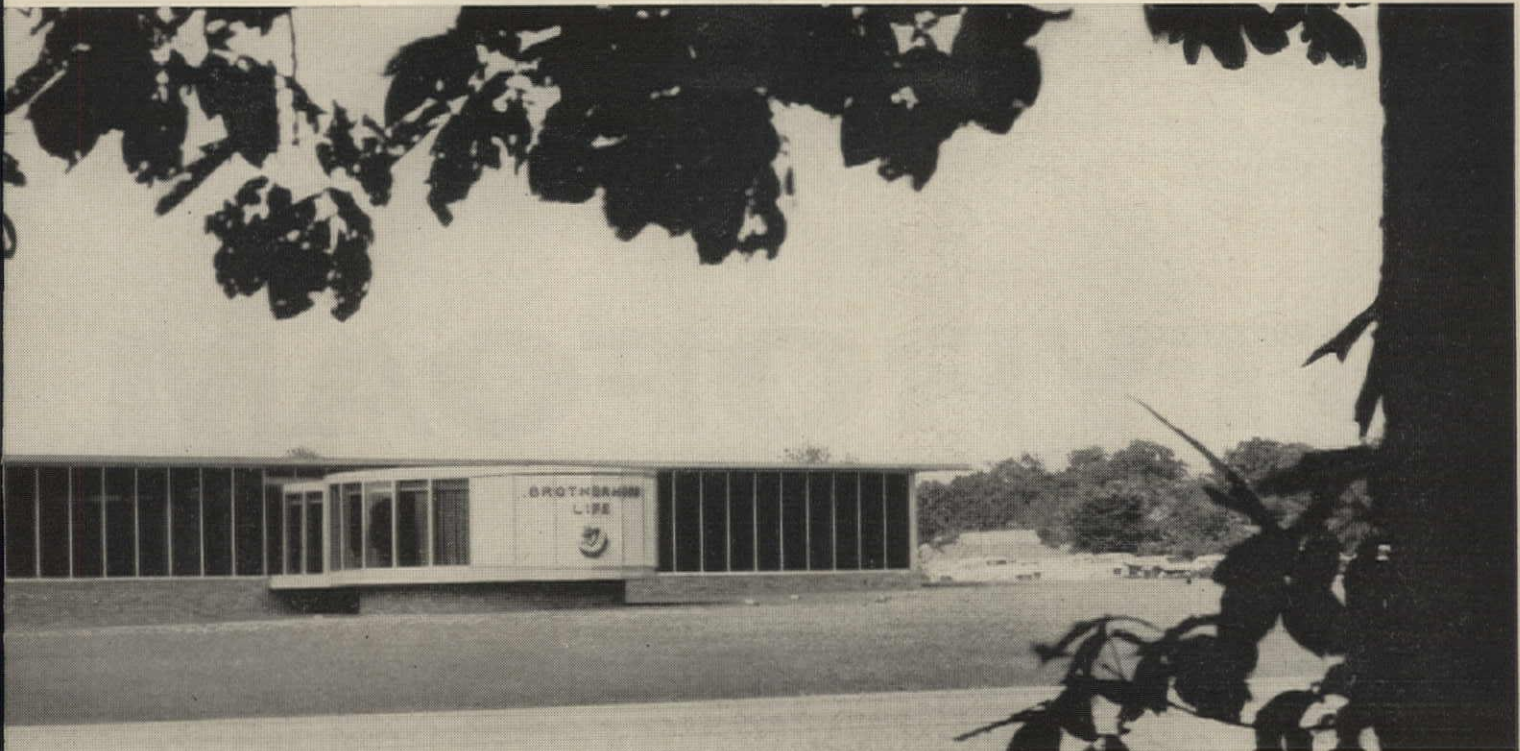
### SOLARGRAY PLATE GLASS

This sketch of the interior court illustrates the wide use of SOLARGRAY in the Brotherhood Mutual Life Building. SOLARGRAY is a heat-absorbing and glare-reducing plate glass. Its soft gray tint absorbs about 50% of the sun's heat and reduces sun glare. Yet it permits plenty of light to come through, allowing a proper balance of natural and artificial lighting without creating color problems.



### TWINDOW INSULATING GLASS

This view of the interior court illustrates the extensive use of TWINDOW in the Brotherhood building. TWINDOW is constructed of two panes of glass with a dry air space hermetically sealed in between. TWINDOW provides effective insulation all-year round. It reduces the amount of heat transferred through the window area . . . saves on heating and cooling costs, minimizes condensation and chilly downdrafts.



Architect: Orus Eash, Fort Wayne, Indiana  
Contractor: Civilian Building & Supply Inc.,  
Fort Wayne, Indiana

The Brotherhood Mutual Life Insurance Company  
Building, Fort Wayne, Indiana

Sunlight or snow . . . hot or cold—

## this building with 258 units of SOLARGRAY® TWINDOW® provides ideal all-year-round comfort

In this building, Architect Orus Eash combined PPG SOLARGRAY Plate Glass and TWINDOW Insulating Glass . . . providing an ideal combination of glass products for year-round working comfort. SOLARGRAY, a heat-absorbing and glare-reducing plate glass, transmits less than 50% of the sun's heat and reduces unpleasant glare from the sun.

TWINDOW Insulating Glass, which

is actually two panes of glass with an air space between, helps to maintain desired temperatures and humidity levels . . . adds to interior comfort, summer and winter.

The exterior framing system in this building is PITTCO® Metal 25-X Construction, designed especially for TWINDOW installations. PITTCO Metal framing systems are designed for trouble-free, glass-clad construc-

tion and have been thoroughly proved in countless installations.

When you design with glass, you get unexcelled architectural freedom . . . when you specify PPG you get the ultimate in dependability and durability. For specific data on any Pittsburgh product consult your PPG Architectural Representative. Detailed product information can also be found in Sweet's.



### PITTSBURGH PLATE GLASS COMPANY

Paints • Glass • Chemicals • Fiber Glass

In Canada: Canadian Pittsburgh Industries Limited

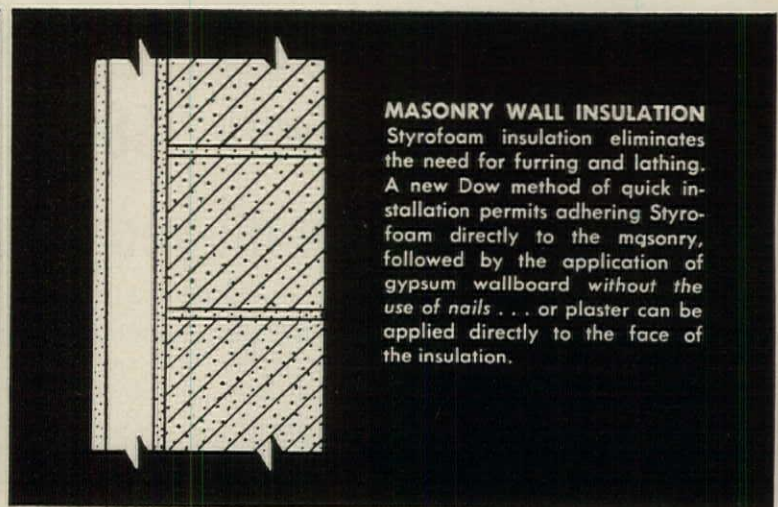
# STYROFOAM<sup>®</sup>

**Rigid insulation**

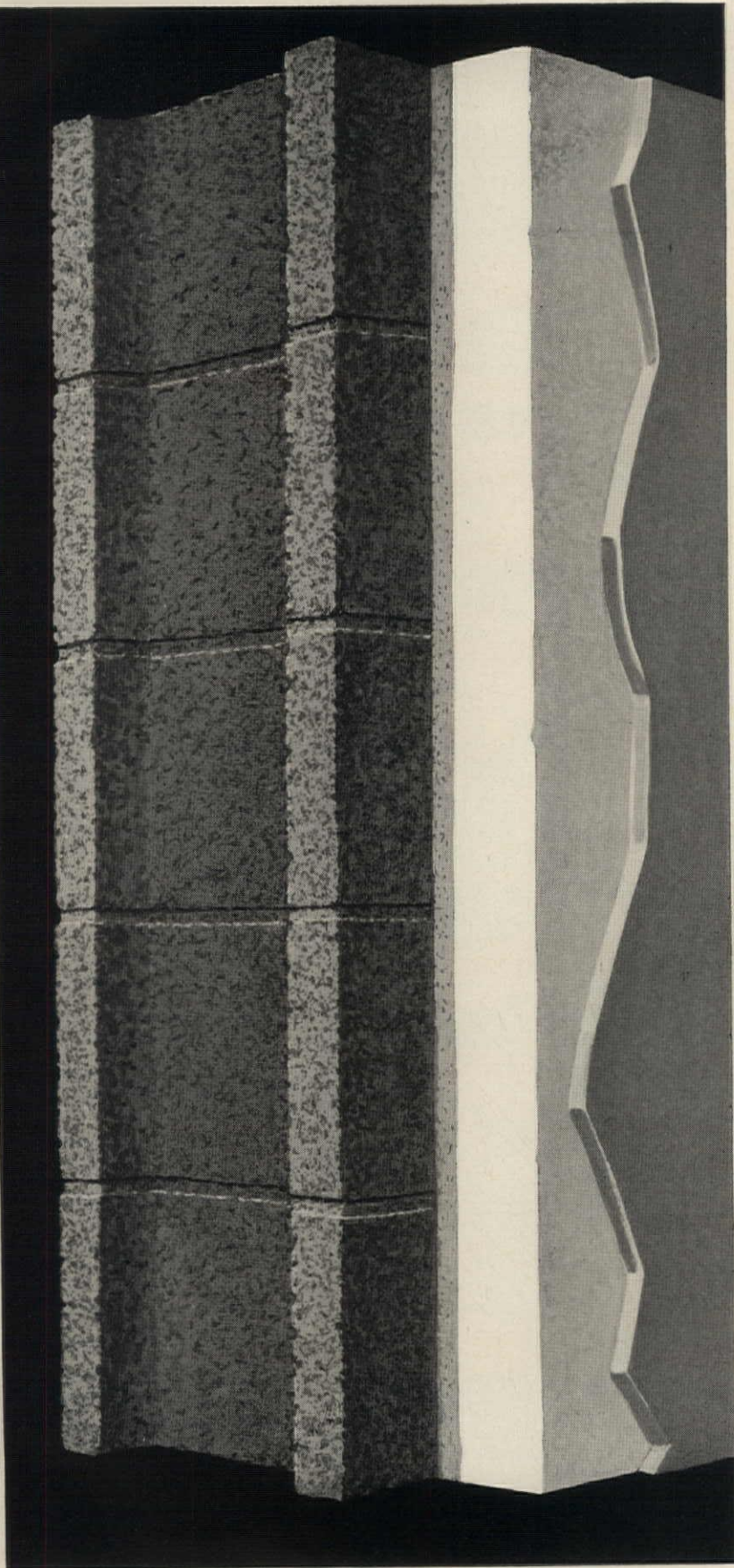
**saves masonry insulating costs and time,  
gives permanent insulating values**



**COMBINED FORM LINER/INSULATION.** Styrofoam insulation eliminates the need for a form release agent . . . acts as its own vapor barrier . . . and provides high, permanent insulating values. Concrete keys positively to the cellular surface of Styrofoam insulation. When forms are removed, permanent insulation is in place, ready for finishing.



**MASONRY WALL INSULATION**  
Styrofoam insulation eliminates the need for furring and lathing. A new Dow method of quick installation permits adhering Styrofoam directly to the masonry, followed by the application of gypsum wallboard *without the use of nails* . . . or plaster can be applied directly to the face of the insulation.



## ◀ **STYROFOAM**

brand insulation board offers advantages for use as both comfort insulation and for low temperature applications, in masonry construction. For example, this lightweight, foamed insulation offers savings in installation time and costs, by eliminating steps in "conventional" construction. It also offers a low "K" factor which will *stay* low year after year . . . Styrofoam insulation contains millions of tiny non-interconnecting air cells with high resistance to the passage of heat and moisture vapor.

Styrofoam has no food value, nor will it rot or mildew. It's easy to handle and install. High compressive strength permits pouring concrete directly over it for floor or ceiling construction. And Styrofoam insulation is flame retardant.

**THURANE**<sup>®</sup> brand insulation board is a rigid urethane foam which offers unusual insulating effectiveness for low temperature applications. For example, a curtain wall panel with a core of Thurane insulation permits approximately 40% less heat flow than a panel made with conventional core materials. Consequently, panel thickness can be reduced by up to 40% with no sacrifice of insulating efficiency . . . a decided advantage where low temperature space is at a premium.

For every kind of insulated masonry construction . . . for coolers, freezers, pipe covering . . . Dow insulating materials offer both installation and performance advantages. For information and data, write THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Department 1300LH3.

---

*Styrofoam is a registered trademark of The Dow Chemical Company. It is applied only to the homogeneous expanded polystyrene made according to an exclusive Dow process. Styrofoam brand insulation board is available only from Dow and its authorized representatives.*

**THE DOW CHEMICAL COMPANY**

**DOW**

Midland, Michigan

# DESIGNED TO MEET

## #1 DOUBLE BARRIER SEAMS



Anodized aluminum extrusions are assembled to rear panel and pre-caulked at the factory. Smooth seam both inside and out . . . permanently leakproof.

FIVE KEY POINTS OF DESIGN SUPERIORITY PRODUCE  
A SHOWER OF EXCEPTIONAL QUALITY AND PERMANENCE

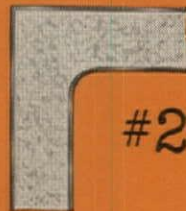
## THE COMMANDER

Check the five key values found only in the new *COMMANDER* shower by *Fiat* and you'll find the answer to long-life, good appearance and low maintenance for shower rooms in school, college, club, industry and institution.

Just three factory-fabricated sections (plus headrail) complete the *Commander Cabinet* which erects on the widely used and approved *Fiat PreCast Terrazzo Floor*. Actual tests prove the *Wonderwall Commander* to be many times faster and much easier to erect than any conventional shower. Labor saving drastically reduces total installed cost.

Unlimited design and service requirements are satisfied by three models. Each model available in stainless steel, baked enamel or a combination. For complete information on the *Commander* write for copy of the new *PLAN BOOK*, or see Sweet's  $\frac{26c}{Fi}$ .

## #2 COVE CORNER INTERIOR



All four corners have 1" radii with no corner joint, crack or crevice. Can't harbor grime and germs—sanitary—easy to clean.

## #3 WONDERWALL SANDWICH PANEL



Full inch of expanded polystyrene is permanently bonded between two sheets of rust-proofed metal. Temperature changes, high humidity, boiling water, soaps, alcohol or detergents are daily duties the *Commander* handles in stride.

## #4 STAINLESS PILASTER CAP



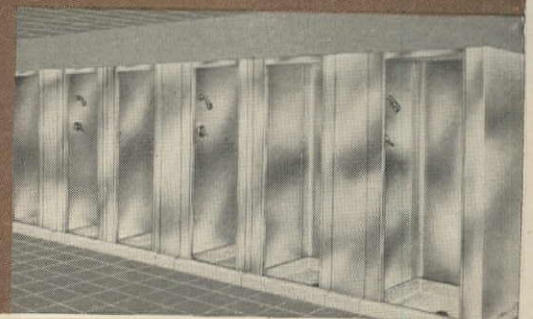
Added service and neat appearance maintained by factory applied stainless steel cap running the entire length of pilaster.

## #5 DEEP TERRAZZO FLOOR



Permanently leakproof and sanitary; high shoulders keep wall joints well above water level. Stainless steel connecting flange and brass drain cast integral.

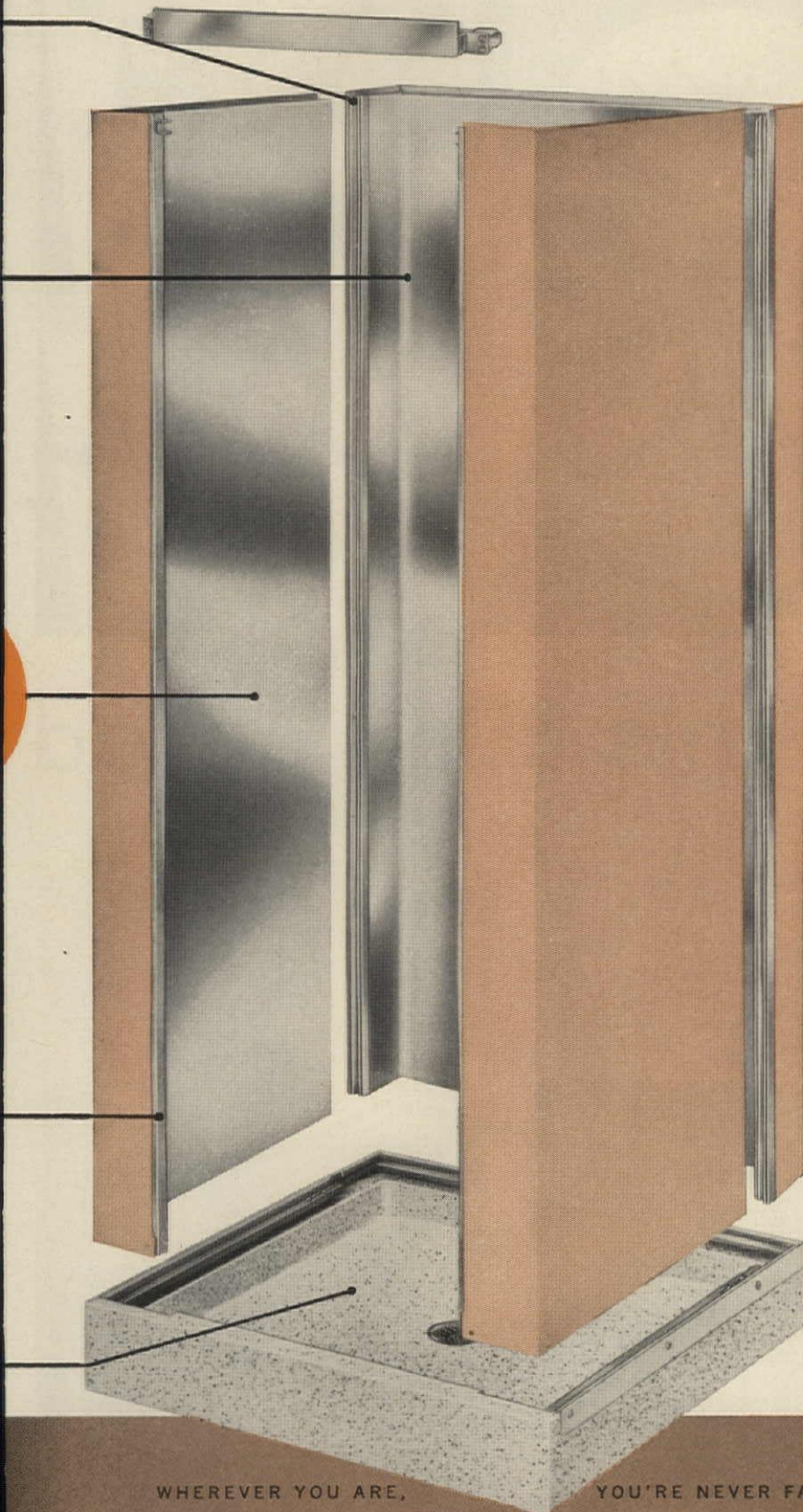
The rigid, rugged *Commander* cabinet combines with *Fiat* Dressing Enclosures as single units or in battery arrangements to provide added convenience and privacy. (Enclosures not illustrated.)



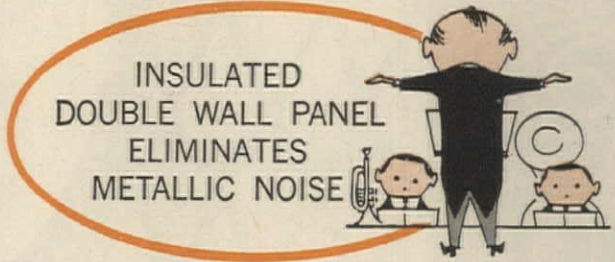


# DORMITORY NEEDS...

ALL NEW SANDWICH PANEL, SOUND DEADENED,  
RIGID WALL SHOWER CABINET ASSURES  
SATISFACTION & COST-SAVING INSTALLATION



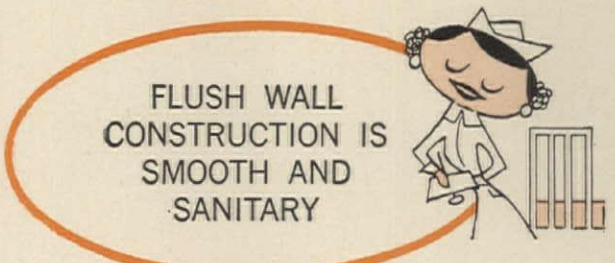
NO PAPER FILLER  
TO ROT OR  
MILDEW... USES  
POLYSTYRENE



INSULATED  
DOUBLE WALL PANEL  
ELIMINATES  
METALLIC NOISE



STRONG,  
NON-FLEXING  
WALL PANELS  
MAKE IT RUGGED



FLUSH WALL  
CONSTRUCTION IS  
SMOOTH AND  
SANITARY



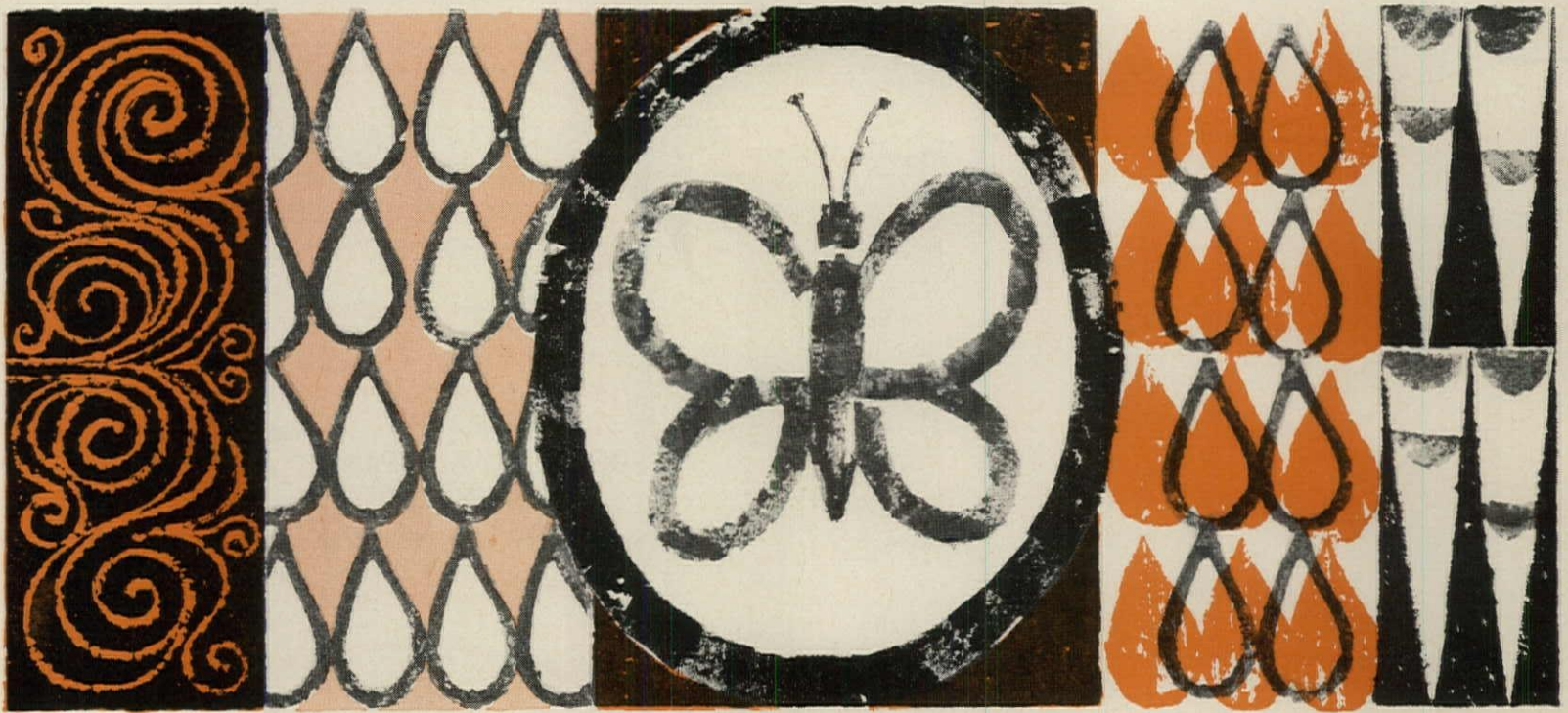
FAST  
EASY ERECTION  
SAVES MUCH  
ON-SITE LABOR

WHEREVER YOU ARE,

YOU'RE NEVER FAR FROM ONE OF 5 FIAT FACTORIES



**FIAT METAL MANUFACTURING COMPANY, INC.**



**What is this thing called**





# COCOON?

A vinyl spray coating that does so much more than any other kind of coating. Originally developed in conjunction with the United States Navy during World War II, its marvelous waterproofing and protective qualities have been continually refined so that today it is truly the **WORLD'S MOST VERSATILE SPRAY COATING.**

- prevents moisture penetration
- resists corrosion
- cuts building costs
- reduces upkeep
- performs in any climate
- retards fire
- available in a wide range of colors

## WHO USES COCOON AND HOW DO THEY USE IT?

Listed below are just a few of the recent applications of Cocoon. We would be happy to furnish more complete details upon request.

**Guggenheim Museum, New York City—Frank Lloyd Wright, Architect**  
**IBM Building, Baltimore, Md.**

**Pedersen & Tilney, Architects, New Haven, Conn.**

**Brightwater Towers, St. Petersburg, Fla.**

**Fred Schlotterlien, Architect, J. K. Ruff Enterprises, Baltimore, Md.**

**Citizen's Marine Jefferson Bank, Newport News, Va.**

**Victor Gruen, Associates, Architects, Newport News, Va.**

## ROOFING • INTERIORS • EXTERIORS . . .

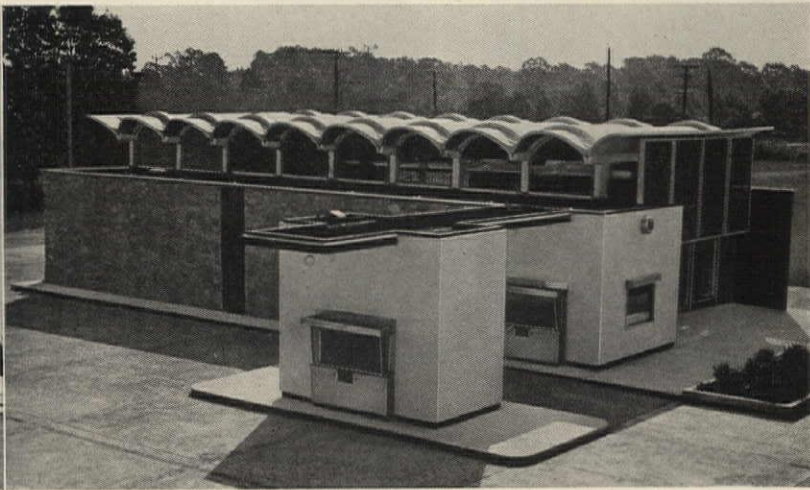
And now, something different in hard-surface interior coatings: new from Hollingshead research. Watch for more details soon.

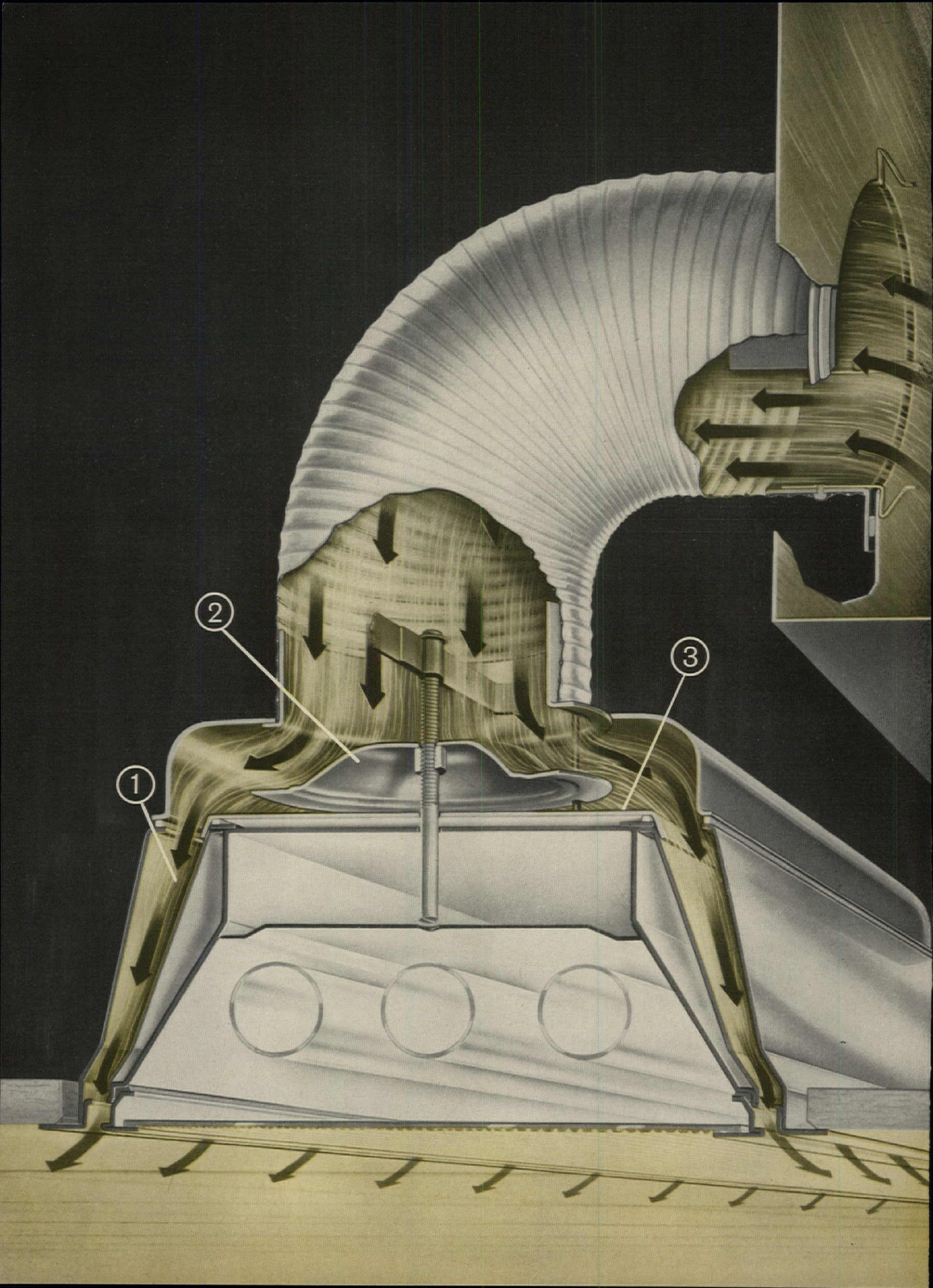
ANOTHER FINE HOLLINGSHEAD SERVICE: a complete department devoted to building maintenance chemicals. Inquiries invited!



## ARCHITECTURAL COATINGS DIVISION

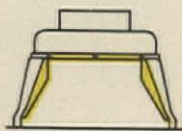
R. M. HOLLINGSHEAD CORP., 840 COOPER ST., CAMDEN 2, N. J.  
SUNNYVALE, CALIFORNIA TORONTO, CANADA





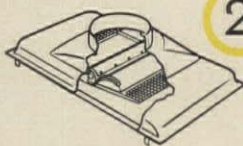
Before you specify any air-handling troffer

## Take another look at Lumi-Flo advantages



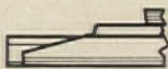
**1** INSULATING AIR GAP GIVES  
MAXIMUM LIGHTING EFFICIENCY.

Lumi-Flo troffers eliminate color shift, stop lamp flicker, and lengthen ballast life by keeping lamp chambers at optimum design operating temperature.



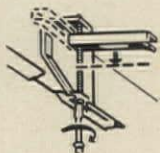
**2** CHOICE OF DAMPERS FOR LOW, MEDIUM,  
OR HIGH CAPACITY REQUIREMENTS.

Now use one basic troffer design in every kind of installation. Just select the correct damper, snap it in place. Dampers by Tuttle & Bailey Division of Allied Thermal Corporation.



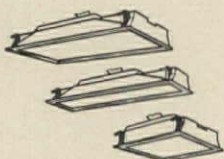
**3** SHALLOW DEPTH GIVES YOU MORE  
FLEXIBILITY IN PLENUM LAYOUT.

All suspension equipment is within the 4 7/8" overall height of the troffer housing. Distance from end of unit to damper is approximately 13".



**4** SWIVEL BAR HANGERS  
CUT INSTALLATION TIME UP TO 50%.

New hanger design eliminates the cumbersome yokes used in most troffers. Snap-in socket plate and drop-in hinges also speed installation, need no tools.



INDUSTRY'S WIDEST CHOICE OF UL LISTED UNITS.

Only Benjamin Lumi-Flo troffers are available in 2 x 4, 1 x 4 and 2 x 2 sizes. All units listed by Underwriters Laboratories for heating, cooling and lighting.



**FREE**—THE ONLY COMPREHENSIVE MANUAL  
ON AIR-HANDLING TROFFERS.


Acclaimed by many architects and engineers as the only complete document on combined lighting—air-handling systems. This new manual is a useful guide to planning installations of every type. Write today for your free copy.

4



**BENJAMIN**  
DIVISION

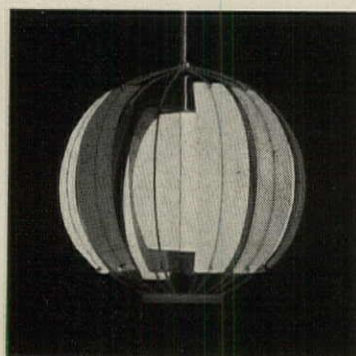
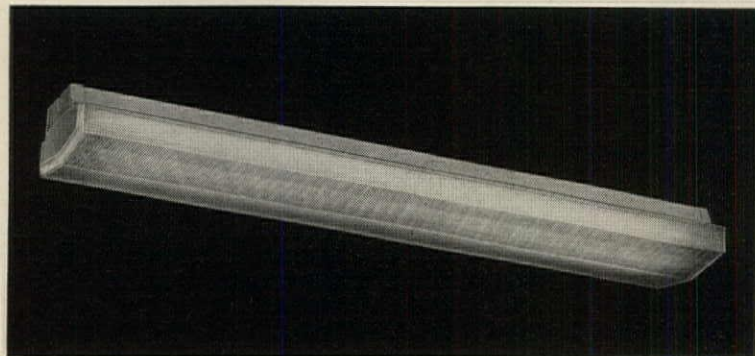
THOMAS INDUSTRIES Inc.  
207 EAST BROADWAY  
LOUISVILLE 2, KENTUCKY



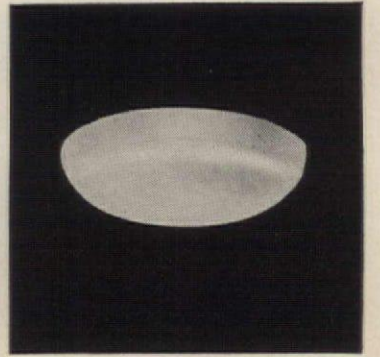
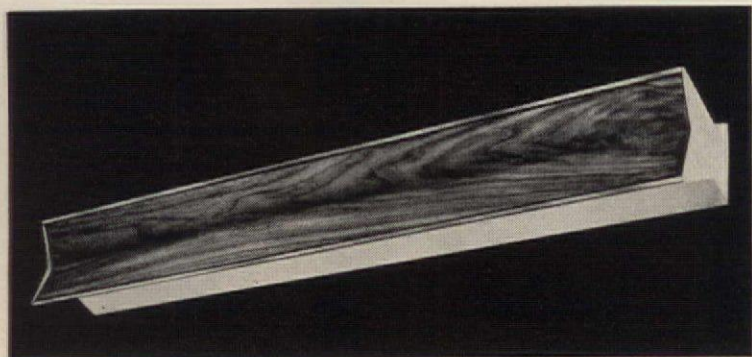
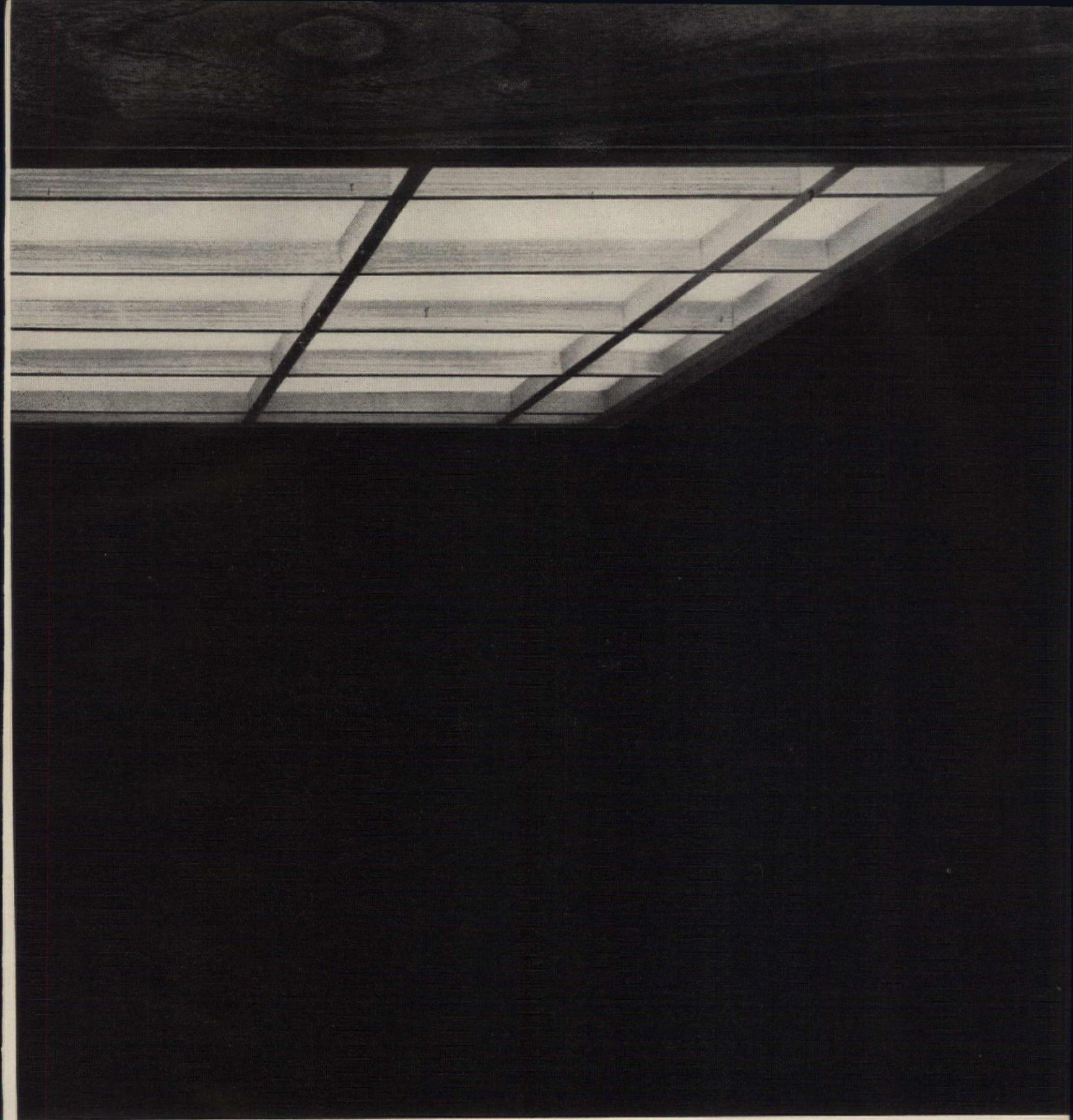
Corona puts fluorescents in an entirely new light. It makes the use of fluorescent fixtures a decorative asset, adding richness and distinctive charm to important interiors. The satin-finished walnut frame...the natural red birch pattern across the face of the smooth, white styrene diffuser contribute a feeling of warmth to contemporary or traditional interiors. Corona is available in four sizes for fluorescent lamping and in smaller matching designs for incandescent. It is completely enclosed yet engineered for easy cleaning and relamping without the use of tools.

**highlight**

**of a long line of lighting achievements by LIGHTOLIER®**



Corona and the fixtures shown above are stocked by the Authorized Lightolier Distributors listed on p. 58.



For more information on Corona, write today for Brochure 37, Lightolier, Jersey City 5, N. J., Dept. AF3.

# fyi

(for your illumination)

Lightolier fixtures are stocked and sold by the following Distributors:

**ALABAMA**  
Birmingham: Mayer Elec. Sup. Co. Mobile: F. E. Smith Elec. Co.

**ALASKA**  
Anchorage: Northern Sup. Co.

**ARIZONA**  
Phoenix: Brown Wholesale Elec. Tucson: Beacon Ltg. Fix. Co.

**ARKANSAS**  
Little Rock: Adcock Ltg. & Sup.

**CALIFORNIA**  
Bakersfield: San Joaquin Whlse. Elec. Co. Fresno: Electrical Suppliers, Inc. Los Angeles: Gough Industries, Inc. Palm Springs: Tri-County Elec. Whlrs. Riverside: Tri-County Elec. Whlrs. Sacramento: Capital Whlse. Elec. Co. San Bernardino: Tri-County Elec. Whlrs. San Diego: Sunlight Elec. Sup. Co. San Francisco: California Elec. Sup. Co.

**COLORADO**  
Denver: Central Elec. Sup. Co.

**CONNECTICUT**  
Bridgeport: B. M. Tower Co., Inc. Hartford: Beacon Light & Sup. Co. New Haven: Grand Light & Sup. Co. New London: United Elec. Sup. Co. South Norwalk: Klaff's Inc. Stamford: Marie Co. Waterbury: Starbuck Sprague Co., Suburban Supply Co.

**DISTRICT OF COLUMBIA**  
Washington: Maurice Elec. Sup. Co., National Elec. Wholesalers

**FLORIDA**  
Miami: Farrey's Whlse. Hdwe. Co.

**GEORGIA**  
Atlanta: Atlanta Ltg. Fix. Co., Electrical Wholesalers, Noland Co. Augusta: Hart Elec. Sup. Co. Columbus: P. & W. Elec. Sup. Co. Macon: Noland Co.

**HAWAII**  
Honolulu: Hawaiian Light & Sup. Co.

**ILLINOIS**  
Champaign: Tepper Elec. Sup. Co. Chicago: Eteenge Elec. Sup. Co., Englewood Elec. Sup. Co., Harlo Elec. Sup. Co., Hyland Elec. Sup. Co., Metropolitan Elec. Sup., Steiner Elec. Co., Wholesale Elec. Sup. Co. Elgin: Fox Elec. Sup. Co. Joliet: Joliet Elec. Sup. Rockford: Englewood Elec. Sup. Co. Springfield: Springfield Elec. Sup. Co.

**INDIANA**  
Ft. Wayne: Mossman-Yarnelle Co. Gary: Englewood Elec. Sup. Co. Indianapolis: Farrell-Argast Elec. Co. South Bend: Englewood Elec. Sup. Co.

**IOWA**  
Des Moines: Weston Lighting, Inc.

**KANSAS**  
Kansas City: W. T. Foley Elec. Co. Wichita: Architectural Lighting, Inc.

**KENTUCKY**  
Louisville: Henry J. Rueff Co.

**LOUISIANA**  
Baton Rouge: Electrical Wholesalers, Inc. New Orleans: Interstate Elec. Co.

**MAINE**  
Bangor: Standard Elec. Co. Portland: Holmes Elec. Supply Co.

**MARYLAND**  
Baltimore: Baltimore Gas Light Co., Dominion Elec. Sup. Co. Hagerstown: Noland Co., Tristate Elec. Sup. Co. Salisbury: Artcraft Elec. Sup. Co.

**MASSACHUSETTS**  
Boston: Boston Lamp Co., Mass. Gas & Elec. Light Co., Henry L. Wolfers, Inc. Pittsfield: Carr Supply Co. Springfield: M. W. Zimmerman, Inc. Waltham: Standard Elec. Worcester: Benjamin Elec. Sup. Co.

**MICHIGAN**  
Detroit: Madison Elec. Co., Michigan Chandelier Co. Flint: Royalite Co. Grand Rapids: Purchase Elec. Sup. Co. Jackson: Electric Wholesale Sup. Co. Kalamazoo: West Michigan Elec. Co. Lansing: Michigan Elec. Sup. Co. Muskegon: Fitzpatrick Elec. Sup. Co. Pontiac: Standard Elec. Sup. Co. Saginaw: Scherheim Elec. Co., Standard Elec. Sup. Co.

**MINNESOTA**  
Duluth: Northern Elec. Sup. Co. Minneapolis: North Central Elec. Distr. Co. Northland Elec. Sup. Co., Terminal Elec. Corp. St. Paul: Lax Elec. Co.

**MISSISSIPPI**  
Jackson: Stuart C. Irby Co.

**MISSOURI**  
Kansas City: Glasco Elec. Co., Rossner Elec. Sup. Co. St. Louis: M. K. Clark Springfield: Southern Materials Co.

**MONTANA**  
Great Falls: Glacier State Elec.

**NEBRASKA**  
Lincoln: White Electric Supply Co. Omaha: Electric Fix. & Sup. Co.

**NEVADA**  
Reno: Western Elec. Dists. Co.

**NEW HAMPSHIRE**  
Portsmouth: Mass. Gas & Elec. Light Co.

**NEW JERSEY**  
Atlantic City: Franklin Elec. Sup. Co. Camden: National Elec. Sup. Co.

**NEW MEXICO**  
Albuquerque: The Lighting and Main Co.

**NEW YORK**  
Binghamton: Freije Elec. Sup. Co. Buffalo: Buffalo Incand. Light Co. Inc. Nanuet (Rockland Co.): Rockland Lighting. Niagara Falls: Hysen Supplies Inc. Poughkeepsie: Electra Sup. Co. Rochester: Rowe Electric Sup. Co. Schenectady: American Elec. Sup. Co. Syracuse: Superior Elec. Corp. White Plains: Wolar Lighting Corp.

**NORTH CAROLINA**  
Asheville: Electric Sup. Co. Charlotte: Independent Elec. Sup. Co. Durham: Noland Co. Greensboro: Elec. Sup. & Equip. Co. High Point: Electric Sup. Inc. Kinston: Kinston Elec. Raleigh: Electrical Equipment Co. Winston-Salem: Noland Co.

**NORTH DAKOTA**  
 Fargo: Border States Elec. Sup. Co., Northwest Elec. Sup. Inc.

**OHIO**  
Akron: The Sacks Elec. Sup. Co. Canton: Electric Sales Co. Cincinnati: B. & B. Elec. Co., F. D. Lawrence Electric Co., Richards Elec. Sup. Co. Cleveland: The H. Leff Electric Co., Midland Elec. Co. Columbus: Elgee Elec. Co., The Loeb Elec. Co. Dayton: Duellman Elec. Co. Springfield: The W. W. Elec. Co. Toledo: Gross Elec. Fix. Co. Youngstown: The Bruff Ltg. Fix. Co.

**OKLAHOMA**  
Oklahoma City: Elec. Sup. of Oklahoma, Hunzicker Bros.

**OREGON**  
Portland: Baker-Barkon Co., Malloy Robinson Co.

**PENNSYLVANIA**  
Allentown: Coleman Elec. Co. Erie: Kraus Elec. Co. Harrisburg: Fluorescent Sup. Co., Schaedler Bros. Hazleton: Power Elec. Co. Inc. Lancaster: Jno. E. Graybill & Co. New Castle: Midwestern Elec. Co. Norristown: Norristown Elec. Sup. Co. Philadelphia: Gold Seal Elec. Sup. Co., Logan Elec. Sup. Co., Inc., Pyramid Elec. Sup. Co., Inc., Silver's Elec. Sup. Co., Sylvan Elec. Fix. Co., West Phila. Elec. Sup. Co. Pittsburgh: Allied Elec. Sup. Co., Argo Lite Studios, Brown & Green, Wally Elec. Sup. Co. Reading: Coleman Elec. Co. Scranton: Lewis & Reif, Inc. Uniontown: Pioneer Electric Dist. West Chester: West Chester Elec. Sup. Co. Wilkes-Barre: Anthracite Elec. Williamsport: Lowry Electric Co., York: Jno. E. Graybill & Co.

**RHODE ISLAND**  
 Pawtucket: Major Elec. Sup. Co. Providence: Leavitt Colson Co., Tops Elec. Sup. Co.

**SOUTH CAROLINA**  
Columbia: Capital Elec. Sup., Noland Co. Greenville: Sullivan Hdwe. Co.

**SOUTH DAKOTA**  
Watertown: J. H. Larson Elec. Co.

**TENNESSEE**  
Chattanooga: Mills & Lupton Sup. Co., Noland Co. Knoxville: The Keener Co. Memphis: Belvedere Lighting Co. Nashville: Nashville Elec. Sup. Co.

**TEXAS**  
Brownsville: Electric Fix. Sup. Co. Dallas: Rogers Elec. Sup. Co. Ft. Worth: Anderson Fixture Co., Cummins Supply Co., General Industrial Sup. Corp. Houston: Anderson Lighting Co., Gulf Coast Elec. Sup. Co., Inc., Marlin Associates, Worth Elec. Sup. Co. San Antonio: Electrical Distrib. Co., Southern Equip. Co., Strauss-Frank Co., Worth Elec. Sup. Co., Waco: Dealers Elec. Sup. Co.

**UTAH**  
Salt Lake City: Artistic Lighting

**VIRGINIA**  
Arlington: Dominion Elec. Sup. Co. Inc., Noland Co. Lynchburg: Mid-State Elec. Sup. Co. Inc. Richmond: Atlantic Elec. Sup. Co. Roanoke: Noland Co.

**WASHINGTON**  
Seattle: Seattle Lighting Fix. Co.

**WEST VIRGINIA**  
Bluefield: Bluefield Supply Co. Charleston: Capitol Light Co., Goldfarb Elec. Sup. Co. Wheeling: The Front Co.

**WISCONSIN**  
Appleton: Moe Northern Co. Eau Claire: W. H. Hobbs Supply Co. La Crosse: W. A. Roosevelt Co. Milwaukee: Electric-Craft Lighting, Lappin Electric Co., Standard Elec. Sup. Co. Racine: Milch Elec. Sup. Co.

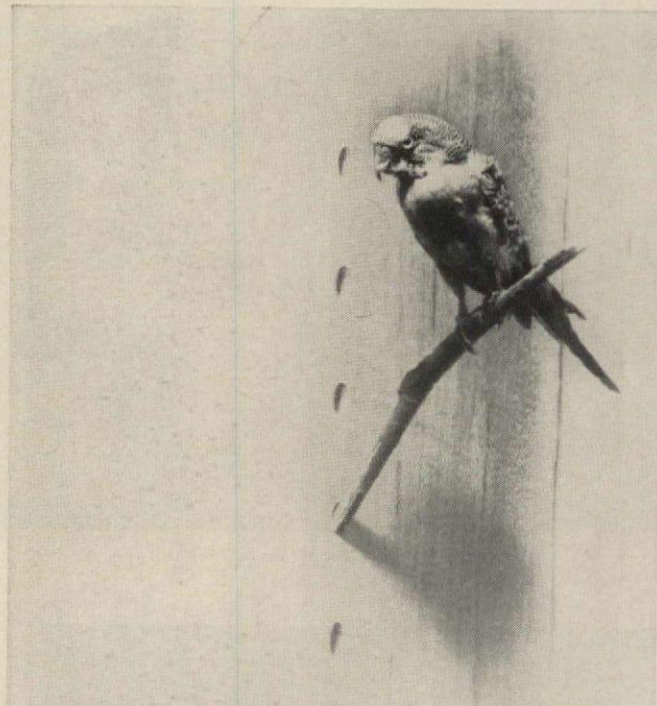
**CANADA**  
Edmonton: Alberta Elec. Sup. Ltd. Montreal: L.D.G. Products, Inc., Gray Elec. Co., Union Elec. Sup. Co. Ltd. Toronto: Revere Elec. Dist., Toronto Ltg. Studios, Union Elec. Sup.

**PUERTO RICO**  
San Juan: Sole Electric

Working under the direction of Architect Edward Durell Stone, Rambusch developed this design for the hanging 11½-foot seal at the main entrance of the United States Embassy, New Delhi, India.



**RAMBUSCH** 40 W. 13th St., New York 11, N.Y.  
Telephone: ORegon 5-0400  
DESIGNERS, CRAFTSMEN, LIGHTING ENGINEERS,  
WORKING IN METAL, GLASS, PAINT, WOOD, MOSAIC.



**Velkommen** to our showrooms where a new interior design formulation, employing wall furniture components and sectional panels with holes of unique design, is on view. Created in Denmark by Poul Cadovius exclusively for interior designers, architects and contract furnishers.

WRITE FOR LITERATURE **System Cado**  
1130 Third Ave., New York  
DESIGN: POUL CADUVIUS

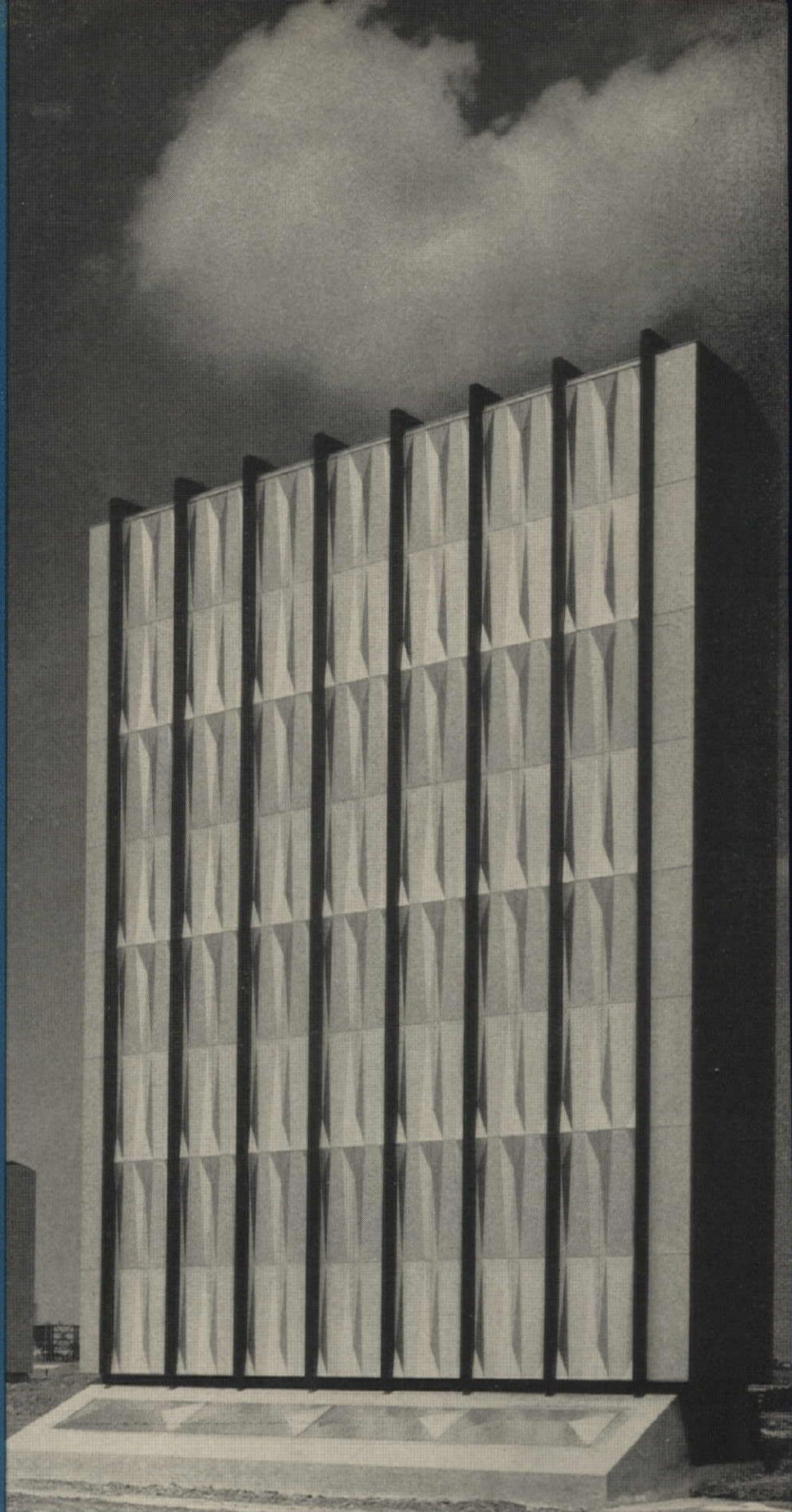
Royal System: 9400 St. Lawrence Blvd., Montreal, Canada  
S. Christian of Copenhagen, Inc.: Jackson & Sansome, San Francisco



Another of  
today's  
trend-setting  
designs—crafted  
and clad by  
**GENERAL BRONZE**



**NIAGARA POWER  
PROJECT'S STAIN-  
LESS TOWERS  
SHOW GB'S SKILL  
WITH PATTERNED  
CURTAIN WALLS**



These monumental intake gate structures are new landmarks on the Niagara River. The functional severity of the two 100-foot towers has been softened and humanized by brilliant stainless steel curtain wall envelopes, accentuated by black enameled aluminum columns. The structures were designed by Uhl, Hall and Rich—Engineers and Architects for the N. Y. State Power Authority. Contractor: Merritt-Chapman & Scott Corp.

In these unusual towers, many recurring problems in curtain wall treatment were amplified. Corrosive atmospheres were present. Harsh reflections and "oil-

canning" in the all-metal facades had to be avoided with extreme care. Maintenance had to be held to a minimum. General Bronze helped solve these problems by applying the skills of a half-century in architectural metalwork... 16 years in curtain wall construction.

For information or assistance on your own design problems, consult your Sweet's files . . . call in the General Bronze representative nearest you . . . or write to: GENERAL BRONZE CORPORATION, Garden City, New York. • Sales Office: 100 Park Avenue, New York, New York.

SANYMETAL TOILET COMPARTMENTS • Lowest In-Place Cost ••• Minimum Maintenance ••• Longest Life



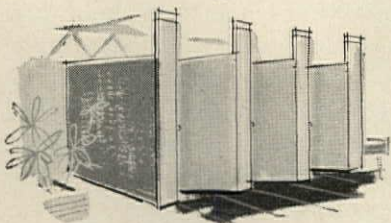
LONG LIFE  
HINGES  
ON HINGES

- CONTROL SPRING (OPERATES UNDER COMPRESSION)
- CAMMING SURFACES (DO NOT BEAR DOOR WEIGHT)
- LOWER ZYTEL CAM MOVES WITH DOOR
- PERMANENTLY LUBRICATED THRUST BEARING (SUSTAINS WEIGHT OF DOOR)
- DOOR REST-POSITION ADJUSTING NUT
- INTEGRAL HINGE BRACKET

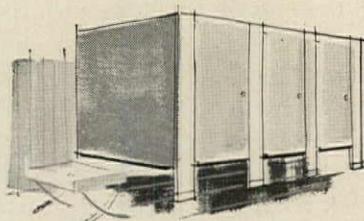
Why are hinges so important? Because the main points of wear in any toilet compartment installation are the hinges. This is where Sanymetal quality pays off in: **EXTRA LONG WEAR** (full door weight rides on thrust bearing — no vertical stresses. Independently tested for over 1 million swings); **LOWEST MAINTENANCE** (fully recessed hinges for easiest cleaning, highest sanitation) and ... **LOWEST IN-PLACE COST** (hinges and brackets are theft-proof installed at the factory to greatly reduce installation costs).

Sanymetal is best for new construction and for remodeling. Send for the full story.

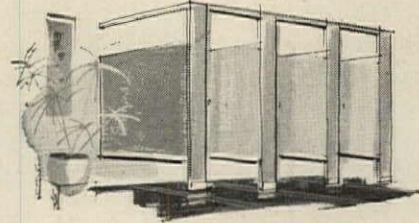
*Century*



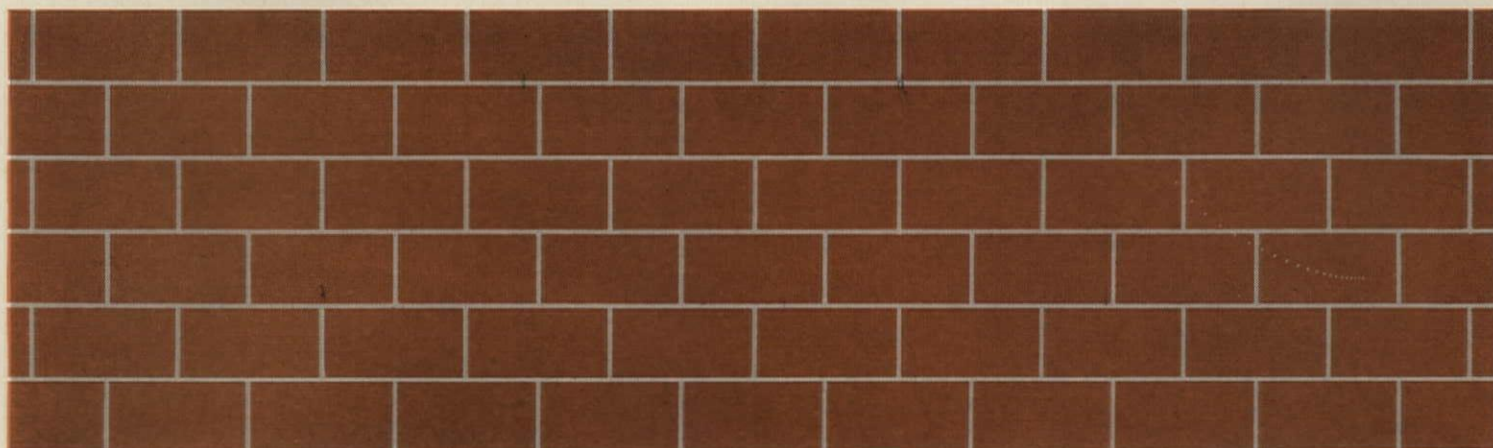
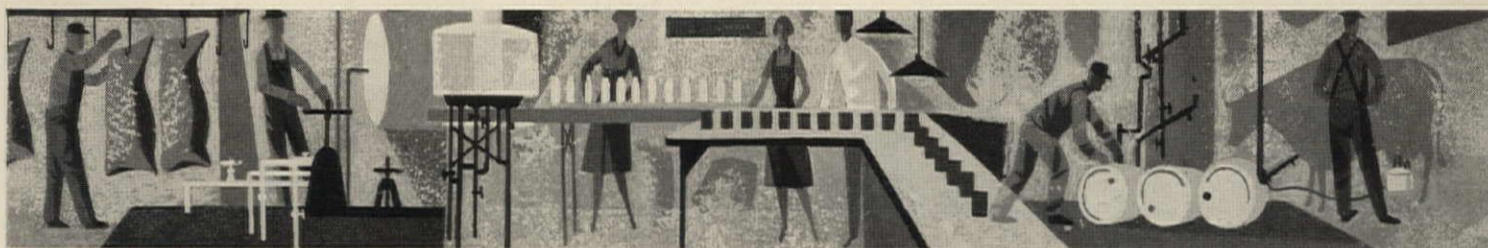
*Normandy*



*Academy*



SANYMETAL PRODUCTS CO., INC. • 1687 URBANA ROAD • CLEVELAND 12, OHIO



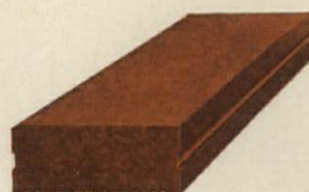
## HEAVY DUTY ACID-RESISTANT FLOOR BRICK & QUARRY TILE

Murray's new  $1\frac{3}{8}$ " thick Floor Brick provides a surface that will withstand the impact of heavily loaded trucks, and is unharmed by strong acids, oils, greases, or corrosive solvents and liquids.

Murray Acid-Resistant Floor Brick is available in the conventional  $3\frac{7}{8}$ " x 8" size in Canyon Red, and in three surfaces—smooth, diamond grid, and non-skid abrasive. The back is standard groove or Murray's exclusive V-Bak®.

Murray also offers Heavy Duty Quarry Tile ( $\frac{3}{4}$ "

thick) in the same color and surfaces. Available sizes are: 9" x 9", 6" x 6",  $3\frac{7}{8}$ " x 8".



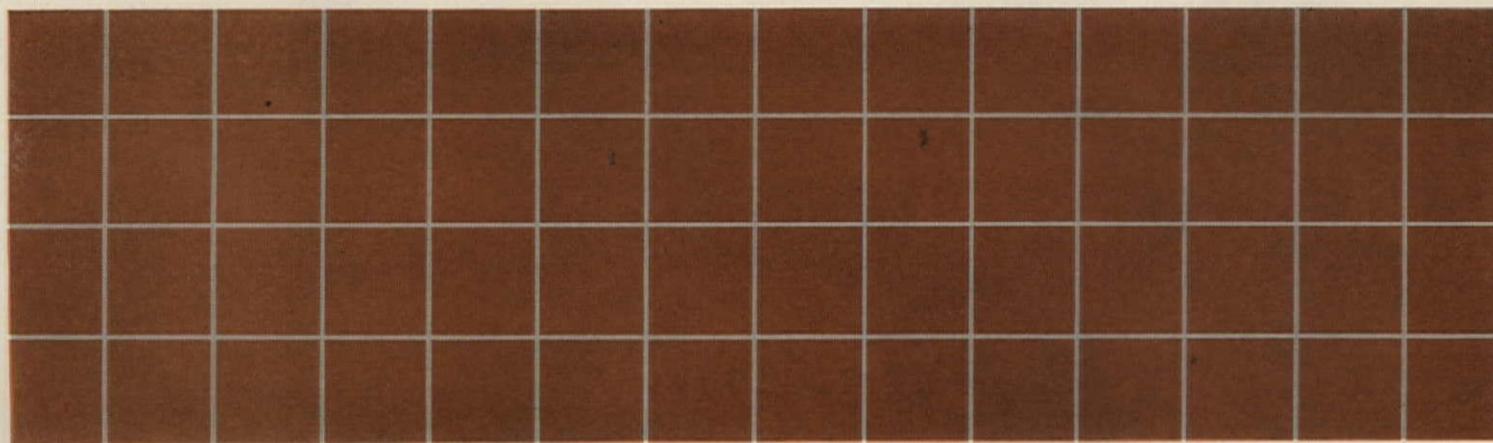
Floor Brick  $1\frac{3}{8}$ " thick



Heavy Duty Quarry Tile,  $\frac{3}{4}$ " thick

Write for Booklet 871 giving complete information on Murray Acid-Resistant Floor Brick and Quarry Tile.

MURRAY TILE COMPANY INC., 143 MELANIE DRIVE, LEWISPORT, KY., DIVISION OF AMERICAN OLEAN TILE COMPANY



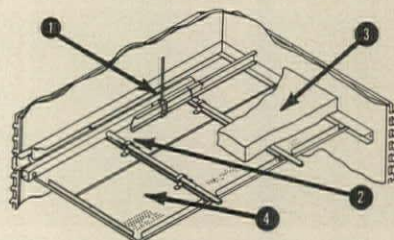
# delightful environment



## Springville School, Omaha, reports on Burgess-Manning Radiant Panel Ceiling

"... no drafts or appreciable ceiling-to-floor temperature differential even against the window wall ... during a week of rather bitter weather, 0 to 10°F. with strong north-westerly winds ... north wall brick exposure—west wall complete single-glazed fenestration exposure ... room was delightful. 'At any point in the room ... warmth emitted from the radiant ceiling in a room atmosphere freshened by infiltrations and held at 72° temperature. 'A delightful teaching and learning environment,'" says Warren Huff, Director of Building Construction.

Report after report from Architects, Engineers, School Superintendents and School Boards prove there is no comparison with the Burgess-Manning Radiant Panel Ceiling for schools—maximum pupil comfort—acoustical efficiency—structural and design simplicity—operating economy and maintenance savings. *Your school is better—your budget no bigger!* Write for complete information and literature.



Note the relatively simple construction, consisting of 4 simple components—(1) suspension grid, (2) water circulating coil, (3) acoustic-thermal insulating blanket, and (4) snap-on panels.

**BURGESS-MANNING COMPANY**  
 P.O. BOX 350-E LIBERTYVILLE, ILL.  
 ARCHITECTURAL PRODUCTS DIVISION

# ***polrized***<sup>\*</sup> ***structoglas***<sup>®</sup>

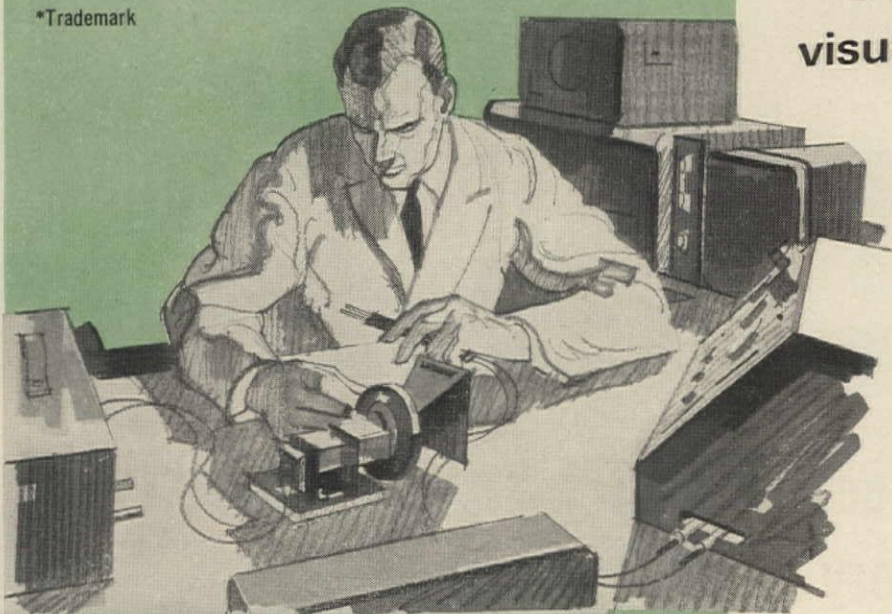
Glass-fiber reinforced acrylic-  
modified polyester building panels.

## It's New In The Industry And Only Structoglas Has It

1. POLRIZED STRUCTOGLAS polarizes light.
2. Polarized light penetrates to a maximum—reduces glare and hot spots, increases visual contrasts and gives greater color saturation.
3. Thus polarized light (POLRIZED STRUCTOGLAS) enables you to see better, work more efficiently.

Shatterproof—Weatherproof POLRIZED STRUCTOGLAS is designed for exterior use in all industrial, commercial and institutional installations where vision is important and cost is of major interest.

\*Trademark



# 46%

**more**  
visual efficiency

Manufactured by Polrized Panel Corporation  
11701 Shaker Blvd. • Cleveland 20, Ohio

### WRITE FOR:

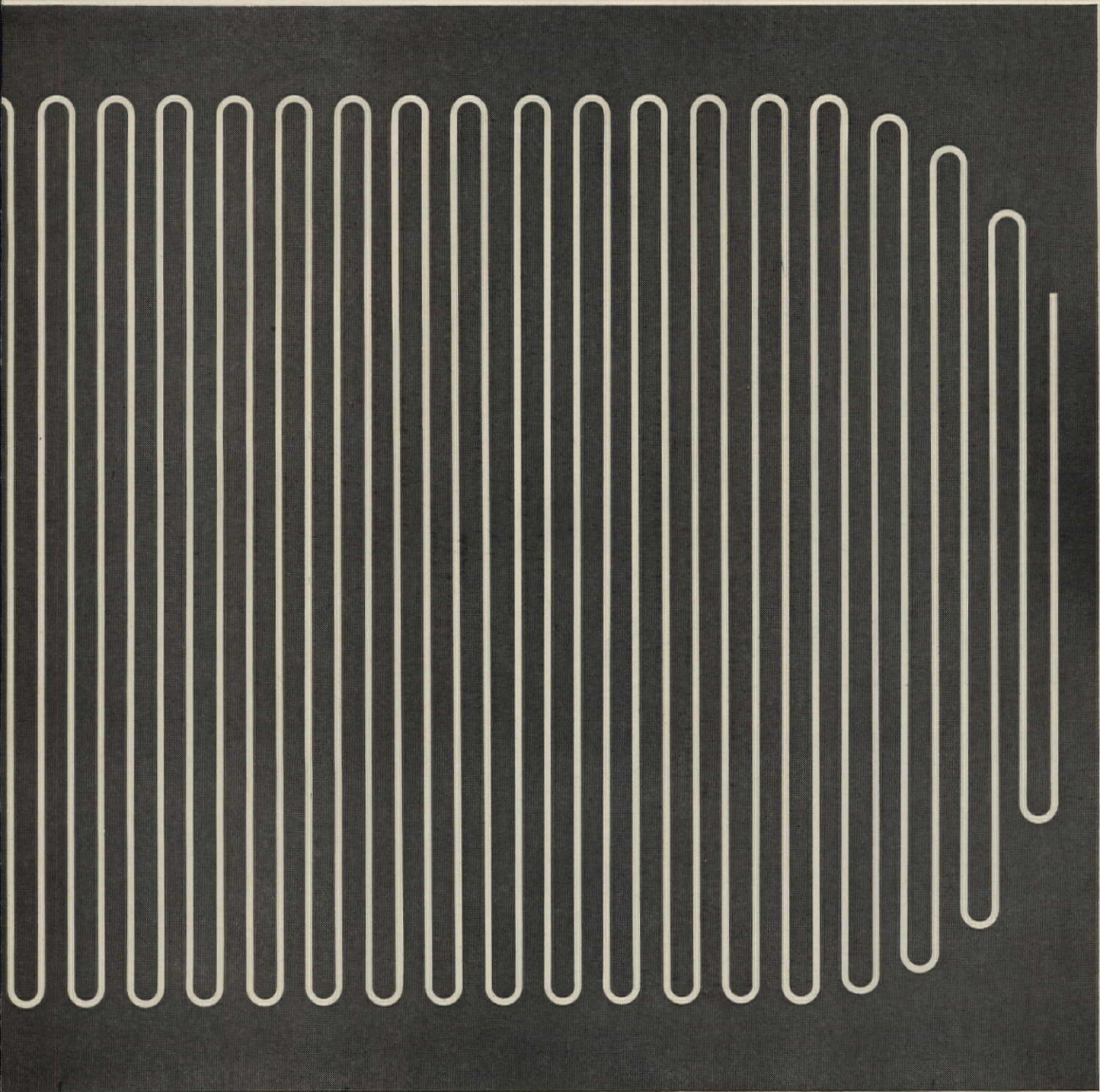
- Technical data sheets.
- "Polarization, Illumination and Vision" Booklet.
- Technical paper presented by Dr. H. R. Blackwell, Director Institute for Research in Vision, at the Ohio State University, at the National Technical Conference—Illuminating Engineering Society—September 26, 1961.
- Other literature.

**11½ miles of steel pipe  
... and every inch  
has to be right**

Pittsburgh's gleaming new Auditorium, with its movable Stainless Steel roof, is now open. The world famous Ice Capades were the first attraction, and professional hockey returned to the city to cavort on the Auditorium's ice rink, which has some 11½ miles of USS National Pipe underneath.

For quick freezing of the ice, temperatures will go down around -42°F., although specifications called for a temperature of "only" -16°F. The system uses a calcium chloride brine solution with 1.25 specific gravity, and it is a 25.9% solution. The steel pipe used in the coils was 1¼" standard and extra strong; the reverse header pipe





**Architect:** Mitchell & Ritchey, Pittsburgh, Pa. **Mechanical Contractor:** Limbach Company, Pittsburgh, Pa. **Supply House:** Crane Supply Company, Pittsburgh, Pa.

consisted of over 600 feet of 4" through 10" pipe.

In a big commercial operation like this, the pipe has to be dependable or the show doesn't go on. That's one good reason they specified USS National Pipe. If you need top-quality steel pipe for ice skating rinks, snow melting and radiant-heating installations, or for any type of building or industrial application, be sure you get USS National Pipe. For further information, or assistance with any pipe problem, write National Tube Division, United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania. USS and National are registered trademarks.



## National Tube Division of United States Steel

Columbia-Geneva Steel Division, San Francisco,  
Pacific Coast Distributors  
United States Steel Export Company, New York

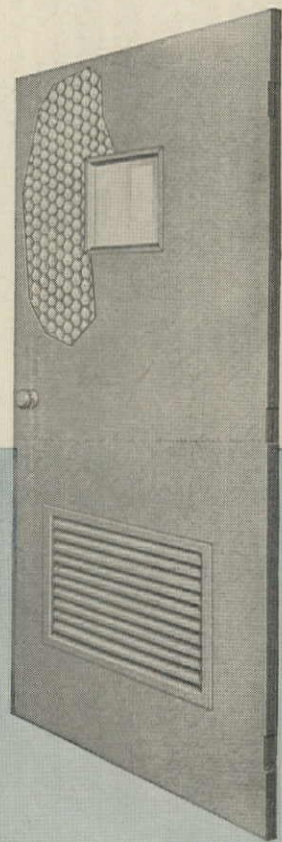


This mark tells you a product  
is made of modern, dependable Steel.

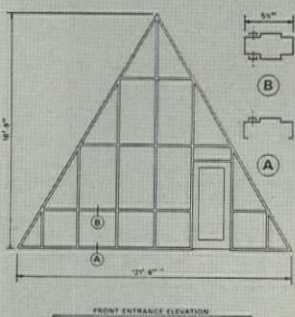
# STEELCRAFT

*The finest name in...*

## METAL DOORS and FRAMES



Another suggestion  
from the Steelcraft  
Architectural  
Detail File.



**Honeycomb core**—A Steelcraft development that provides new strength! A honeycomb core is permanently bonded to two layers of steel... deadens sound, adds ruggedness.

*Steelcraft's Dallas distributor, Samuel A. Ellsberry Co. fabricates locally this unusual job using standard sections for a lodge owned by Owens Country Sausage, Inc.; Richardson, Texas; architect, Billy R. Keller.*

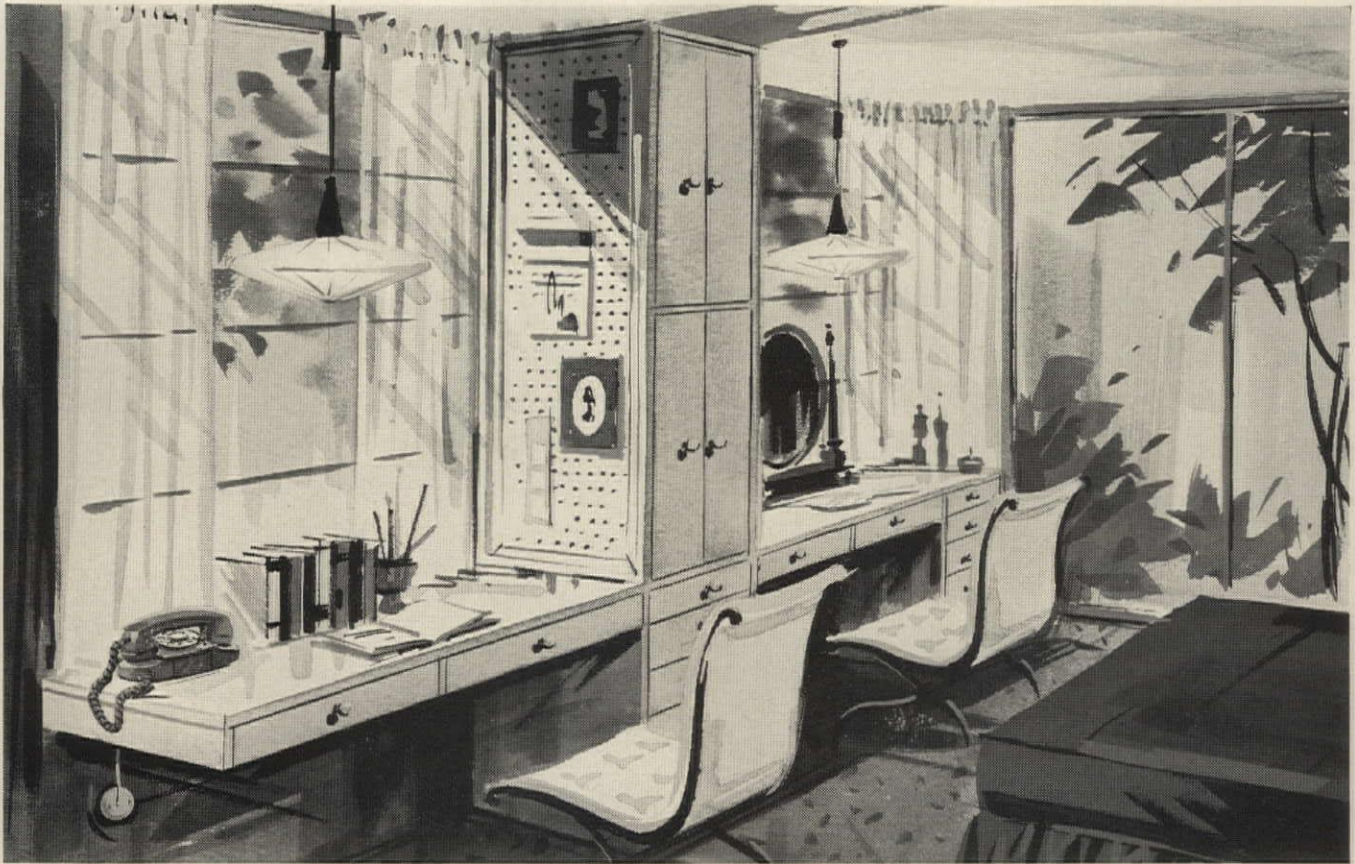
Steelcraft offers unmatched versatility in unusual frames for doors and glass lights through a system of stock sections called sticks. These stick sections are stocked locally by authorized Steelcraft distributors. All Steelcraft doors can be used interchangeably on any Steelcraft frame. Call a Steelcraft distributor for professional assistance in coordinating hardware and approval drawings. Save time—cut costs.

THE STEELCRAFT MANUFACTURING COMPANY

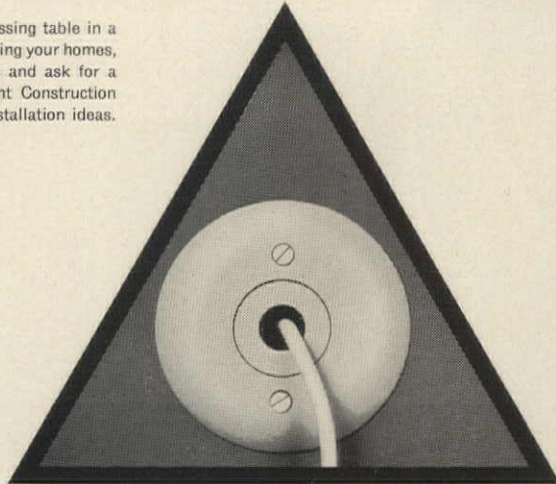
9017 Blue Ash Road, Cincinnati 42, Ohio







▲  
 The Princess phone adorns study area and dressing table in a teen-age girl's room. For help in telephone-planning your homes, call your local Bell Telephone Business Office and ask for a Communications Consultant. See Sweet's Light Construction File, 11c/Be, for other residential telephone installation ideas.



***SPECIFY*** built-in telephone outlets and wiring concealed within the walls. When you do, you provide flexible telephone service, and protect the interior beauty of the home...you make homes more livable, more salable.



**Bell Telephone System**

*Gold Bond gives you a better way with*





*modular ceilings...*



*Fissured Pattern*

*Acoustiroc lets you custom design acoustical ceilings*—with unusually large tile sizes without fear of sag (when supported by suspensions on all four sides). Like this office ceiling, for instance. Special 48" x 18" panels, interspersed with 18" x 12" tiles, form an orderly pattern around 18" x 12" lighting fixtures. The product: Gold Bond Acoustiroc, made with an exclusive felting process that interlocks long mineral wool fibers—for 50% greater strength than ordinary mineral wool tiles. Acoustiroc has a good sound-attenuation rating. You can get an almost unlimited size range, from 6" x 24" wide to 6" x 72" long. The minimum order for special sizes is 30,000 square feet. You can match tile proportions better to building modules. You will speed erection, reduce material costs. For even more ways with ceilings, call your Gold Bond® Representative. National Gypsum Company, Buffalo 13, N.Y.



**Gold Bond**  
ACOUSTICAL PRODUCTS

***office building heated***



***by the same  
revolutionary  
Arkla Gas Unit***

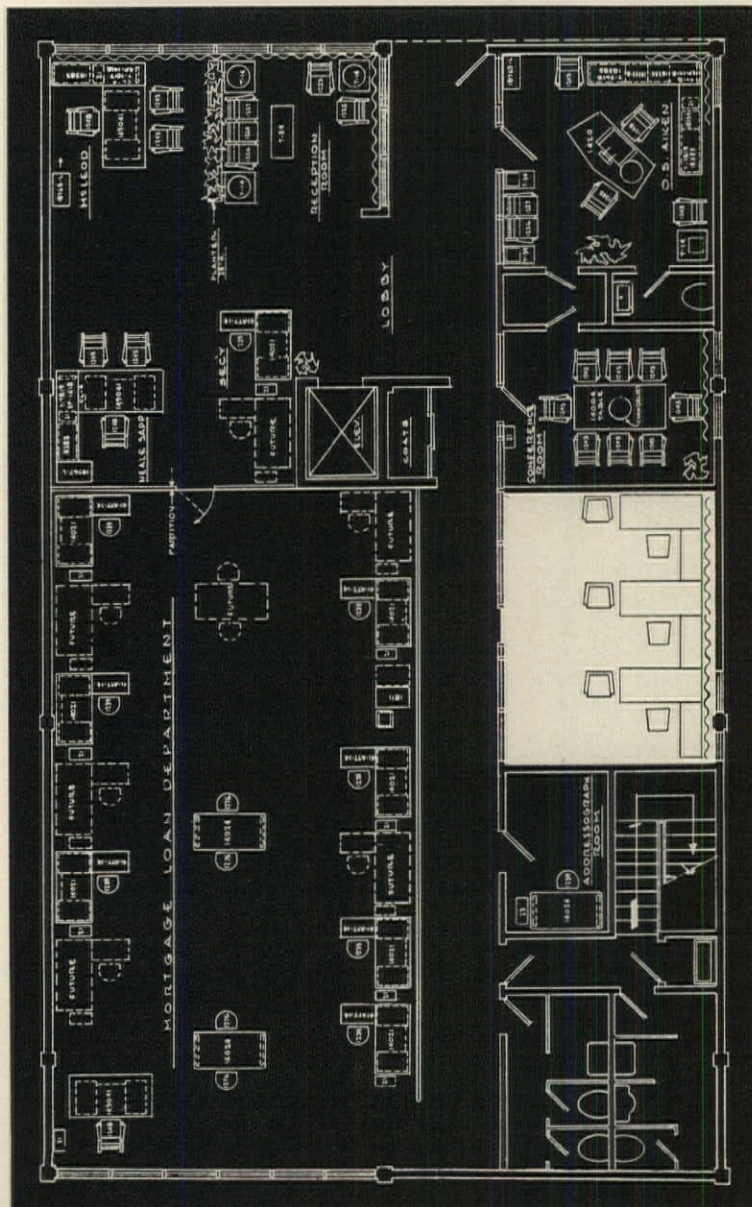
## *office building cooled*



VISIT THE ARKLA GAS AIR-CONDITIONED SPACE NEEDLE AT THE CENTURY 21 SEATTLE WORLD'S FAIR.

Arkla's new 25-ton Gas Chiller-Heater—the DF-3000—has come to Phoenix in offices, churches and apartments. Reasons for its popularity: ▫ **Heats or cools automatically—no boiler, no compressor** ▫ **Sealed for life, requires no lubrication** ▫ **Keeps same capacity for life of the unit** ▫ **No moving parts—no friction—in the heating and cooling cycle** ▫ **First large tonnage absorption air conditioner that also heats** ▫ **For the whole story on the Arkla 25-ton DF-3000, call your local GAS company. Or write Arkla Air Conditioning Co., General Sales Office, 812 Main St., Little Rock, Ark. ▫ American Gas Association. **For Cooling & Heating... Gas is Good Business****





For more information about the new Steelcase Office Planning Service and the name of the participating dealer nearest you, or for your copy of our office furniture folder, just drop us a line on your business letterhead. Address Dept. A.



## New office planning service for architects and designers

*You're invited to use our new  
service to help ease deadline  
pressure and staff load.*

Efficient floor layout and work-flow planning in major office projects are time-consuming chores that may frequently over-burden your professional staff. Now Steelcase offers you a new Office Planning Service to give you the extra help you need. Backed up by Steelcase's own planning and engineering departments, it is available through many leading Steelcase dealers in your area. Please contact Steelcase for the name of the participating dealer in your city.

Also, we think you'll find our office furniture folder for architects extremely helpful to your staff in planning smaller offices. It contains a layout template and product illustrations you can use for client presentations; finish and fabric sample cards and installation photographs accompanied by detail drawings. Steelcase Inc., Grand Rapids, Michigan; Canadian Steelcase Co., Ltd., Don Mills, Ontario.

# STEELCASE INC

*Now in our  
50<sup>th</sup> year*

# FORUM

EDITOR-IN-CHIEF: Henry R. Luce  
CHAIRMAN, EXEC. COMM.: Roy E. Larsen  
CHAIRMAN OF THE BOARD: Andrew Heiskell  
PRESIDENT: James A. Linen  
EDITORIAL DIRECTOR: Hedley Donovan  
ASSISTANT DIRECTOR: Albert L. Furth

---

## EDITOR

Douglas Haskell, AIA

## MANAGING EDITOR

Peter Blake, AIA

## ART DIRECTOR

Paul Grotz

## SENIOR EDITORS

David B. Carlson, Jane Jacobs  
Walter McQuade, AIA  
Richard A. Miller, AIA  
Ogden Tanner, AIA  
(assistant managing editor)

## ASSOCIATE EDITORS

Marshall Burchard, Warren Cox  
Hugh Nash, Mary Elizabeth Young  
Richard Saunders (Washington)  
Allan Temko (West Coast)

## ASSISTANT TO THE EDITOR

Mary Jane Lightbown

## RESEARCH STAFF

Benita G. Jones, Anne Peyton

## ART STAFF

Martha Blake  
Charlotte Winter

## EDITORIAL ASSISTANTS

Anne Le Crenier  
Henry Martin Ottmann, Ann Wilson

## CONSULTANTS

Miles L. Colean, FAIA, Lawrence Lessing

---

## PUBLISHER

Ralph Delahaye Paine Jr.

## ASSOCIATE PUBLISHER

Joseph C. Hazen Jr., AIA

## GENERAL MANAGER

John J. Frey

## ADVERTISING DIRECTOR

S. C. Lawson

## ADVERTISING MANAGER

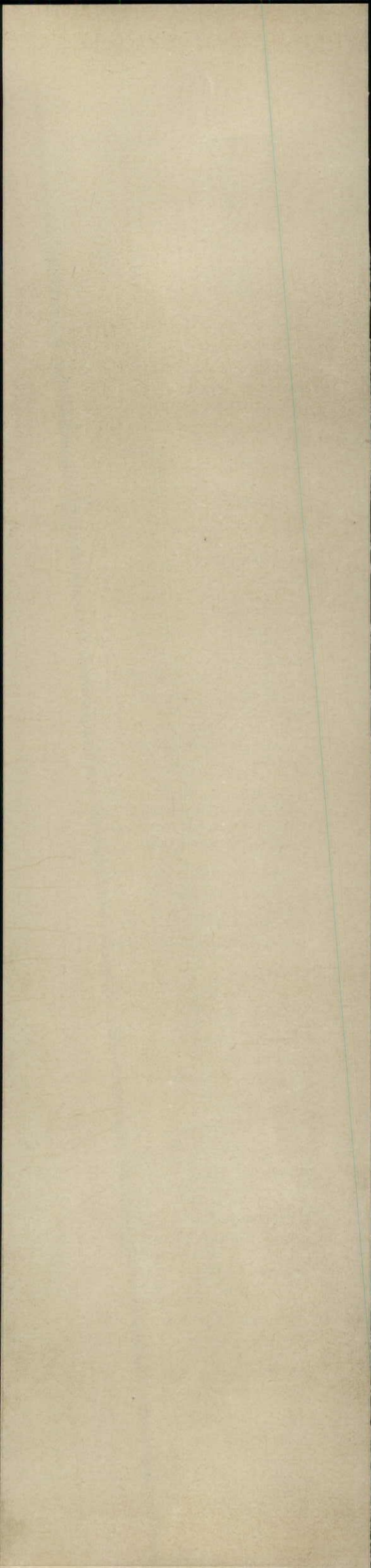
John Beard

## PRODUCTION MANAGER

John R. Wheeler

---

ARCHITECTURAL FORUM published by TIME INC.





## QUOTE . . . UNQUOTE

"Governor Rockefeller said the other day that the states can meet their own problems on urban affairs. Why, that is utter, unadulterated bunk."—*HHFA Administrator Robert C. Weaver.*

"Now we are in . . . a lovely, creative, delicious chaos where I feel at home and content."—*Architect Philip Johnson.*

"America has espoused and tackled urban renewal with a zest that the European observer finds exciting, admirable, and from time to time alarming. . . . The south side of Chicago—that old, shameful, and one would have said eternal, slum—now looks like the scene of a massive air raid."—*British City Planner Mervyn Jones.*

"We have always taken land for granted. But now we must give thought to preserving some of it."—*Conservationist Horace Albright.*

"There is nothing intrinsically wrong with an expensive building."—*British Architect David Medd.*

"When I visited the skyscrapers in New York and Chicago, everyone had their own little potted plants on their desks. A plant has become as much of a status symbol as the vodka martini or the attaché case."—*Brazilian Landscape Architect Roberto Burle Marx.*

"Soundly managed and publicly appreciated and supported cemeteries manifest our devotion to liberty and proclaim the strength of our ideals."—*American Cemetery Association Vice President James Worley.*

"Americans [are so] dissatisfied with present houses . . . that more and more of them are seeking the conveniences of apartment living."—*Yale & Towne V.P. Leo J. Pantas.*

"There are three types [of modern architecture]: crackerbox, hog pen, and chicken coop. See that building [pointing to a new Washington office building]? That's crackerbox. Due to the Frank Lloyd Wright influence. Did you ever see his horrible Guggenheim Museum in New York?"—*Former President Harry S. Truman.*

**And the President replied, "... I regret it."** The rest of the nation, especially the building industry, shares President Kennedy's regret, expressed recently over the latest contract of New York's powerful Local 3 of the International Brotherhood of Electrical Workers.

The President was understandably annoyed by a union which so flagrantly ignored his own determination to maintain a 40-hour week and to settle contracts only in relationship to productivity increases. Instead, the electricians struck New York city's electrical contractors, demanding a basic 20-hour week; they succeeded, after temporarily crippling the city's \$1.25 billion-a-year building boom, in getting a basic 25-hour week (see "News").

What is the justification for this inflating of building costs? Other labor leaders who have come out for a shorter work week have done so to preserve a shrinking number of jobs. There was no threat of that in the case of Local 3; on the contrary, the Local has had to beef up its own membership of 6,750 members with an additional 2,250 "imported" electricians just to handle New York's terrific building work load. So the cutback in the basic work week can only aggravate the shortage of workers. Realizing this, the union has announced it will seek 1,000 new apprentices, but their training requires five years. Will New York still have the present sort of building boom five years from now?

The answer to that question will come largely from an analysis of how many cost increases the market can stand. When will costs overtake foreseeable gains from new construction? Some New York electrical contractors estimate that the new contract, which will run for 30 months, will raise man-hour costs 12 per cent, or about 83 cents per hour. This may not look like much alongside a billion and a quarter dollars, but what if other unions follow Local 3's lead? One expert says that if all of New York City's 200,000 construction workers could get the same contract as the electricians, commercial construction costs would rise 10 per cent, and residential building costs about 7 per cent, or a total of about \$100 million per year. The building industry seems hardly able to withstand such an extra load.

Fortunately, informed observers say that other unions will not be able to get the 25-hour week contract for some time. Most other New York construction trades work either a 35-hour week or a 40-hour week, and, indeed, hours may not even be a factor in many other contracts scheduled for bargaining within the next year. Some union leaders seem embarrassed by the blatant cupidity of the electricians' contract. Harry Van Arsdale, head of Local 3, who reportedly has political ambitions within the labor movement, found little support for his position among the top leaders of the AFL-CIO.

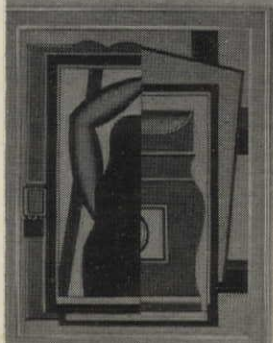
Aside from the immediate effect of boosting New York's already inflated building costs, the electricians must bear the onus of ignoring another, even more serious, fact of life. As President Kennedy said to the steelworkers during the 1960 campaign: "In the face of the Communist challenge, we must meet today's problem of unemployment with greater production rather than by sharing the work."



GEORGE CAKINA

*Over a period of many years, Architect Julian C. Levi and the late Mrs. Levi gave their Manhattan apartment a highly personal character*

## **THE CHANGE IN URBAN LIVING**



ALEXANDER GEORGES

*New York Architect Gordon Bunshaft and Mrs. Bunshaft, both avid art collectors, live in a sharply contrasting but equally personal apartment*

The two living rooms above, though vastly different, have at least one thing in common: both demonstrate that city living can be a pleasant, individual, and permanent affair despite today's rapid and often chaotic change. For most Americans, such qualities might seem beyond reach. But are they really? On the following

24 pages FORUM explores such divergent sources as a millionaire's tower in Tulsa and a British industrial slum, examines two views of planning, and looks critically at the federal role in design. Conclusion: there are plenty of ideas for improving city living—and we still have a long way to go (see story on next page).

## **BACK TO THE CITY — BUT IS IT WORTH THE TRIP?**



CARTER WINTER

Any town with claims to urbanity is currently having a back-to-the-city movement.

All over the U.S., refugees from suburban ranches are fixing shutters to old row houses and moving in. Executives are trading their country mansions for apartments in new balconied towers on the outer reaches of downtown. Some of the statistics tell the story of the growing demand for urban living units: 25 per cent of all new dwelling units going up are in high-rise apartments, and increasing numbers of these are in central cities.

Unhappily, this demand is being met almost entirely without imagination. That part of the story is told every day in the real estate pages of newspapers throughout the country which show block after block of deadly, uninspired, and utterly repellent apartment projects (above, left) put up by what appears to be the same architect and the same builder, operating, it seems, a nationwide syndicate. At present these grim projects, which rise wherever an investment builder, urban renewal authority, or a housing authority has cleared the land, seem to satisfy the demand—at least for cubage.

### **The demand for amenities is not being met**

But this demand is likely to become more discriminating. For one thing, the principal reason for the back-to-the-city movement on the part of disillusioned suburbanites is their yearning for the sort of variety which, in their minds, is represented by urban life (above, right) and which they miss in the monotony of suburbia. Now that they have made the

break with the suburb, or are about to make it, they find that monotony has become the pattern of urban living as well.

For another, the ex-suburbanite brings with him a newly acquired interest in some of the amenities of life which even the most monotonous suburb offers—some private outdoor space, fairly good schools, playgrounds big enough for children to use in groups and teams, easy parking facilities, greenery, and sunshine. While the ex-suburbanite may be willing to sacrifice some of these amenities in return for that great urban attraction, variety, he is not going to sacrifice them all, and he will not sacrifice any of them when he discovers that urban variety has become an illusion.

These two demands—the demand for urban variety (which includes a demand on the part of the ex-suburbanite for some individual expression for himself), and the demand for some



DAVID HIRSCH

Ground-floor gardens: Boston-area apartments by Hugh Stubbins.



BENNET BRAUN

Rooftop gardens: San Francisco apartments by Hertzka & Knowles.

of the amenities of suburban living—should be shaping the thinking of planners, architects, builders, and others involved in the present apartment boom. But are they? Unhappily, the vast majority of new urban housing reflects no awareness whatever of these demands, and the only reason there is a boom at all is that enough people seem to be willing to put up with shoddy construction, primitive planning, and absence of architectural imagination just to escape the daily grind of commuter traffic.

The following pages of this issue of FORUM show examples of some of the things that might be done to answer creatively the legitimate demands for decent urban living. Elsewhere, several contributors from the field of urban design and planning explain some of the obstacles that now exist to such creative design.

**Obstacles to good urban living must be removed**

Basically, these obstacles fall into four categories.

First, there is the unfortunate influence of FHA bureaucracy upon all apartments being designed under FHA standards. (See pages 96-97.)

Second is the basic zoning philosophy employed in most cities, which tends to separate different uses from one another rather than mix them up creatively to encourage the kind of variety that can make urban living so exciting (pages 89-91).

Third is the attitude of many planners and urban designers which has changed little in the past 40 years and which continues to create "project" islands of urban living—some of them very handsome islands indeed, but islands nevertheless, and unrelated to the fabric of the city as a whole.

Fourth is the inability of architects to create variety in architectural forms (and thus to encourage an individual expression that will give each apartment dweller some sense of identity), and their inability to relate new structures to what exists nearby. One rare, successful example of such an at-

tempt in England is found on pages 92 to 95.

In the light of these obstacles, it is surprising that so much good work is being done all over the U.S. With all its flaws, the married students' housing at Yale by Paul Rudolph (pages 98-101) does suggest a lively new pattern for urban living that may eventually catch on in other parts of the U.S. And for all its unneighborliness, the Atrium project built in Chicago by Architect Y. C. Wong (pages 86-88) suggests still another pattern which should prove most attractive to refugees from the suburbs who do want some private outdoor space.

But much more remains to be done, and the time to do it is now, while the apartment boom lasts.

Unfortunately, the boom does not seem to be doing it. Monster buildings of red or white brick poked spottily with windows loom large one beyond the other, moving in on a fine old neighborhood because it has a "name." In New York, Greenwich Village, Sutton Place, Gracie Square, and other once-charming city areas have thus been ruined by bad



*Community on a street of steps: Yale married housing by Paul Rudolph*

and bulky new building. The same thing is happening now on Chicago's Lake Shore Drive, Atlanta's Peachtree Street, Milwaukee's Downer Avenue, and Cleveland's Shaker Boulevard, and on once-fine streets in every

major city in the land.

Most of these buildings are economical and go up fast. They normally have balconies (because FHA counts a balcony as one-half a room). But, inside, the walls are so thin they cannot block a nor-

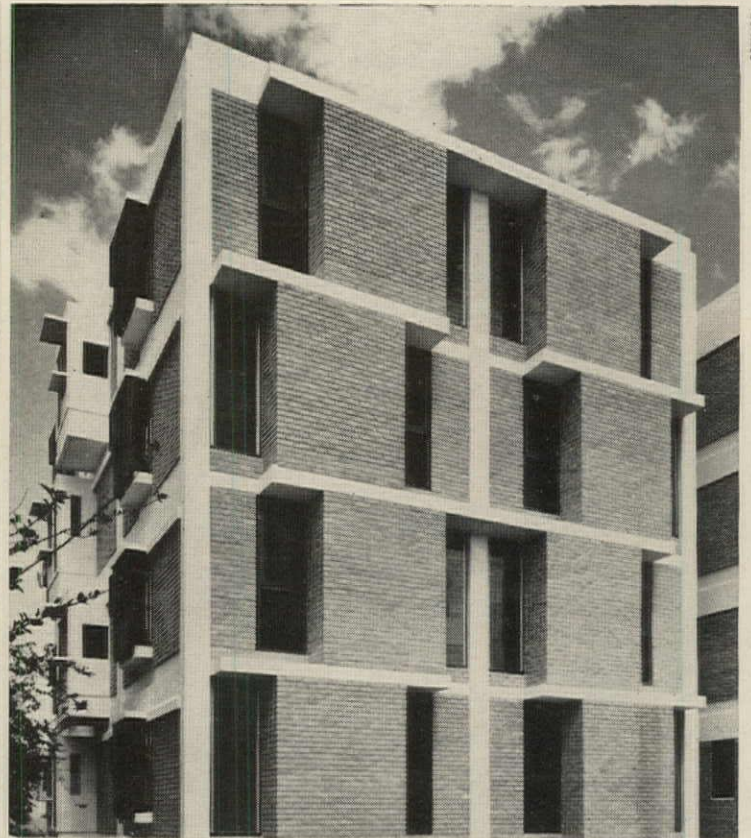


*Outdoor privacy in the city: Chicago's "Atrium Houses" by Y. C. Wong*

mal conversation. Rooms are small and cut up; hardware and fittings are the cheapest available; and the paint job looks like the work of a ten-year-old. Despite the doormen, murals, pool clubs, caterers, and built-in garages, the new apartment buildings fail to improve the image of living in the city; in fact, without the doorman they are hard to tell apart

from most public housing projects.

Obviously, this ubiquitous building type can, and must be, improved. Inside, rooms can be simplified in shape, and beams and columns fitted to unit plans. Living rooms can go into corners, where two exposures are available (and buildings could have more corners). Bathroom and bedroom



MUNIZ

*Individuality expressed outside: Havana apartments by Mario Romanach*

doors should be removed from full view in living rooms. Kitchen odors must be exhausted elsewhere than through corridors, and the corridors themselves made to look less like tunnels.

Balconies, too often tiny, useless platforms stuck on the face of the building, should be made more spacious and useful, or eliminated. (Occasionally, they can be replaced by continuous porches pulled back into the main envelope of the building, or they can be turned into loggias, opening to rooms on three sides, with only one side exposed.)

Unit plans could well be more varied, provided the variations are not merely whimsical. Two-story apartments and floor-through units, both possible in skip-corri-

dor plans, offer possibilities, as do ground-floor units with separate entrances and private gardens (e.g., Hugh Stubbins' apartments in Cambridge, Mass., page 78), and penthouse units with studio rooms and balconies (e.g., the San Francisco apartment by Hertzka & Knowles on the same page).

#### **The unit on the wall**

Important as these interior improvements are, it is the outside wall of the apartment house that most needs to be changed. In large buildings, the giant scale could be tempered by revealing on the exterior the shape and character of the individual dwelling units. In expressing dwelling units outside, the bland, warren-like façades of big buildings could be transformed

COURTESY "CUADERNOS DE ARQUITECTURA"



*Interior variety expressed: Peppo Brivio's Swiss apartments in Masagno*

into lively, highly individual tap-  
estries in the cityscape. If the  
structure itself were expressed too,  
and related to the unit (which im-  
plies a cellular or shear-wall struc-  
ture rather than a column and  
slab system), a whole new domes-  
tic scale could be achieved. With  
such new thinking the apartment  
house could become not a single  
building, but a pile of many indi-  
vidual dwellings, just as a group  
of row houses is a string of indi-  
vidual homes.

By looking at apartment houses  
and neighborhoods as assemblages



COURTESY, "THE ARCHITECTURAL REVIEW"

Bridges linking neighborhoods in  
air: England's Park Hill project

of individual and identifiable dwell-  
ing units, architects and builders  
could do much to bring back to  
cities a recognizable urban scale.  
Some dwelling units could be  
placed above stores, restoring an  
urban building type now missing  
from the scene (as was the row  
house until a few years ago).

In larger developments, plat-  
forms for individual dwelling units  
could be linked by walks on more  
than one level; and this could be  
done not just for one building  
group, but over scattered yet  
linked sites in a wider neighbor-  
hood area (as in the giant Park  
Hill Housing project in Sheffield,  
England, left). It might even be  
possible to sell, in "condominium"  
fashion, individual building sites  
on these multilevel building plat-  
forms, which would contain park-  
ing within their depths and be  
tucked into single, block-size sites  
surrounded by older buildings.  
Structures like these, suggested in  
all seriousness by more than one  
leading architect, might well be a  
substitute for the now triumphant  
tower slab, and they could still  
provide densities suitable for city  
sites and city concentrations.

**Cities, freed of the "project" idea, could build on their own**

If urban renewal abandoned its current clearance-or-  
nothing approach and started to build strength into existing  
neighborhoods—with attention to existing historic, spatial,  
and cultural continuities—many currently hot debates could  
be settled and all kinds of wasted ingenuity could be saved.

Freed from the concept of single, unrelated "projects," the  
city might come into its own. Building, with urban renewal  
used as a catalyst where and as needed, could proceed as  
many individual acts, from small to large. Sound structures  
would be preserved, indeed used to "cue" new work, and  
step-by-step, cities would renew themselves.

Our cities cannot be cleared from core to suburbs by public  
action, only to need clearance soon again. Americans must  
learn to settle with their past, to set a new stride, and to  
make each building a contribution to the whole.



C. E. KIDDER SMITH

Variety and amenity despite size: London County Council's Roehampton



BEHR PHOTOGRAPHY

Vitality of façade: Denys Lasdun's St. James Place apartments, London





**Tulsa's new riverside apartments, a highly successful venture in high-priced living, use convenience and continuous porches to lure executives from their suburban estates.**



PHOTOS: BOB HAWKS, INC.

## VERANDAHS IN THE SKY

Although the rentals are geared to an Onassis or a Farouk, apartments in Tulsa's new 2300 Riverside tower (opposite) are renting with astonishing ease.

Tenants, whose monthly rents begin formidably enough at \$300 to \$375 for a one-bedroom apartment (and skyrocket to \$500 to \$575 for two bedrooms, \$700 to \$750 for three, and up to \$1,000 for the penthouses) have already taken over 80 per cent of the building—though it has yet to receive its finishing touches. The minimum lease is for three years, but many tenants have happily signed up for longer stretches—in some cases for as long as ten years. This remarkable confidence in high-cost living has even affected the way the tower is being financed. Permanent financing has come, not from a giant nationwide insurance company, but from a syndicate of four local banks and one local insurance company (see "Facts and Figures").

Why has this happened and, particularly, why has it happened in Tulsa?

The story begins five years ago when three Tulsa civic

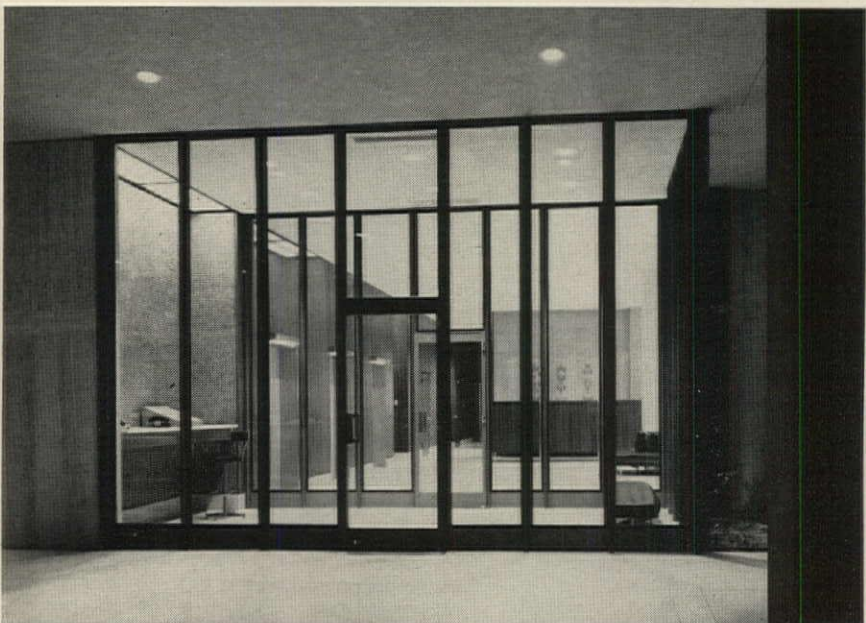
leaders invited Dallas developer Raymond D. Nasher to construct an apartment building on the 5.2-acre site along the banks of the Arkansas River, a mile from Tulsa's downtown heart (photo, above). They insisted that the building be one of very high quality and reserved the right to approve the design. Accepting their invitation, developer-client Nasher retained Dallas Architects Harrell & Hamilton. Subsequently, he began exploring the possibilities of finding permanent financing right in Tulsa.

The structure which resulted, known as 2300 Riverside Apartments, was intended from the outset to be a super-luxury address which would attract company presidents and other men of substance, many of whom were living on large estates nearby. Convenience was part of the bait. Among the many services provided for tenants are a restaurant, guest apartments, optional maid service, 24-hour doorman, swimming pool, putting green, and underground parking.

But the simple promise of convenient services was not enough. The underlying premise which governed the architects' design was that their apartments would have to be spacious and unusually open to the outdoors to induce pro-



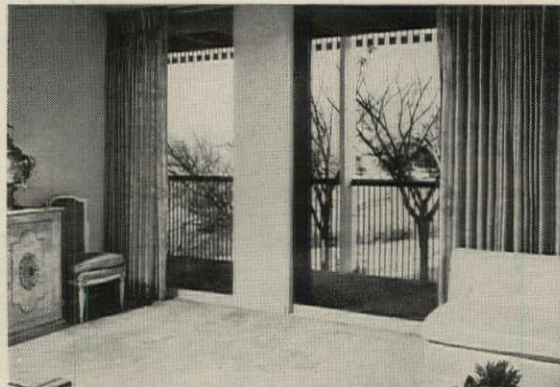
*Verandah shelters main entrance. There is another door for tenants in sport clothes.*



*Full height entrance doors of glass and steel lead into the building's main lobby*



*Baths have built-in closets, marble dressing tables*



*Railings add decorative border to living-room views*



*Kitchens gain view through adjoining breakfast room*

spective tenants to forsake the wide-open freedom of the neighboring range.

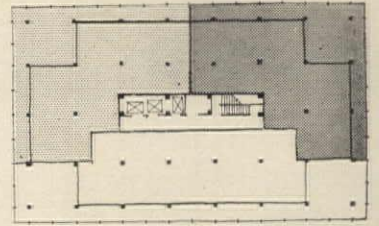
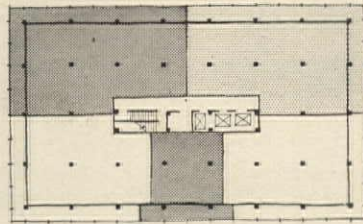
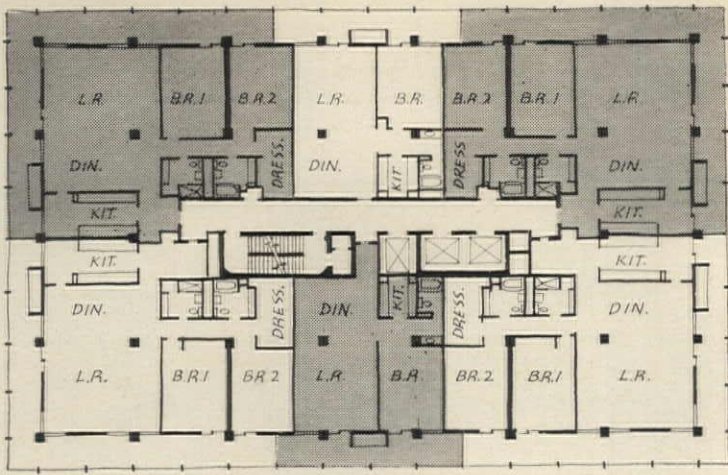
Indeed, space and openness are primarily what the tenants are paying for. The building cost a reasonable \$17.58 per square foot and finishes, generally, are not lavish. But bedrooms average 12 by 16 feet, living rooms 16 by 23 feet. (One-bedroom apartments total 1,170 square feet, two bedrooms 2,334 square feet, three bedrooms 2,924 square feet.)

The sense of contact with the outdoors stems first from the sloping, parklike setting from which the 16-story tower rises. More important, however, is the use the architects made of that venerable southern tradition, the verandah. Continuous porches circle each floor, opening up apartments to views up and down the river and toward the nearby Tulsa skyline. Six feet deep, the verandahs are faced with precast fins and extruded aluminum railings which extend below the slab, establishing vigorous, changing shadow patterns through the day and providing privacy at night. The verandahs not only afford good sunshading, but also provide protection from weather, which allows the use of simple stucco panels alternating with glass in the exterior wall.

#### FACTS AND FIGURES

2300 Riverside Apartments, Tulsa, Okla. Owner: 2300 Riverside, Inc., Raymond D. Nasher, president. Architects: Harrell & Hamilton. Landscape architects: Lambert Landscape Co. Engineers: Hunt & Joiner (structural); William K. Hall & Associates (electrical). General contractor: Centex Construction Co. (All firms of Dallas, Tex.) Cost (excluding architect's fee, site purchase, landscaping, and furnishings): \$4,395,756. Building area: 193,109 square feet (balconies are figured at half area). Cost per square foot: \$17.58. Permanent financing: by local syndicate composed of The First National Bank of Tulsa, The National Bank of Tulsa, The Fourth National Bank of Tulsa, and the Atlas National Life Insurance Co. Unit distribution: 21 one-bedroom apartments, 40 two-bedroom apartments, 20 three-bedroom apartments, 6 guest rooms.

Construction details: reinforced concrete columns forming 18- by 19-foot structural bays; high-strength A. 431 reinforcing bars spliced with square-sawn ends in pipe sleeves; columns supported by caissons drilled through water-bearing sand to sandstone; floors are 10½-inch-thick flat slabs with 6-inch-diameter fiber tubes at 8-inch spacing cast in to lighten dead load and to serve as air-conditioning ducts; individual air-handling units, located in closets opening off balconies, serve each apartment through the voids in the floor to the perimeter with interior distribution by overhead ductwork, chilled water supplied from central roof-mounted cooling tower; wind loads carried by four symmetrically placed shear walls and elevator and stair walls; continuous balconies faced with precast concrete fins and extruded aluminum railings of light amber finish.



Four symmetrically placed shear walls combine with elevator and stair-shaft walls for wind bracing (plan, left). Above: typical variations of apartment distribution on two different floors.

Broad, continuous verandahs 6 feet deep are paneled at ends for privacy. Aluminum railings extend below floor slabs for decorative effect.





*Doorways to each atrium unit are recessed into neatly detailed, windowless walls, echoing houses of the Mediterranean, especially ancient Greece*

**Interior courtyards give these very small Chicago row houses unusual spaciousness, privacy and light**

## RETURN OF THE ATRIUM

Two familiar dwelling types—the city row house and the suburban one-story patio dwelling—are mated here in Chicago to produce something quite different from either, exotically called the “atrium house.”

There are eight atrium units in this group; they are arranged in two rows, and oriented entirely toward two pairs of inner courtyards. Not a window gives upon the street. The seclusion and hidden freedom of this turned-outside-in scheme delight the owners and surprise their guests. According to one of the residents, first-time visitors often approach with “doubt, uncertainty, sometimes even hostility showing on their faces. It is a pleasure to see the sudden change of expression . . . as they see the atrium, and the idea comes through.”

Architect Yau Chun Wong, who occupies one of the dwellings, comments that because the atrium belongs to every room in the house, the use of the garden is tripled. His clients point to the added use which the atrium gives to the rooms, and the

way it makes all of them seem spacious, serene, and quiet. Several residents, who took for granted the probable summer-patio pleasures, were agreeably astonished to find the courts as visually delightful in winter, especially when clothed in snow.

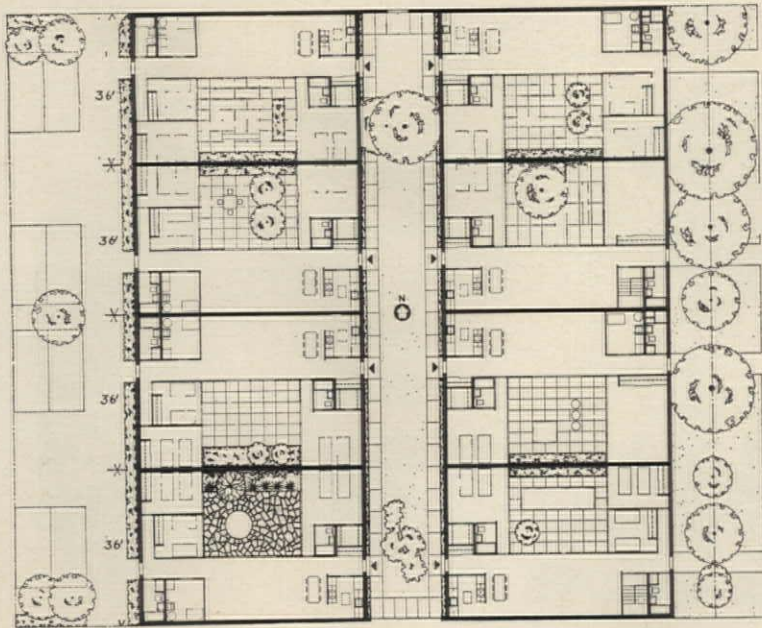
So that the atrium walls might be left as open as possible, Architect Wong decided on lightweight steel framing, with masonry walls completely enclosing each dwelling and also dividing each court into thoroughly private preserves. One of the less obvious reasons for the scheme’s success is the attention Wong paid to sound insulation between dwellings, including 4 inches of concrete poured in the joints between the roof decks at the units’ dividing walls.

The houses were entirely the initiative of a group of salaried people—e.g. the Hokes, who are high school teachers. They got no redevelopment subsidies or FHA financing, though they built in the Hyde Park-Kenwood renewal district. Several banks turned them down on mortgages, including one of the city’s largest loan associations, which said: “We think Colonial

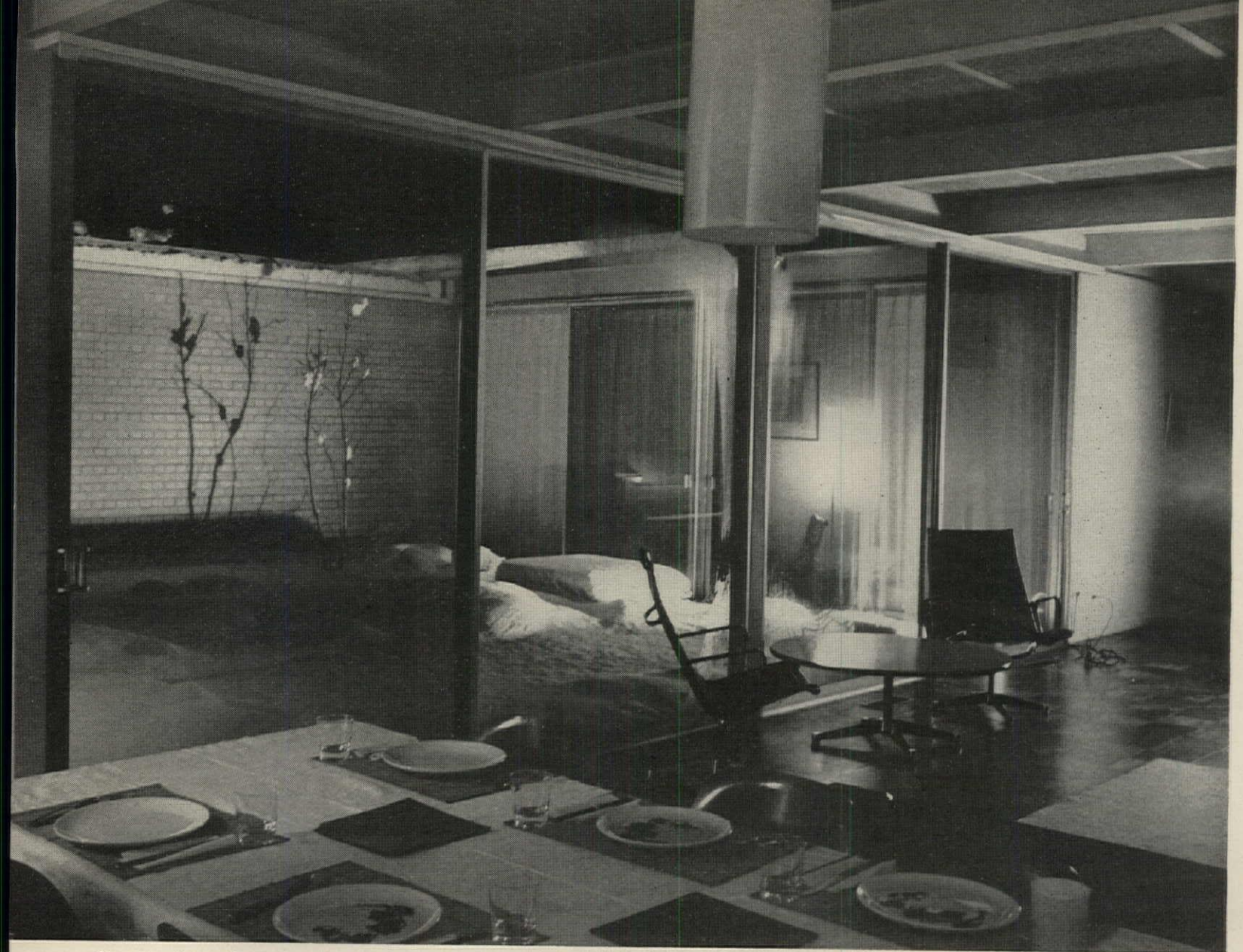


*Inside, living and dining areas, bedrooms, and studies all open up to the light and landscaping of the courtyards they surround (plans, below)*

*Low, open blocks contrast sharply with conventional apartments nearby*



PHOTOS: ARTHUR SIEGEL



*Even in winter, the atrium offers spaciousness and views behind its private walls, with snow and brickwork dramatically floodlighted from inside*

is still very good." Mortgages, made individually, were obtained eventually from Talman Federal Savings & Loan Assn. which has been successfully pioneering in the financing of self-help renewal in many of the older neighborhoods of Chicago. Even so, each buyer had to make a \$10,000 down payment on his \$32,500 dwelling before a spadeful of earth was turned—one big difference between buying in the city and in the suburbs. The units were sold by showing plans to neighborhood groups and to persons attracted by local publicity.

#### FACTS AND FIGURES

Atrium Homes, 1366-1380 East Madison Park, Chicago, Ill.  
 Architect: Yau Chun Wong. Engineers: Edward Mok (mechanical); Paul Kwang (electrical). Landscape architect: Ivan Smally, Jensen Landscape Service. General contractor: Nathan Linn & Sons, Inc. Construction cost: \$204,256, or \$16.75 per square foot.

Other costs: land and site development, \$37,500; equipment, \$12,803; architectural and legal fees, \$20,690; total, \$275,249.

Financing: 20-year mortgage of \$185,000 at 6 per cent from Talman Federal Savings & Loan Assn., Chicago; equity of \$90,249 advanced by the eight buyers; Atrium Homes Associates, Inc., owner.

*Toward the street and other back yards, the low walls have no openings*



## AMERICAN CITIES: DEAD OR ALIVE?—TWO VIEWS

Few books have raised such a storm in city-planning circles as *The Death and Life of Great American Cities*, by FORUM Senior Editor Jane Jacobs. To present some of the views of the opposing camps, FORUM invited Edward J. Logue to state his case against the book, and Edward T. Chase to frame a rebuttal to the argument. Mr. Logue, former urban renewal chief in New Haven, is now the Development Administrator of the Boston Redevelopment Authority. Mr. Chase is a vice president of Cunningham & Walsh, New York advertising agency, a writer on public affairs, and the organizer of several national conferences on planning and transportation.



LOGUE



CHASE

### THE "VIEW FROM THE VILLAGE"—BY EDWARD J. LOGUE

Jane Jacobs' window on the world of cities is Hudson Street in Manhattan's Greenwich Village. Her view has all the perspective of that wonderful *New Yorker* magazine cover betraying the average New Yorker's view of the U. S.

The Hudson Street from which Mrs. Jacobs angrily rants at city planning, public housing, and urban renewal is a busy place—all day long and through most of the night.

All this activity produces safety, and Mrs. Jacobs is preoccupied with safety. It does not seem to have occurred to her that there are other ways of achieving safety and other values which other city dwellers will hold as high—quiet, for example.

Greenwich Village has always had its fans. However, Mrs. Jacobs is the first one to propose that we use its street life as the model for city life everywhere. It is in the image of the Village that she would recast our slum-stricken cities. No more federal renewal aids; let the cities fend for themselves. Not surprisingly, this approach has won her many new friends, particularly among comfortable suburbanites. They like to be told that neither their tax dollars nor their own time need be spent on the cities they leave behind them at the close of each work day.

For Mrs. Jacobs the city begins on the sidewalk. If the sidewalk is safe, the city is safe. Successful sidewalks must have three qualities: First, no grass. Mrs. Jacobs is very much against grass. Second, lots of eyes must be on the street at all times. Third, the eyes must have something to look at.

If your sidewalk meets these specifications, you are all right; if it does not, you are in trouble. I have been busy testing out all the older residential areas of Boston, and I am confused. The sidewalks of the North End meet the test, and the streets are safe. But so do the streets of the South End, and they are considerably less safe. The sidewalks of Beacon Hill, Charles-

town, East Boston, and South Boston do not meet the test, and yet I have found them perfectly safe. In Boston the sidewalk safety theory scores only .200. How is it in your city?

Where the bars are open late at night, the shops busy, the windows full of people looking out—are these the streets you always feel safest on? And the quiet streets where bars are not welcome and the shades are drawn—are these streets unsafe for you? Much of Manhattan has a street safety problem. Hudson Street does not. To generalize from this limited, particular evidence that no big city neighborhood can be safe unless it is both bustling and beery is absurd.

It turns out that our idea of a neighborhood, a collection of blocks focused on a church, or a school, or a square, is both sentimental and silly. Not only is it provincial to Mrs. Jacobs, but the stronger the neighborhood is, the weaker the city is. Presumably, a city composed entirely of sound, strong, stable, self-contained neighborhoods would be in the worst shape of any city imaginable.

For Mrs. Jacobs there are only three kinds of neighborhoods that are useful. The city as a whole is a neighborhood, and certain large subsections of it may be as well. However, the real neighborhood is the street block.

As a city dweller all my life, I find this limited concept inadequate and, indeed, inaccurate. Sentimental or silly, Beacon Hill is a neighborhood, and so is the North End. Furthermore, their strength *does* add to the strength of the city of Boston.

The Jacobean doctrine of cities stresses the need for variety, density, concentration. But how does the Jacobean city fit together? The only clue I find is Mrs. Jacobs' analogy of the city as "many fires, large and small" each carving out a space in the darkness. I do not think this is an idea anybody

is going to get very excited about.

Let us take another look at our cities, and begin by admitting our shortcomings. City planning has been too much a branch of the fine arts, too little concerned with practical ways of improving the real world around us. Too seldom have city plans been translated into action, and too rarely has that failure bothered city planners. The large-scale public housing project has turned out to be one of the biggest social failures of our times, particularly the tower projects. It is time we admitted as much. Urban renewal too often bears too much resemblance to the public housing program from which it came. Too many projects have been insensitive to relocation, unaware of the importance of design, and have taken too long to complete.

#### **Jobs to be done**

Our cities are in deep trouble, and large-scale federal financial aid is essential. There is no other effective, constitutional way to get rid of harmful urban land use on the scale required.

Urban renewal is the most useful tool yet devised to help cities help themselves. It is flexible enough to let cities approach their own problems in their own way. It can accommodate programs ranging from the simple clearance of a small slum for a parking lot to a vast, comprehensive effort aimed at rehabilitating all the older areas of a badly blighted city. It is capable of good design, sensitive relocation. Most important of all, it is capable of renewing cities for and with people.

Rehabilitation is the wave of the future. The days of the bulldozer redevelopment program will soon be over. Rehabilitation may be harder to start but it is easier

to wholesale, and it makes much more sense to city dwellers.

Strong, healthy neighborhoods will be the major objective of urban renewal. More and more we city types are going to be looking at our suburbs not in scorn but rather with a view to what we can learn from them that will make our urban neighborhoods alive, strong, and stable. A partnership approach between city hall and a neighborhood can work wonders.

#### **Some roles in renewal**

Our urban school plant is not in good shape. It helps shove education-conscious parents to the suburbs. City schools must compete with the suburbs. Only through urban renewal can cities afford to renew their school plant on the scale required.

Relocation will improve. More experience, better legislation, more pressure from Washington, and an accent on rehabilitation will remove much of the criticism.

Public housing is going to change its ways—or else. Sooner or later PHA is going to refuse to approve large projects, even in New York.

The race problem is going to be solved (or fail to be solved) in the cities of the north and west rather than in the rural south, and urban renewal has a vital role.

Planners are losing ground. Responsibility for the replanning of cities is moving into the hands of administrators. Surprisingly, the planners do not seem to mind.

And, finally, architects have a big role in renewal, yet I see dishearteningly little evidence that they are prepared to accept it.

There is much to be done in renewing our cities. We need all the help we can get. We need Jane Jacobs, who believes in people as much as we do, to keep on giving us the needle. I am sure she will.

#### **A NEW STANDARD FOR CITIES—BY EDWARD T. CHASE**

Mrs. Jacobs begins with a powerful ally: contemporary facts. Our cities do suffer from dismaying, widespread afflictions. This is despite—Mrs. Jacobs contends substantially because of—billions of dollars spent for renewal and for planned construction. The record provides planners antagonistic to Mrs. Jacobs with a woefully vulnerable beachhead on which to make a defense, let alone to launch an attack.

What is the magnitude of her accomplishment? Potentially, it is no less than to change the character of urban America. Overnight she has presented the American intellectual community with a wonderfully concrete critique of planning dogma and the rationale for a new approach, both desperately lacking until now. She has exposed the fatuities and irrationalities in planning shibboleths in a fashion to spread consternation among planners, architects, and bureaucrats. What is most important, Mrs. Jacobs has created a new concept and a new standard in the literature of urban studies.

In each generation there are relatively few books that set a whole body of specialists on their ear as Mrs. Jacobs' has. How have the planners reacted to the toppling of their dogmas? Rather badly, I would say. There is resort to ridicule; there is patronizing dismissal of Mrs. Jacobs as a crackpot anti-intellectual, antiplanner; and, there is careless or malicious misrepresentation of her book.

*Charge:* that Mrs. Jacobs tries to impose lessons derived from New York City and Hudson Street on all cities everywhere. *Retort:* partially true but essentially irrelevant. New York is America's preeminent urban center. It is a splendid "for instance." Anyhow, Mrs. Jacobs draws knowingly upon examples from a dozen other cities. Nor does she propose New York, let alone Hudson Street, as the universal model: "I hope no reader will try to transfer my observations into guides as to what goes on in towns, or little cities, or in suburbs," she writes. "I have concentrated on great cities and on their inner areas because this is the problem that has been most consistently evaded in planning theory. . . . Most of the basic ideas in this book come from things I first noticed or was told in other cities . . . my first inkling about the powerful effects of certain kinds of functional mixtures in the city came from Pittsburgh; my first speculations about street safety from Philadelphia and Baltimore; my first notions about the meanderings of downtown from Boston; my first clues to the unmaking of slums from Chicago."

The point is that Mrs. Jacobs, no matter where she learned it, has revealed the underlying functional conditions at the heart of urban vitality. One finds unassailable her analysis of the virtues of mixed use of land, of the mingling of old and



new buildings, of high densities, of shorter blocks. She celebrates diversity, interest, vitality, and the subtle, uniquely urban possibility of privacy and anonymity combined simultaneously with the possibility of varied human contacts. Are these values in dispute?

#### **Who's against cities?**

*Charge:* that Mrs. Jacobs gives comfort to those who are against cities and would like to forget them. *Retort:* translated, this means that because she discloses the malign effects of current urban renewal and public housing programs, and because these programs are also unpopular with illiterate reactionaries and well-heeled, irresponsible suburbanites, she should better keep quiet. One is reminded of the guilt-by-association McCarthy era.

And what a contention this is, for no writer has demonstrated a more intense devotion to and comprehension of city values than Mrs. Jacobs. None has shown more perception in unmasking the essentially antiurban bias of urban specialists, especially the old-hat sentimentalists who have failed to think through their "Garden City" infatuation. No, Mrs. Jacobs' many new friends are not complacent suburbanites (who resent her boredom with suburbia); they are rather the thousands of us who in frustration have puzzled over America's urban failures. Far from demoralizing the city-planning effort, Mrs. Jacobs, by delineating the causes for failure, quickens our hope that "slums can be unslummed."

*Charge:* that her whole position is based on making city sidewalks safe by ensuring their round-the-block busyness. *Retort:* this is a silly burlesquing of her imaginative demonstration that the safety

of a city's sidewalks is indeed one of the fundamental indices of a healthy urban environment. Others she describes are the sidewalks' capacity to create natural, casual social contacts, and to assimilate children.

*Charge:* that she is antineighborhood. *Retort:* this is like the charge that she is antiplanning. The interesting contributions she makes are: to identify the particular role of the street as the immediate neighborhood; to show how, ever so subtly, it fuses into the district-as-neighborhood; how the district in turn takes on unique political functions; and how the city at large acts as a neighborhood in its cosmopolitan role of engendering selective personal relationships unthinkable except among vast concentrations of population.

*Charge:* that she is pro-slum. *Retort:* have you stopped beating your wife? In the entire book there is no more fascinating chapter than Mrs. Jacobs' painstaking diagnosis entitled "Unslumming and Slumming." Mrs. Jacobs not only cares about eliminating slums, but she has bothered to learn how to do this without resort to bulldozer. I don't happen to cherish Hudson Street the way Mrs. Jacobs does. However, I recognize in her love for this section her sensibility to the differences between healthy concentration and vitality, on the one hand, and the overcrowding and incoherence of the slum on the other. Insensitivity to these distinctions has been the palpable defect of a generation of American bureaucrats, planners, and, alas, architects. How else explain the fact that only now, after years of bulldozing, do we see common acceptance of the virtues of spot rehabilitation?

*Charge:* the big one, that Mrs.

Jacobs is antiplanning, antisubsidy. *Retort:* when in the last quarter century has a book so revitalized interest in city planning? Never. Nor is this because planners have rushed to "defend" planning in consequence. The fact is that Mrs. Jacobs' whole book is an essay in planning. Planning means exercising foresight in the use of the resources of time, energy, and materials for worthy social ends. This is Mrs. Jacobs' prime concern, not engineering elegance or "sound market values" or pleasing façade.

Her excoriating criticism of urban renewal, public housing, and project planning is a rejection of a particular set of strategies and tactics as *bad* planning, not a rejection of planning. Nor does she reject federal subsidy for housing and renewal as she is so often accused. To accommodate the lower-income groups she offers instead a scheme of government subsidy to guarantee construction financing for the private builder and to guarantee rental income. (I happen to believe this plan wouldn't work because of the opportunities it offers for discrimination and other corruption.)

#### **The planner as ecologist**

The important thing is that Mrs. Jacobs would give city planning an entirely new orientation conceived in terms of ecology: attention to the myriad mutual relations between organisms, in this case people, and their environment. The approach is not unlike that of the naturalist concerned, for example, with the proper balance of living forces in a given stretch of forest, marsh, or prairie. This orientation has enabled Mrs. Jacobs in her book to reestablish the primacy of such fundamentals of good planning as a *sense of human scale* and a *sense of commu-*

*nity*. And how this ecological approach has led her unerringly to expose the enormities we have permitted under the heading of "relocation"! These are formidable achievements. Any planner who studies Mrs. Jacobs' dicta on these matters must be in her debt.

Mrs. Jacobs has reaffirmed better than anyone else that perceptive *social* planning is the indispensable prerequisite to perceptive *city* planning. She tells us crucial things about city planning at a time when at last the nation seems on the verge of comprehending the dangerous plight of our cities; at a time when our urbanization is proceeding at a feverish pace; and when the country is acknowledging the dominating role of the city.

It is only in Mrs. Jacobs' fanatic loyalty to individual rights, not to say eccentricities, that at times I think she falters slightly. I am fearful that in her distaste for big government intervention and her faith in working with the natural forces of the private marketplace, she may underestimate the ingenious manipulations of the speculators responsible for many of the slum conditions she is inclined to ascribe to planners. It may blind her, for example, to the need to tear down old loft buildings and convert commercial slums to new housing as a better social use of scarce land. It may blind her to the occasional merit of rather large-scale housing projects to achieve the very balance of mixed uses essential to the diversity she cherishes. It may divert her from the recognition that basic regional transportation plans may require some drastic impositions.

These minor demurrals only testify to the unmatched capacity of Mrs. Jacobs' book to make one think, and think hard, about the problems of our cities. END



***A British public housing project shows fresh approaches to planning and architectural expression***

## **LESSONS FROM A SLUM**

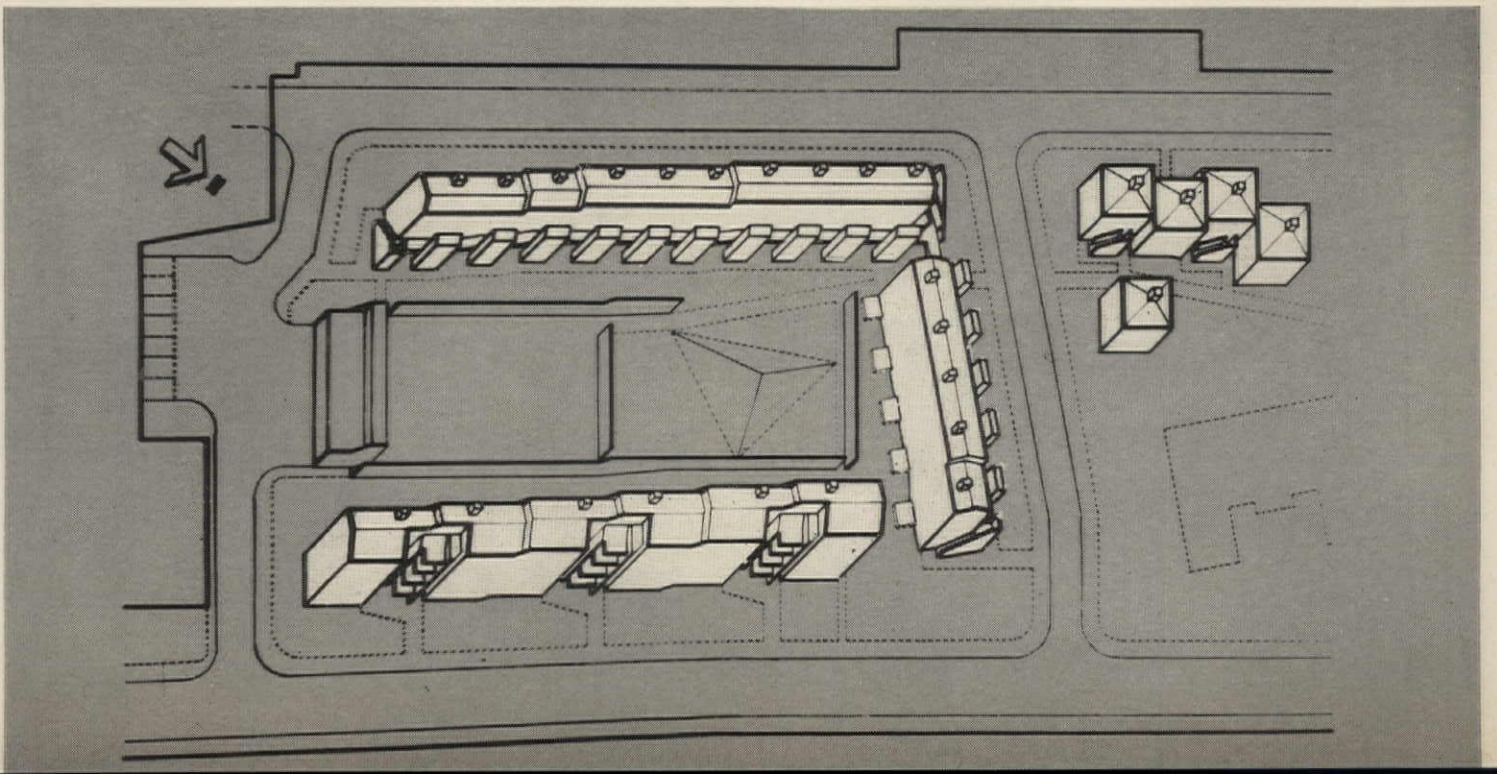
This public housing development in the Lancashire mill town of Preston, England illustrates some radical rethinking in sociology and architecture.

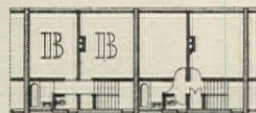
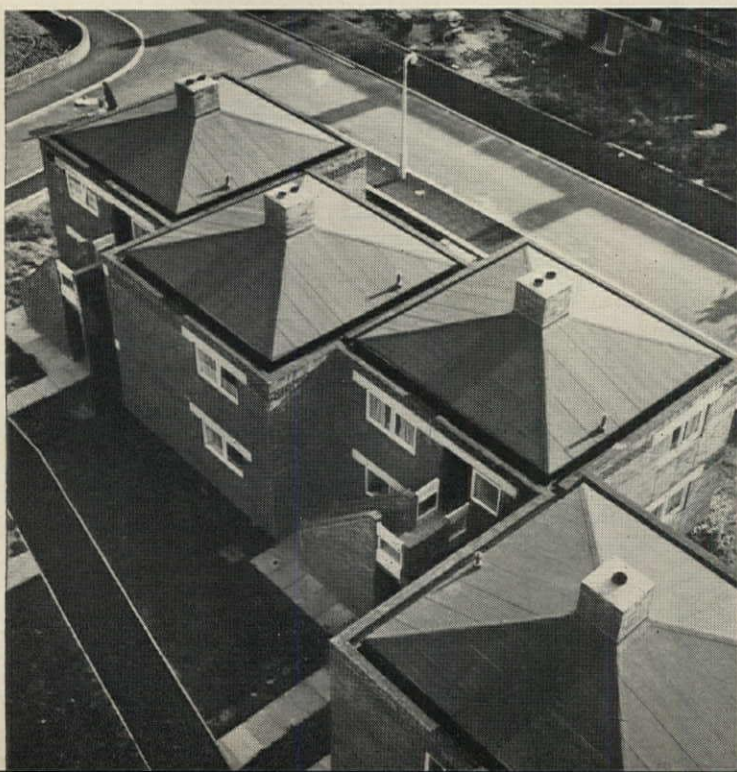
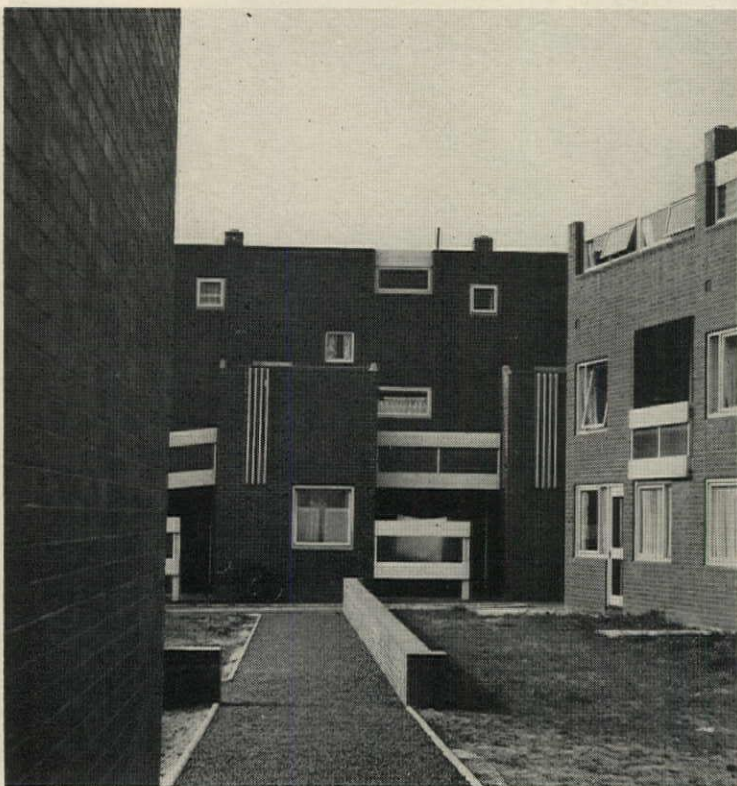
Unlike standard redevelopment housing, in England as well as in the U.S., this scheme rejects "suburban dilution" of city life, in the words of its architects, James Stirling and James Gowan. Their idea was to overcome the obvious and rather simple evils of the center-city slum buildings being replaced, without losing the slum's valuable urban qualities: its familiar "neighborliness and communal vitality."

These aims were assisted by the fact that the project is small and that it includes a considerable range of accommo-

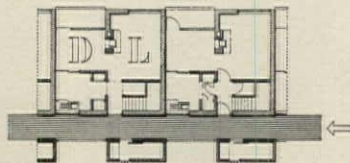
dations among its 62 units: 24 flats in four-story buildings; 15 duplexes and 15 flats in three-story buildings; two houses and six flats for old people in two-story buildings. The local housing authority specified this range, showing a rare concern to provide the real variety needed by displaced households.

The new buildings clearly illustrate the design philosophy of Architect Stirling. It is Stirling's belief that strong, expressive, and timeless architecture begins with the organization of internal functions. Since a functional interior almost always necessarily includes different kinds and sizes of space, the exterior will therefore indicate where the principal rooms or other indoor spaces are located e.g., where boundaries of different units occur, and where differing floor or viewing levels exist. To indicate such realities externally, he adds, brings back

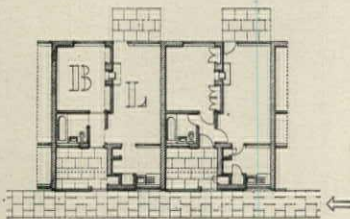




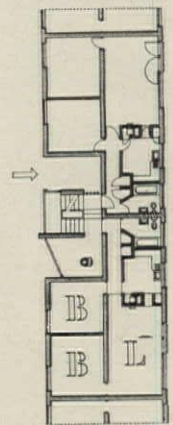
2.



1.



G.



G. 1. 2. 3.

Three-story row houses (photos, top and center, left) each contain a flat at ground level and a duplex over, as shown in the plans (at left). The entrance to the duplexes is along an elevated, ramped walk which passes over the flat and behind a freestanding storage room serving each duplex. Four-story buildings contain flats (plan below, photo opposite). Stair-well and window treatment illustrate the architects' philosophy of showing on the outside the space organization within. Two-story houses (bottom, left) are across the street, with dwellings for elderly people.

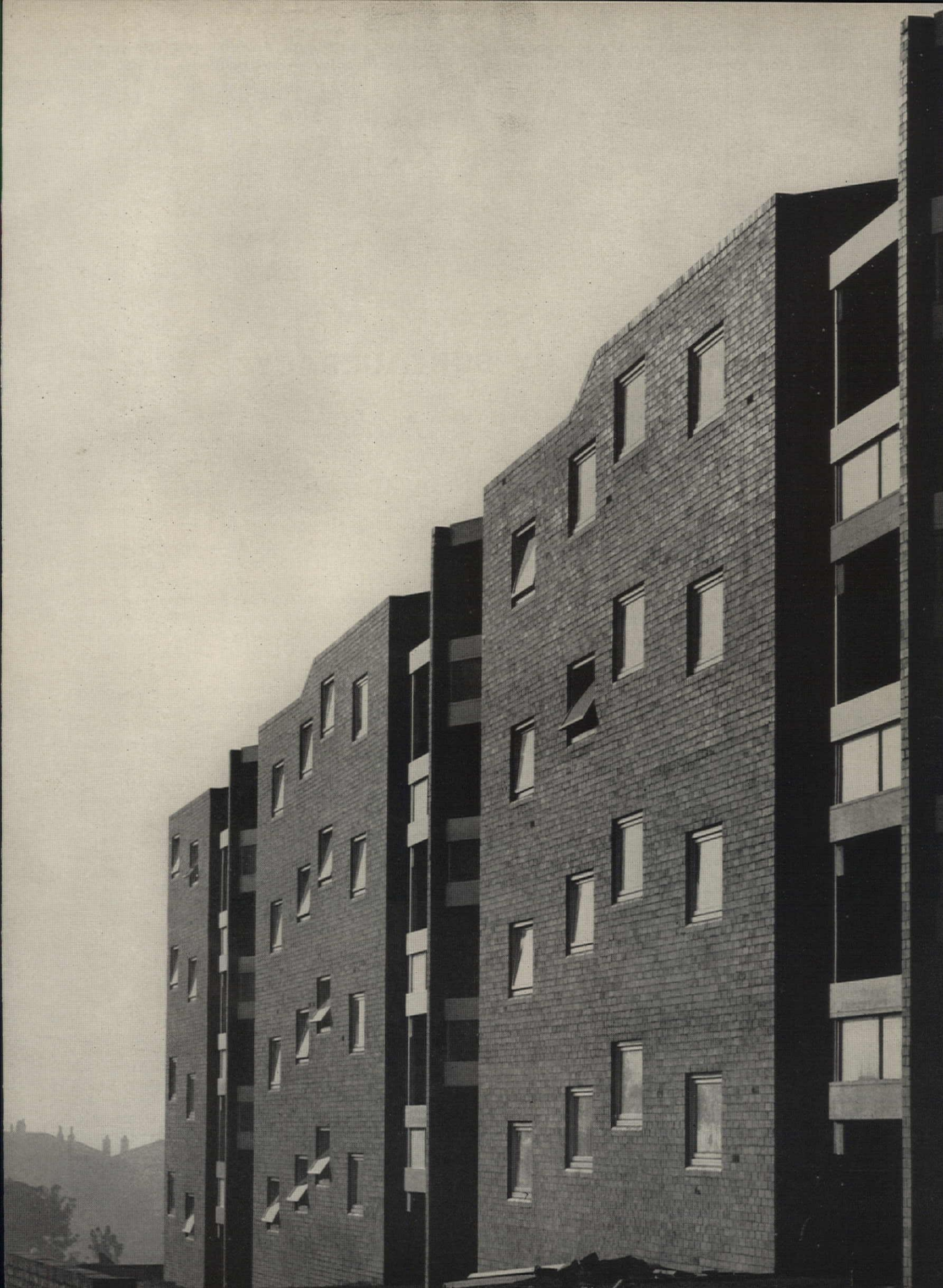
into city scenes the scale of human beings and of rooms.

"On both sides of the Atlantic," Stirling wrote recently while serving as visiting critic at Yale, "the current dilemma of modern architecture seems to be that top architects are absorbed in becoming either stylists or structural exhibitionists . . . both are obsessed with the outer building skin and both [mask] the volumetric dimensions of the spaces behind the façade." Stirling's and Gowan's ultimate structure and skin choices in the buildings shown here were influenced by British industrial brickwork and detailing, which they much admire. Set backs, sills, and copings were adapted from local mills.

#### FACTS AND FIGURES

Public low-income housing, Preston, Lancashire, England.  
Architects: James Stirling and James Gowan. General contractor, John Turner & Sons. Consultants on planning overall redevelopment

project: Lyons, Israel & Ellis. Construction: brick bearing walls. British costs are not germane to U.S. comparisons; the job, however, was considered locally to be admirably economical.



**For nearly three decades, FHA has sponsored uninspired apartment design, and frowned on innovation. Now there may be a new awareness of good architecture—but progress is still slow.**

## **FHA: APARTMENTS BY BUREAUCRACY**

BY BERNARD LANDIS

"One trouble with FHA," an imaginative apartment developer said recently, "is that it encourages you to build yesterday's successes."

He was by no means alone in his criticism. As the recent apartment boom has gained momentum, and as urban renewal apartment building has become more significant in volume, FHA's implicit role as an arbiter of architecture has become more chafing. The agency itself realizes this, and is striving to evolve a workable scheme for its several programs out of the morass of underwriting strictures which have long undermined better apartment design. But builders, architects, planners, and lenders who are interested in creating new, exciting urban housing are still impatient. They feel that FHA, in its underwriting capacity, has imposed rules and procedures so rigid as to discourage the very innovations which might serve to upgrade the quality of all urban housing.

Too long, these critics argue, have the profitable buildings of the past set the pattern for the type of apartment construction FHA will approve for mortgage insurance today. The reasons for the agency's conservative approach are many, starting perhaps with its overriding preoccupation with "the insurability of the risk" and with market factors. Then there is FHA's long-term neglect of design and social considerations. It would seem also that Congress, in 1954, put a damper on FHA's attitude toward apartments when it rigorously investigated the notorious "608" apartment building program (under which many builders made "windfall profits" and under which FHA—and Congress—encouraged the largest volume of rental housing ever underwritten).

As an example of the agency's preoccupation with yesterday, a large New York project was delayed more than a year until the developer and three site planners were able to persuade FHA that a grade in excess of 10 degrees would lend interest to the development. "The FHA land planner was accustomed only to flat sites," the developer explains. In another example, a well-known developer of an apartment project surveyed car ownership in the region and found that 15 per cent of the cars in similar projects in the area were compacts, and so suggested to FHA that parking area be reduced accordingly. "We wanted to add to recreation space," he says, "but our survey turned up new data unfamiliar to FHA. The resistance was such that I had to give up the idea."

Mr. Landis has long been a close observer of building. He is an associate of the marketing organization of Asher B. Etkes Associates.

Other criticism centers on the closed-mind psychology of a good part of FHA's financial staff. The argument is two-fold. First, there seems to be an implicit apprehension that FHA might end up foreclosing the project. Accordingly, even after a development has been fully approved from the technical viewpoint, the appraisers are acutely conscious about every detail, unlike an institutional lender who is more concerned with the men behind the project.

Many builders have learned that the easy way to get an FHA commitment is to keep innovation to a minimum. "In building an FHA [rental] project," says economist Louis Winnick, "the locus of decision shifts from the private investor to government." In terms of design, this means, in the words of one developer, that "some builders simply go to an architect who has done a lot of FHA work and who has no compunction about using previously approved plans, making just a few changes here or there. The agency has seen these designs dozens of times, so the plans will sail right through."

The builder is pleased, for he has kept his architectural costs down, and FHA has not wasted time in processing innovations. The agency, taking a passive role, by no means discourages this attitude. The upshot is an atmosphere that has kept many able architects from doing apartment design.

### **FHA problems derive from geography—and personnel**

The agency's influence on building is also a function of geography, for radical differences exist among the agency's 75 district insuring offices. These offices are said to vary markedly in their interest, enthusiasm, and efficiency, leading to fast processing in some cases and lengthy delays of a year or more in others. Appealing local decisions may be a thorny problem. One builder said bitterly: "Appealing to Washington often gets the people in the district office angry. They resent intervention and take longer to process your project if you complain." Even clearly stated Washington directives are interpreted differently from office to office, builders say, and some of these offices exert an inordinate amount of autonomous power.

Personnel difficulties are often cited as another important variable that limits opportunities for good architecture within FHA programs. A key factor is undoubtedly a low salary scale that fails to attract enough highly competent people. (Consultant and Developer David Lutin has observed that FHA salaries are low, not only in relation to private industry, but in relation to other governmental agencies.) A good underwriter earning around \$10,000 with FHA could earn well over \$25,000 in private industry. The problem has been aggravated by patronage pressure from Congress which sometimes places politicians rather than experts in certain key positions, another authority claims. The latter situation has recently improved.

But even FHA's ablest people may be inhibited for fear of alienating ultraconservative congressmen—for FHA, although more than self-supporting, depends on Congress for approval of its budget.

#### Cornered by the room count

Congress is basically responsible for many of the rules which FHA administers, and some of these impede better apartment design. One of the most important of these is the room-count device, whereby the top mortgage that FHA will insure is determined by its maximum loan-per-room schedule. The room-count rules have been substantially liberalized in the past two years, but as recently as 1959, FHA was often unwilling to approve a higher mortgage than would be permitted under the maximum set by the room count. This is rarely the case today because new counting rules have elevated the maximums. It is now possible, for example, to plan a two-bedroom apartment with a 6½-room count, in order to obtain enough money for some desired amenities.

Nevertheless, the room-count methodology (called by some a "numbers game") remains a restrictive damper on design freedom. "What happens," states Architect Chloethiel Woodward Smith of Washington, D.C., "is that the plan of apartments is dictated by the room count it gives, not by the best design of space for living." Architect Julian Whittlesey adds: "The room count merely leads to a labeling system. To obtain credit for the dining area, we recently had to increase its size—unfortunately by reducing the kitchen—call it a 'den,' and install a folding partition that adds to the cost, but will never be used. All this to conform to FHA's

conception of what a room is."

David Lutin underscores the myopic nature of the room-count system as a whole. These rules are based on *past* experience and so lag behind public taste, he points out. "As the public continues to expect more in housing," Lutin notes, "what is the norm today, as reflected in the room count, may be substandard tomorrow—just as what was considered luxury housing yesterday is today's standard."

Architect I. M. Pei, who has served on the FHA's Industry Advisory Committee for multifamily housing, declares that FHA today is increasingly responsive to suggested changes in the meaning of a room count. Nevertheless, he is among those who believe the system should be abandoned, and he advocates a new standard of measurement, "... one that takes into account three factors: a) the total area of the apartment, b) the efficiency with which the space is used, and c) the over-all pleasingness of the environment created."

#### Better design in slums

Another variable underlying FHA's influence on design is the particular program employed. There are three major provisions for new rental housing: Section 207 (the regular rental program), Section 213 (the cooperative program), and Section 220 (the urban renewal mortgage insurance program). The last of these is producing (or permitting) the more notable architecture.

One reason is that FHA is more sympathetic to such features as better landscaping, art, and sculpture in Section 220 projects because the former slum areas clearly need the extra excitement to attract tenants. (The pictures above show 220 apartments in Washington, right, contrasted with a recent 207 apartment in New York).

However, the most significant reason for the design superiority of Section 220 housing is that intense competition has developed for urban renewal projects. At the same time, redevelopment personnel on all levels of government have become aware of the values inherent in good design



ADOLPH STUDLEY

and planning. "The result," observes James H. Scheuer, president of the Renewal & Development Corp., "is that good architecture has become the focal point of competition for renewal projects. Now the city redevelopment people will award the project—other things being equal—to the sponsor who comes up with the best design to meet their needs."

This state of affairs, together with the satisfactory fee schedule recognized by FHA under the Section 220 program, has led to the involvement of top architectural offices in renewal work.

#### An exception to the rule

That distinguished architecture is, nevertheless, possible within a "207" framework is demonstrated by Marina City, Architect Bertrand Goldberg's complex now rising in the center of Chicago, which includes two 61-story apartment towers. The necessary ingredients are: a good architect, a dedicated client, and able FHA personnel.

Goldberg's client, the Building Service Employees International

Union, then (1959) headed by William L. McFetridge, reasoned that the center of town provided most of the jobs for the union's membership. A large apartment project in downtown Chicago would provide convenient housing for union members and also aid in redeveloping the central city area.



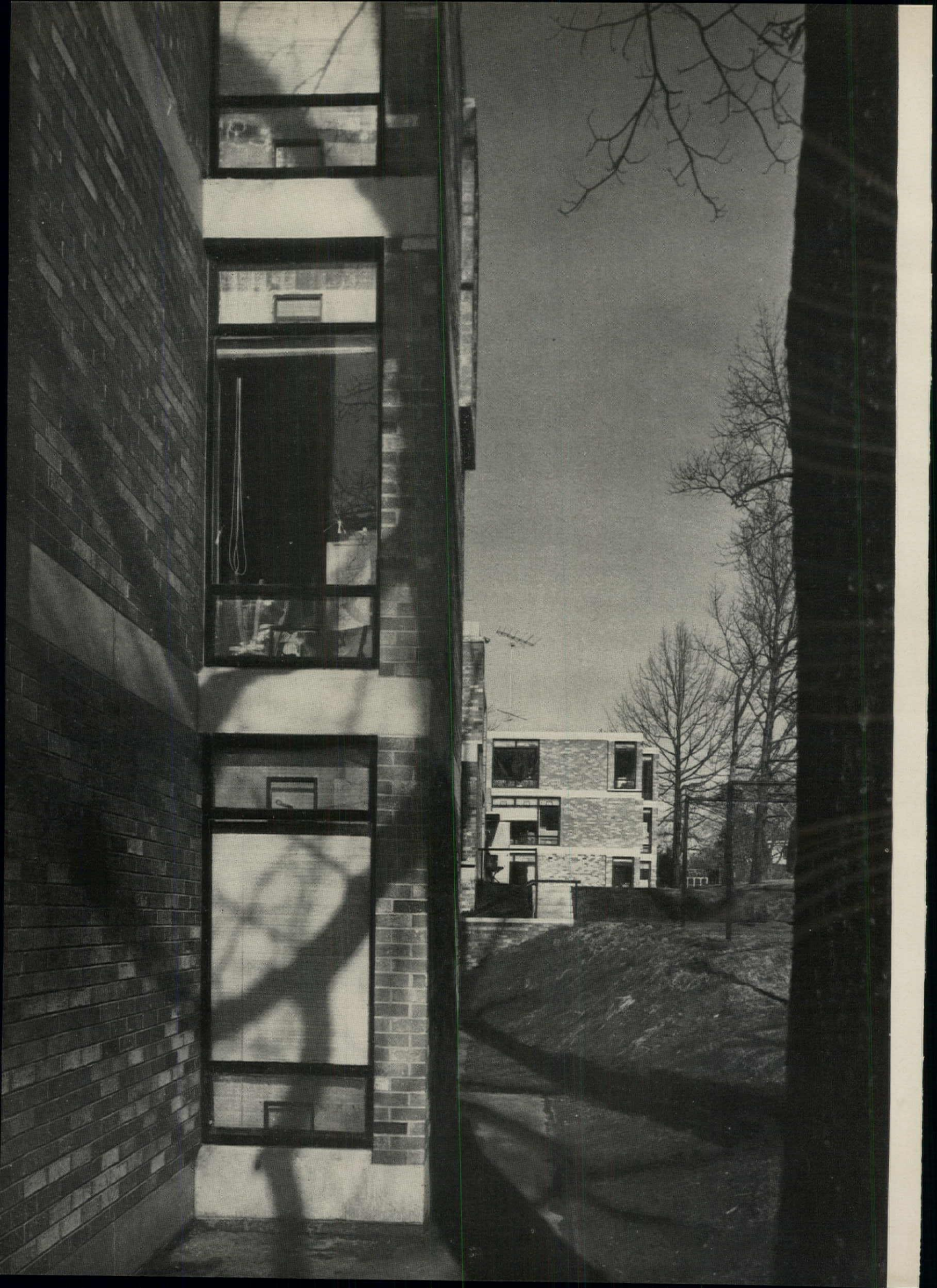
© EZRA STOLLER

McFetridge, his real estate advisor Charles R. Swibel, and Goldberg then planned Marina City as a combination of apartments, commercial area, and recreational facilities. At that time, FHA had required that apartments in urban areas be designed primarily for families with children and had limited efficiency units to 20 per cent. However, Goldberg, McFetridge, and Swibel came up with a survey showing that 40 per cent of the households in downtown Chicago were comprised of only one or two individuals. FHA was convinced and changed its requirements to insure projects in which a majority of the units may be efficiencies—a step that made Marina City feasible. There were other problems to be solved and if it were not for the enthusiasm of FHA's local director, Goldberg insists the project would have been abandoned.

#### A philosophy of design

Clearly, the scope, shape, and arrangement of hundreds of apartment projects across the country

*continued on page 159*







PHOTOS: BALTAZAR KORAB

**At Yale University, married student apartments are stacked up a hillside around a street of steps**

## A NEW URBAN PATTERN

Designed specifically for married students with children, Architect Paul Rudolph's recently completed housing group at Yale University establishes a new pattern for urban living whose importance extends far beyond the confines of its site.

In one sense the pattern is as old as the sunbaked Mediterranean hills whose villages inspired it. For the U.S., however, this is the first real attempt at a translation.

Physically, the pattern consists of five low, blocky units in a compact group marching up a hill. The scale, determined by building height and by the outdoor spaces which the buildings define, is intimate and personal. The primary exterior material, a tweedy-textured brick, has a mottled quality which reduces scale still further.

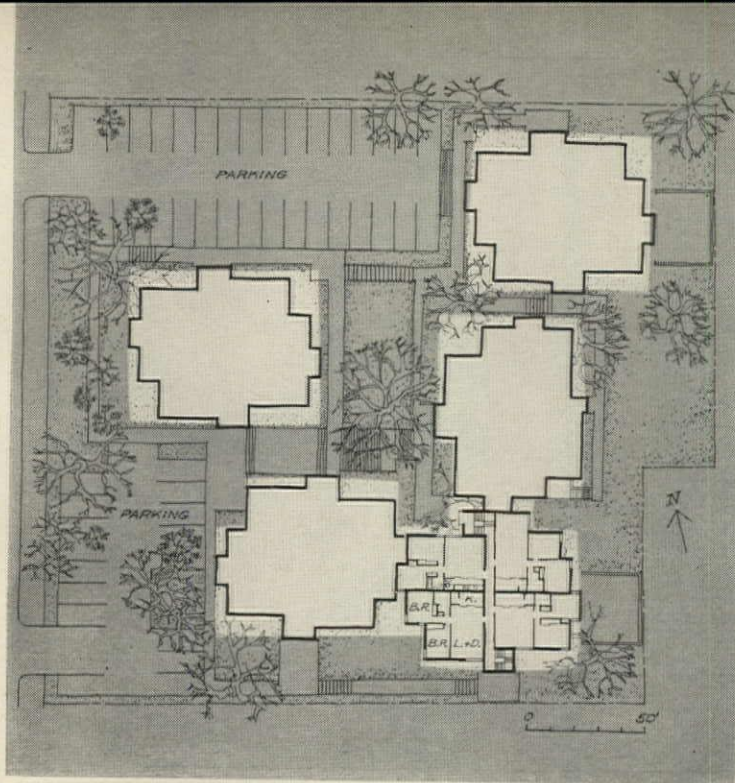
Through the physical pattern, Rudolph has attempted to resurrect the social pattern of a true village-community, with all its intimacy and camaraderie. This is an important departure

from the impersonal character of the usual high-rise solution.

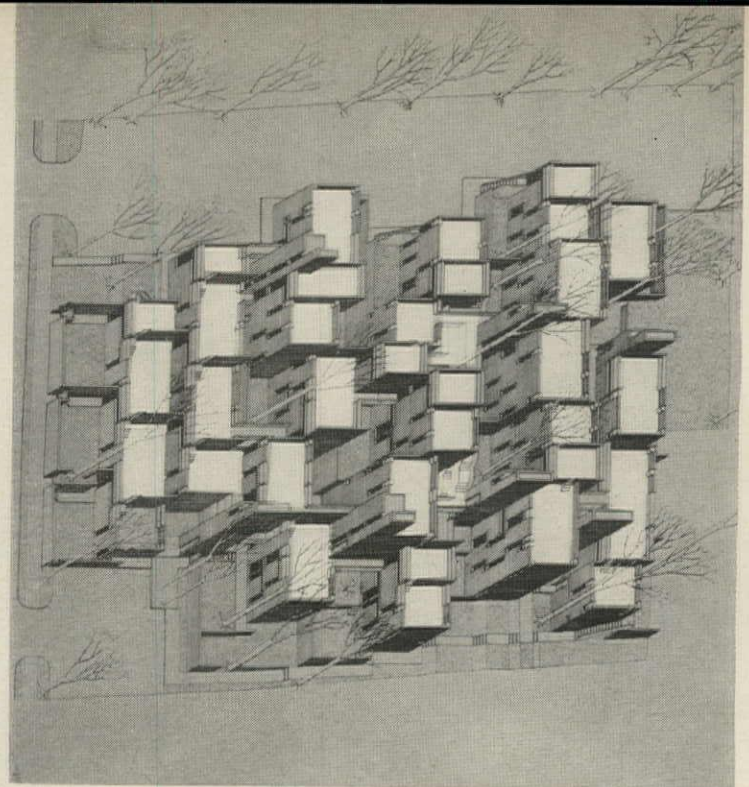
Rudolph's first scheme (rendering overleaf) covered the site even more densely than the one which was finally built. Its unique feature was that the roof of one apartment would serve as a terrace for the next. The scheme was finally abandoned, however, when it proved too expensive.

The scheme which was built uses a basic repetitive unit, two two-bedroom apartments arranged on each side of a through-circulation corridor (plan overleaf). The units are gathered closely around a principal outdoor flight of steps which dramatizes the hillside character of the site. Building heights vary between two and three stories, with the taller units placed on the high side of the hill, thus further emphasizing the slope. Although units are repeated, there is no sense of repetition but one of great spatial and sculptural variety.

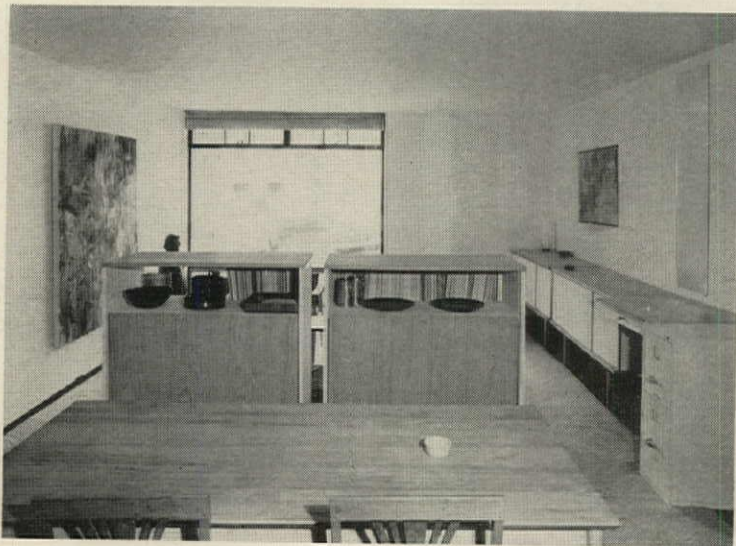
There are criticisms to be sure, and the young mothers who live there are most vocal in giving them. Among their complaints are: inordinately high heating bills (each apartment



Five units, ranged up a slope, have off-street parking for residents



First scheme had smaller units, denser site coverage, rooftop terraces



Large windows, set crisply into black steel frames, light living rooms



Kitchenettes are screened from living rooms by sliding bamboo doors

PHOTOS: (LEFT) GEORGE CSEBNA; (OPP.) BALTAZAR KOBIAK

has its own heating and hot water system); absence of storage rooms (so that carriages and bicycles clutter up the entry halls, and suitcases clutter up the closets); and inadequate laundry facilities (there are two washers and two driers for 51 families). Their greatest complaint, however, is that there is inadequate outdoor play space for their children.

It must be said at once that landscaping, in the sense of planting, is far from complete, although the handsome old elms have been carefully retained. Nevertheless, the basic forms of the site have been established. And ironically, the very character of steep banks, changing levels, low walls, and sudden drops which makes the site so spatially and sculpturally attractive to a perceptive adult, seems to make it less than ideal as a play space for children.

Rudolph once pointed out that creative architects often tend to restrict themselves to the solution of problems that are of primary interest to them, and to disregard problems that are not. In this housing group, Rudolph has made a signifi-

cant contribution to new urban patterns for the U.S.; if he has failed to solve relatively minor problems, he may well be forgiven—especially by those who have never themselves challenged some of the faulty assumptions on which much of our urban housing is based.

—MARSHALL BURCHARD

#### FACTS AND FIGURES

Married student housing, Yale University, New Haven, Conn.  
 Architect: Paul Rudolph. Engineers: Henry Pfisterer (structural), Van Zelm, Heywood & Shadford (mechanical, electrical). Acoustical consultant: Bolt, Beranek & Newman. General contractor: G.B.H. Macomber Co.  
 Total construction cost: \$637,276 (excludes \$115,408 land and site development cost, \$37,661 furnishing

and equipment cost, and \$50,150 in fees). Building area: 49,613 square feet. Cost per square foot: \$12.80. Cost per apartment: \$12,400. Rent: \$97 per month, utilities not included. Construction details: concrete foundations, concrete slab on grade. Brick veneer and precast lintels on wood joist frame; windows of 1/8-inch double glass in black steel frames; plasterboard partitions; asphalt tile floors.



**Are architects suffering from too much self-esteem? The former executive director of the AIA suggests they are, and that they would do better to face up to some hard realities.**

## THE ARCHITECT AND THE SUPERMAN MYTH

BY EDMUND R. PURVES



There is, we are told, in the more remote reaches of Mexico an Indian tribe, the Mazatecs, which many years ago discovered a certain mushroom growing in their territory possessing a unique and glorious power. The discovery gave birth to a cult that still survives. When eaten, the mushroom projects the consumer beyond the confines of humdrum existence and rewards him with an ecstatic trance during which he is no longer the abject savage but a glorious superman and, practically, the lord of the universe. We are told further that it is the custom of these Indians to enjoy the delights so easily come upon not singly, but in company, thus practicing a primitive group therapy. The exhilaration is not quite like that of the "poor little henpecked man" who, fortified by alcohol, offers to lick any man in the tavern, for the effect of the mushroom is not to stimulate belligerence but, rather, to generate benign superiority. The Indian indulgences are ceremonial, properly organized, and well attended. In fact, they are not unlike the committee meetings of a so-called "civilized" society.

Now in our country one does not need cooperative mushroom feasting to project one's self and one's confreres into a world far more gratifying than that which forms our daily setting. And, it is not unusual for a group of men of similar persuasion, jointly exploring and speculating upon the group's future, to arrive in a delightful assumptive world through mutual stimulation, and to enjoy an imaginary exercise of that power to which many of us secretly aspire.

For some years the more thoughtful members of the American Institute of Architects, conscious of changing times and philosophies, have realized that bold and imaginative steps must be taken in order to insure that the capabilities and potential of the architectural profession may be maintained and recognized, and that the confused and conflicting society in which we live, with its technological complications and economic competition, will not relegate the architect to an inferior position. This realization led to the establishment of a committee, in fact of a series of committees, by the AIA, the first one being put into operation some seven or eight years ago. These committees were charged with more or less the same duties and given more or less the same objective: to study the capabilities of the profession and the relation of the profession to society, to the end that the position of the architect might be enhanced rather than diminished.

Naturally, in the course of such an endeavor, mutual admiration, ambition, and pyramiding of self-esteem (unalloyed by outside criticism) combined to lead to the conviction that only one role fits the architect—that of superman. While such an aspiration is laudable and even essential to progress, perhaps a little review of realities may have a salutary effect.

A conviction of superiority and ability to lead is not necessarily more suspect than a normal helping of self-confidence in a healthy mind. It can happen for one blessed with that combination, particularly if he is further endowed with supplemental genes and favorable circumstances, that he attains actually to the goal set by his own self-promise.

A belief in oneself is not a crime, but group assumption of superiority can lead to derision, even to disaster. And a profession which seeks to extend its prerogatives by fiat may find its progress set backward rather than advanced.

So once again we might undertake that perennial pastime of putting the architect into proper perspective.

On the basis of close association with the organized architectural profession and working for it in a variety of capacities, starting in the early 1930s, this critic believes that his observations come from hard-gained knowledge and not from imagination and wishful thinking. And this critic has had the further advantage, through living and working at a national level, both physically and politically, to learn much concerning society in the U.S.: its ways, its folklore, its philosophy, and its government, both legislative and executive. He has also made more than a passing acquaintance with the progress of that extraordinary conglomeration of vocations and associa-

tions called the construction industry and can appreciate its problems. This industry is one not always understood even by its own members, let alone by the public, and manifestly is not always well understood even by the architect.

As a point of departure we might do well to consider the architect's opinions of himself. And let us say again that the architect's opinion of his superiority is not specious; it is honest, even though there may be others who do not share the architect's conviction. Sometimes the architect is surprised to learn that his conviction of superiority is but part of human nature, and that he is not alone in possessing that token of self-esteem.

#### THE ANGRY YOUNG MEN

Perhaps the architect's self-portrait is best illustrated by citing a couple of instances. Some years ago I was called upon to represent the AIA at a series of hearings leading to the writing of the Taft-Hartley Act. These hearings were held by committees of both the Senate and House of Representatives. The interest of the profession in that legislation lay in the necessity of maintaining a status for the professional which would be free of any domination by subprofessional labor organizations or leaders. (Incidentally, it might be added that we were successful.)

In my testimony I started out by saying that the architect was *one* of the leaders of the construction industry. A week or so later, when I appeared as a guest speaker before a group of architects in a meeting on another subject, I was startled and later shocked when two young men rose determinedly to their feet, fixed me with angry but frightened eyes and, holding papers in their shaking hands, read in quavering voices an elaborate resolution of castigation. I was the target of their cumulative venom for having derogated the profession by saying that the architect is "one" of the leaders of the construction industry, whereas everyone but I knew that the architect is *the* leader.

A few days later, along with representatives from other branches of the construction industry, I met with the then Secretary of Commerce, Henry Wallace, and his immediate Undersecretary, William C. Foster. Word of the New York performance had preceded me and I was introduced to the cabinet officer as "the leader of the construction industry." And, I regret to say, the sneer was not even covert. Regaining of the position lost for us by the thoughtless portrait of the profession, drawn by the young men, took both time and skill.

Then there was a resolution adopted at the Institute's Salt Lake City convention which demanded amending the rules and regulations of the Federal Housing Administration to conform with whatever criteria a local AIA chapter might desire.

Governmental regulations usually can be improved upon and many of us would like to undertake such improvement, but the architect's assumption that he was endowed by superior powers to dictate to an agency of the federal government revealed, unfortunately, an ignorance of our governmental structure and prerogatives which, if displayed by an applicant for citizenship, would doubtless deny him that status. Naturally, others began to feel that architects enjoyed rather unusual delusions of grandeur and authority and even enjoyed aspirations of totalitarianism. Of course, I had to swallow my personal doubts and, in behalf of the Institute, transmit this proposal. Raymond Foley, the then administrator to whom I had to present the resolution, was disarming. All he did was smile and look at the ceiling, saying: "I too belong to a trade association. When they get together in annual meetings, they sometimes do the strangest things." He implied that he was not worried. But I was inwardly worried because I was fully aware that our profession, as a group, was scarcely achieving for itself a reputation for sagacity.

However, we are probably not alone in our derelictions. When assembled in convention, organizations seldom heed the voice of experience. Wisdom does not necessarily dominate the sessions. The face of any faction that is presented to the public is usually that of the common denominator. From the democratic point of view, this is as it should be, even if the face that appears is not bright and intelligent.

The architect comes by his arrogance naturally. It is a result of his training and temperament and the ready acceptance of the divine right to a superior position as a concomitant of fundamental intellectual capacity. But the successful architect soon learns that if he is to get on in the world, and especially if he is to be a leader in it, he must temper the exercise of intellectual arrogance with that modesty which becomes a member of society who must coordinate his efforts with those of his fellowman. He learns to understand and appreciate the abilities and accomplishments of others, for the public still looks on the architect as one who must justify his engagement by the public.

Architects hope that some day we can project ourselves beyond the boundaries society placed upon us and become dominant as the wielders of power. We look for the breakthrough, but its day of arrival will not be brought nearer by fiat. Its coming may best be hastened by perfecting the architect.

Neither the architect nor his organization, the AIA, has made any secret of his aspirations. On the contrary, our objectives have been bruited about from the platform and press. Fanfare and expedition have been given to promoting an officially adopted report, which report has drawn the attention

and instant objection of others in the construction industry. In one instance this objection was expressed so strongly that the intent of the report was denied by the sponsors and refuge was taken in claiming typographical error. When confronted with indignant arguments voiced by others, the rapidity with which the architect retreats from the position which he has adopted while convened within the protective ivory tower is an indication of the underlying concern for maintenance of his calling. And the debacle I have cited casts serious doubt on the justification of any claim the architect might advance for a position of superiority.

#### **IS ANYBODY LISTENING?**

The architect must still seek continually the engagement of his services and make a case for good design. We are convinced of our essentiality, but the public does not universally share this conviction. We are not quite in the same position as the doctor and the lawyer whose services are in constant and automatic demand. We may never reach their position, for human beings have a primary concern with maintaining health, with staying alive as long as possible, and staying out of trouble, especially out of jail. A person does not consider any question or indulge in any reservations when his security or health is threatened, but he immediately repairs to a lawyer or to a doctor. People have yet to attach a similar instant desperation to the planning and construction of shelter.

So the architect finds himself struggling against seemingly insuperable odds—odds which have been aggravated for the present generation by the philosophies of our immediate architectural forebears, who enjoyed a rather specious prestige as purveyors of physical opulence in a piratical period.

So in seeking to improve our position, after a study of some two years we came out with the premise that the architect henceforth must and should assume the position which was described as "Master Builder." It is possible that in resurrecting this old and august title and assigning it to ourselves, we may have been ignorant of the definition of its original holder. I rather suspect that in the days when this title was commonly used it applied to a sort of superforeman or skilled contractor, rather than to the twentieth-century overlord of construction and planning that our committee had in mind.

Our ambitious proposal is to set up the architect as the owner's superagent directing such services as negotiation, land acquisition, financing, construction—prime and sub—materials purchase, and labor, in addition to his principal service of design.\* All this would call for an assemblage of function and

activity that is probably beyond the competence of any single entity in today's society. Now the architect should be encouraged to make himself intelligently conversant with all the facets of the production of construction projects, for the degree of his familiarity with them would certainly have a decided impact on his success as an architect and his ability as a designer. An architect, however, in attempting to fulfill the obligations of the proposal, would soon find that his ambitions not only would not be encouraged by society, but also would be impossible of execution.

In the greatly expanded assignment, the proposal went on to preserve the professional sanctity of the architect by prohibiting him from being identified with any guarantee of the costs save that of his own fee. The probability was overlooked that authority in the form of financial power regards cost as an ultimate criterion and, therefore, power might be reluctant to engage an agent who could not include in his catalogue that all-important item, a guarantee of ultimate cost.

The picture of us held by others is not necessarily flattering. It is certainly not that which we would paint. An interesting and possibly flattering concept was encountered some years ago by one of our chapters. Looking for more favorable publicity than we had been receiving (as a matter of fact, we had been receiving little or no publicity, favorable or otherwise), we pled with the editor in chief of one of America's leading weekly magazines to feature the architect as an important member of society. We were informed by the editor that the prevailing picture enjoyed by his readers (and there were hundreds of thousands of them) was that of a tall, dark, handsome man who seduces the client's wife. The editor stated further that he saw no reason for disturbing this romantic vision. Since that day the magazine has rather reversed itself and has become quite a champion of the architect and his product, and features him in a way that we thoroughly enjoy and approve.

Just as almost everyone who possesses intellectual attainment and artistic talent, and who engages in the pursuit of those talents, is considered by the less-well-endowed laity as naïve, so the architect too is regarded as being rather simple and even stupid in general affairs. This, however, is no cause for any great concern so long as the public appreciates the architect for what he is and what he can do. The architect's contribution to the welfare and progress of the country lies in the field of planning.

We can supply the service for what is needed and can direct the operation if we are competent in our own field. But taking on the formulation of the basic conception of enterprise and its promotion is scarcely within our calling.

\* See "Editor's note," page 190.

A review of history, especially of those ages which produced the greatest architecture and the greatest planning development, would reveal that they were led not by architects but by military leaders and statesmen who realized the value of cultural and artistic perfection. It is power that must lead, and when power is intelligent the architect will prosper. The architect has a definite obligation to educate power as well as to educate himself.

We have made some progress. I think we have dissipated the once popular notion of architecture illustrated by the account of the owner of a building in the tornado belt in the middle west who, upon receiving word that a storm had gone through his town, rushed back from Florida to be met by his superintendent and informed boastfully that he need not worry—the building had come through the hurricane all right, only the architecture was blown off.

#### **ARCHITECTS AND THE FUTURE**

Prediction is hazardous and only too often the predictor is confounded. However, there are some rather safe assumptions: like any other persuasion, the architect is not going to change his character over night. The architect, like everyone else, is subject to the forces and trends which may be beyond the direction of the people undergoing a change. There are those who may be gifted enough to see, understand, and do a little guiding, but probably like most human beings the architects pursue the path of least resistance, or at least the path that promises what the architect believes to be the best future.

Within the next quarter century we will be faced with enormously increased population and shrinkage of distance. Transportation will be swift, communication easier; heating, lighting, and other mechanical assistances may well attain degrees of perfection which we can scarcely imagine. But I doubt if people themselves or their fundamental beliefs will change.

Presumably our country politically will be more or less the same. It will be a capitalistic democracy with all the advantages and frustrations of such a structure. We may become "highly industrialized," whatever that might mean. Opportunities for recreation will be increased, and the amenities of life may be greater. Unquestionably, finance will be more carefully and more exasperatingly regulated. The architectural client will become organizationally more complex than ever, and his demand for swift organization and production will be stepped up.

It is doubtful if that current apparent monster to the profession, the package dealer, will achieve any greater success than he has at the moment. He may appear to offer a more comprehensive and pleasing package to the corporate client,

but as the general intelligence advances and as the corporate client becomes more perceptive, he will doubtless realize that the package dealer fails in one major respect—many do not produce good architecture. And as soon as the dollar-and-cents value of good architecture is universally recognized, the architect need no longer worry about his future.

Of course, the architect will have to develop better salesmanship, but that is nothing to be feared from any point of view. Good salesmanship really depends upon having something worthwhile selling, being highly proficient in the subject, and having the ability to express one's beliefs and impress people with one's candor and ability.

Although there is nothing to preclude the architect from being a leader, or a leader of what is commonly known as the "team", I think we might well not attach so much importance to that title and to that roving position. But rather we should attach maximum importance to the perfection of our ability and so make ourselves indispensable, not only to the team, but to society. Any architect or architectural firm which possesses qualities of leadership will assume that position—remembering that the ultimate leadership rests with power, and power is political majority or money, and in neither of these fields is the architect usually affluent.

There have been architects who have been foremost leaders in the ways of men, but these architects have been politicians as well as leaders or possibly they have been superb businessmen.

Architecture per se is not necessarily the vehicle in which one rides to leadership, and it is difficult to see how it will become so until the day arrives when society attaches supreme importance to shelter and places shelter above financial position, good health, and security.

It is pleasant for the architect, like the Mazatec Indian, to indulge in flights of fancy, artificially stimulated or otherwise, which enable him for a few brief hours to enjoy in his own imagination a supreme and glorious status. But let him be strong enough to emerge from the trance, evaluate himself, and see things as they are. Let the architect nibble if he wishes at the magic mushroom, but let him never forget that the greatest contribution he can make to society, and to the welfare of his fellowman, is to perfect himself as the professional purveyor of his own service—architecture. That contribution will not be produced by committee reports or by resolutions passed in conventions. It will be produced only by intelligent application to one's calling. And architecture, as such, is one field of human endeavor which is capable of expansion, provided its practitioners temper ambition with the restraint which results from a comprehension of the realities. END

**On the Pacific Coast, a new beacon signals the headquarters of a great American steamship line.**

## **BRIGHT TOWER FOR SAN FRANCISCO**

The view from the twenty-second floor (right) takes in one of the most beautiful harbors in the world. It is a fitting view to those who, for the past month, have occupied these penthouse offices on top of San Francisco's gleaming new International Building; for this tower was built, primarily, for the American President Lines (APL), whose ships sail out of the great port to cross the Pacific and encircle the globe.

So the 350-foot-tall streak of white against San Francisco's brilliant blue skies is an appropriate symbol. But as a work of planning, a work of technology, and a work of art, the 285,000-square-foot International Building is much more.

It is, for one thing, a highly successful demonstration of what Anshen & Allen, the architects who designed the building, call "cityism": expressing the special quality of the city in which you build.

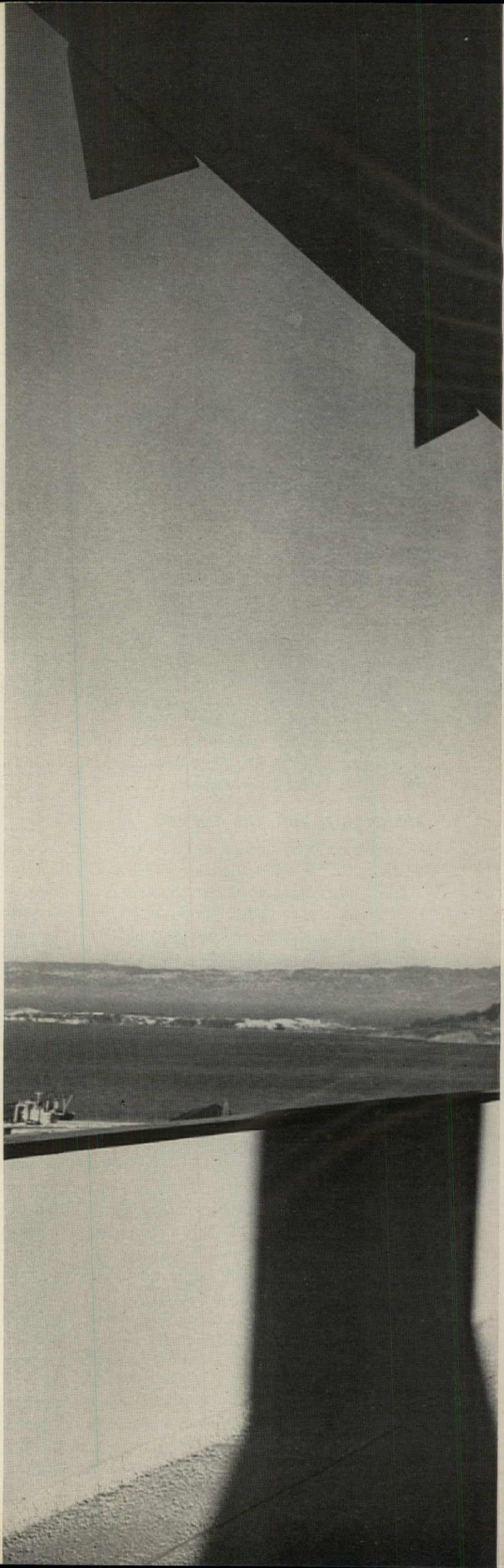
It is, for another, an intriguing demonstration of how much original thinking about big buildings is often done by architects who (like Anshen & Allen) had never designed a very big building before.

It is, finally, a satisfying demonstration of how an intelligent client and a group of creative architects, engineers, contractors, and suppliers can produce a solution that is economically sound, practical—and a fine piece of architecture.

On the next 12 pages, various aspects of the building are discussed in detail: how a very unusual site condition shaped the plan and the structure of the tower (pages 109-110); how the office module was used to create flexible spaces for both large and small tenants (page 112); how much imagination went into the detailing of windows, walls, mechanical systems (page 114); and, finally, how the architects' philosophy dominated all these practical decisions.

**First things first.** But long before planning, engineering, or architecture could come into play, the U.S. Maritime Administration stepped in with a far-reaching decision: APL's capital funds should go into ship replacement, not into a new headquarters. So the Natomas Co., which controls APL, acquired the necessary land directly, and formed a subsidiary to put up the building.

The site recommended by the architects and approved by Natomas is a 10,000-square-foot corner plot, between San Francisco's financial district and Chinatown. The plot occupies about 15 per cent of its city block; the rest of the block consists of a public park; a city-owned parking garage



GEORGE KNIGHT







**San Francisco tower: for a terraced city, Anshen & Allen designed a terraced building.**

partially under the park; and some small, privately owned buildings, including a rather picturesque Oriental temple. **How to build on air.** To explore the possibilities of this site, Architects Anshen & Allen prepared an exhaustive, 84-page report which evaluated, in diagrams and statistics, almost every type of office building that could conceivably be put up on the property. They studied buildings ranging from 13 to 38 stories in height; they compared economic efficiency factors (probable return on investment); they compared costs per net square foot; and they compared the usable floor space of various possible schemes.

Their conclusion was that—given one important condition—a 22-story tower would be most efficient, least expensive per square foot, and most profitable.

The important condition was that the owners should acquire air rights over the adjacent, city-owned 1,200-car garage. Once these air rights were acquired, it would become possible to cantilever the upper 18 tower floors 17 feet out beyond the actual property lines of the site so that each typical office floor could contain some 12,900 square feet of gross area, although the building site itself measured only 10,000 square feet. (Because earthquake codes in San Francisco beef up the steel framing anyway, cantilevers would not increase structural costs.)

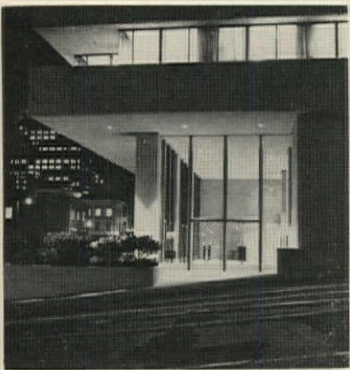
And so the International Building became perhaps the first U.S. office tower to occupy 129 per cent of its site!

**A square with eight corners.** The air-rights decision, coupled with the cantilever solution, gave the tower its eight-cornered plan; for it became quite clear that—given recessed corner columns (because the columns, obviously, had to be kept inside the property lines) and cantilevered floors (to take advantage of the air rights)—it would be best to avoid unstable, two-way cantilevers by simply dropping out the four troublesome corners on each floor. The added advantage thus gained was a square floor plan with eight corner offices per floor, instead of the normal four. Finally, the architects filled the reentrant corners of the building thus created with massive vertical air-conditioning ducts. These exposed ducts are the building's most striking detail; and they also screen adjacent pairs of corner offices from one another.

In retrospect, all these decisions and solutions seem convincingly simple. This, of course, is one test of good architecture—and the ultimate simplicity is often deceptive. How carefully each decision, each concept, and each detail was thought through is described on the following pages.

*Glimpse of white tower (opposite) from the financial district shows play of shadows on precast concrete spandrels. Right: the building in its downtown setting, with its wide terrace at fourth-floor level.*





The main lobby of the International Building (above and page 113) is entered on the lowest corner of the 300-foot-long city block; within the length of this block, the ground rises 60 feet.

To make any structure sit well on such steep contours, architects have often terraced the slope. On this site, much of the terracing had already been done; some years ago, the city built a multi-story garage with a handsome park covering most of the roof. The dramatic view (opposite) looking down the fire-escape balconies of the building, shows the free-form public park and some of the rooftop parking. Part of the air rights acquired by the owners cover this garage, and so the architects planned a 9,000-square-foot terrace at fourth-floor level to take advantage of these rights. (One further, important dividend of the site: direct access to the city-owned, 1,200-car garage from the lobby of the build-

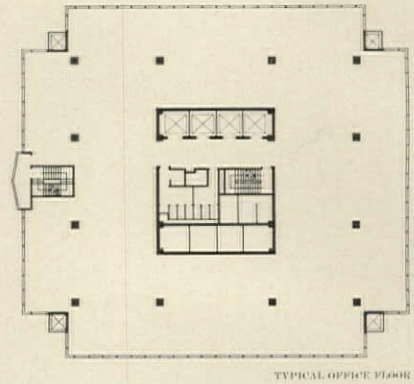


ing.) The terrace overlooks the park (bottom, left); to construct it, the designers had to specify one of the heaviest plate girders ever put into a U.S. building: a 38-ton assembly, 109 feet long and 9 feet deep, supported on only two points.

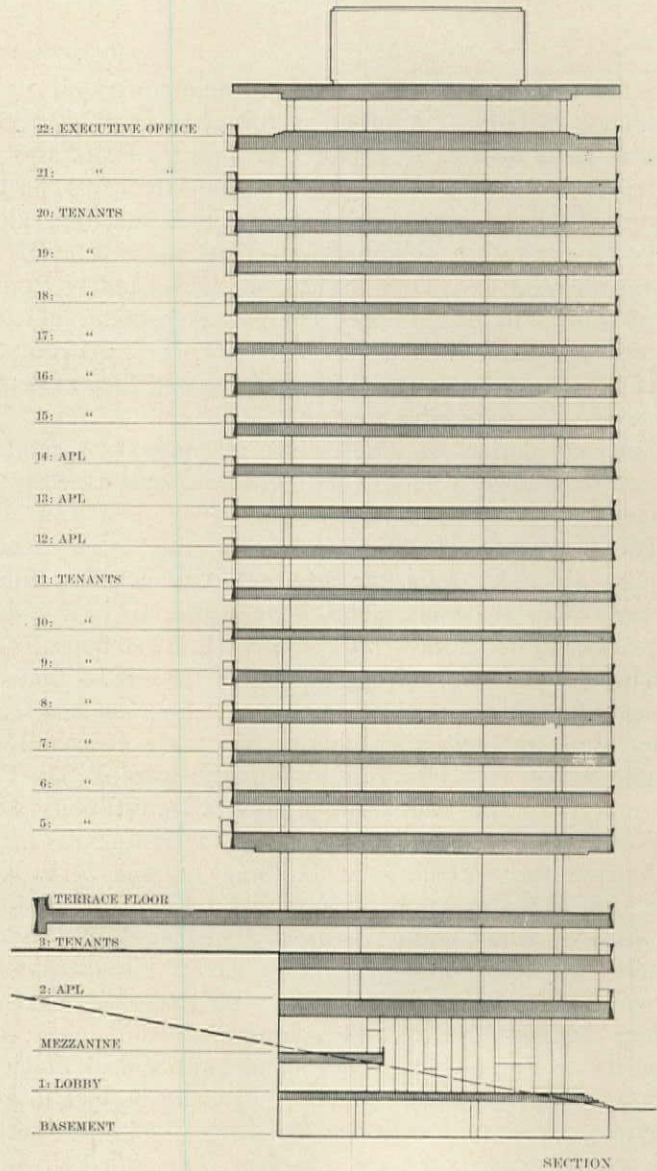
The steel structure of the tower proper is full of intriguing innovations: 100-pound live loads were assumed for floors (in place of the usual 50-pound loads) because of the growing use of heavy business machines; earthquake problems necessitated moment connections between all columns and girders—and some of these connections had to be  $4\frac{1}{2}$  feet deep. Still, the engineers were so careful that only 25 pounds of structural steel were required per square foot, compared with more than 30 pounds per square foot for two comparable San Francisco buildings put up recently.

This economy was made possible, in part, by using the service core as a stiffener for the entire structure (this alone saved 4 to 5 pounds of structural steel per square foot); and in part by the steel supplier, who developed a special, super-high-strength bolt for this building, and thus reduced the number and weight of all connections. Finally, the architects cut down on dead loads wherever possible; the terraces, for example, use an epoxy terrazzo flooring substantially lighter than conventional terrazzo.

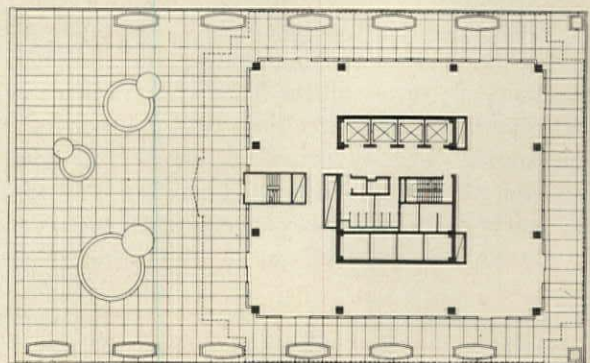
The typical floor plan (top, right) is based on a 4 foot, 6 inch module. At present, Natomas occupies the top floor, APL occupies 51,000 square feet on five other floors, and 95 per cent of the entire building is rented. A brokerage firm occupies the fourth terrace floor (right), though this may, some day, become an indoor-outdoor restaurant.



TYPICAL OFFICE FLOOR



SECTION



FOURTH FLOOR



PHOTOS: FRED LYON



The bronze lion seen above guards the reception room outside the offices of Ralph K. Davies, Chairman of the Board of Natomas. His office, like all the other executive offices on the twenty-first and twenty-second floors, was individually designed and furnished. To give these executive offices an appropriate added importance, the ceiling height was increased to 10 feet, 6 inches from the 9-foot clear dimension used on other floors. This extra height is emphasized by the verticality of the detailing in doors and partitions.



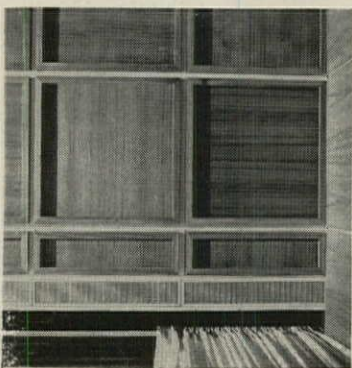
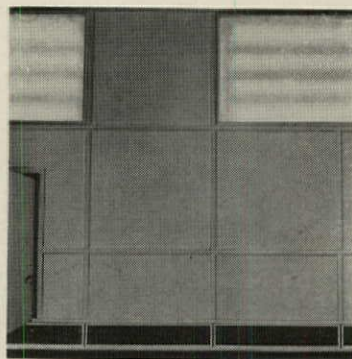
**Interior efficiency** of the office floors is high: 84 per cent of the total floor area is usable office space. The total efficiency of the building, including basements, lobbies, et cetera, is 78 per cent.

Moreover, the 4 foot, 6 inch module proved to be highly attractive to prospective tenants: a group of attorneys, who had planned to rent space in another new building in downtown San Francisco, which had an office module of 5 feet, 6 inches, discovered that they could save 2,500 square feet by taking two floors in the International Building instead, without squeezing their junior partners, or, apparently, their secretaries (photo, left). Other tenants include brokers and German, Dutch, and Japanese consular officials. Because of the eight-cornered floor plan, even small tenants can obtain premium space.

**Modular partitions** of a standard type were used with only one, minor modification: to make

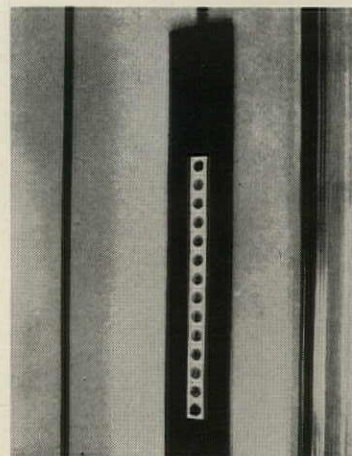
doubly sure that earth tremors would not damage the partitions, the architects put in a 1-inch tolerance at the top in the form of a continuous, flexible gasket. (The Los Angeles Statler, with rigidly fixed, permanent partitions, had some \$300,000 worth of earthquake damage within days after its opening, and the Los Angeles City Hall suffers about \$50,000 worth of damage after each earthquake! So fixed partitions were ruled out, and the flexible ones chosen were further guarded against damage.)

**Modular ceilings** in all office areas use 27 by 27-inch acoustical tiles, and 27 by 54-inch lighting fixtures. The ceiling grid of aluminum tees was recessed behind the face of the tiles and fixtures—a small but effective refinement that greatly improves the appearance of an otherwise familiar system. The view of the ceiling (below) also shows the peripheral



air-conditioning diffusers (discussed on page 114), which were integrated in the modular grid. The bottom picture shows a more lavish version of the modular ceiling, using Brazilian rosewood, in some of the executive offices.

Each of the 5,400 ceiling fixtures in the building was installed with a 6-foot length of flex, and there are outlets at close intervals in all ceiling spaces. As a result, fixtures can be moved easily and rapidly when the need arises, with little annoyance to



tenants. The light fixtures have polystyrene lenses, and these were tested for a full year before being accepted by the clients.

**Some furniture** (like the monumental desk in Board Chairman Davies' office, opposite) was specially designed by the architects. Indeed, the twenty-second floor contains a number of special, luxurious features, such as two fireplaces, a shower, a kitchenette, and other comforts of home.

The meticulous detailing of the interiors was not limited to the executive offices; such small but all-important items as elevator doors, lights, and push buttons (above) were specially designed for the building to conform to the high standard of detailing established throughout.



*Board Chairman Davies' penthouse office (above) boasts a marble fireplace and a specially designed desk. Below: the 24-foot-tall main lobby.*



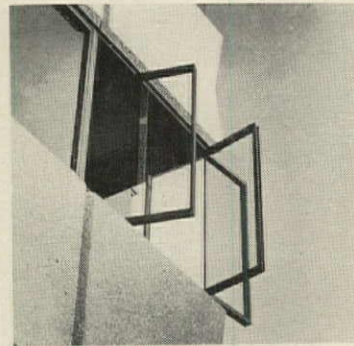
**The mechanical system** of the building is expressed on the outside not only for dramatic effect; actually, the system is greatly improved because the tall, gray, porcelain-enameled ducts are outside the building, rather than tucked away inside (opposite).

Admittedly, the architects liked the idea of expressing the ductwork where it could be seen: since mechanical work in the building costs just as much as the structure (both are 27 per cent), why express only one?

It soon developed, however, that putting four 6 by 6-foot ducts (two supply, two return) into the four reentrant corners of the building made very good practical sense; since the air conditioning is in two major parts—a perimeter system, and a system for interior spaces (see diagram, below)—it made good sense to have the perimeter system supplied and exhausted through ducts located close to the perimeter. Indeed, an alternative system using interior

ducts to supply perimeter spaces was studied and rejected because it would have required a 9-inch greater floor thickness to accommodate crossover ductwork. In the end, the unorthodox mechanical system used in the International Building cost \$2 less per square foot than the more conventional system used at Crown Zellerbach nearby.

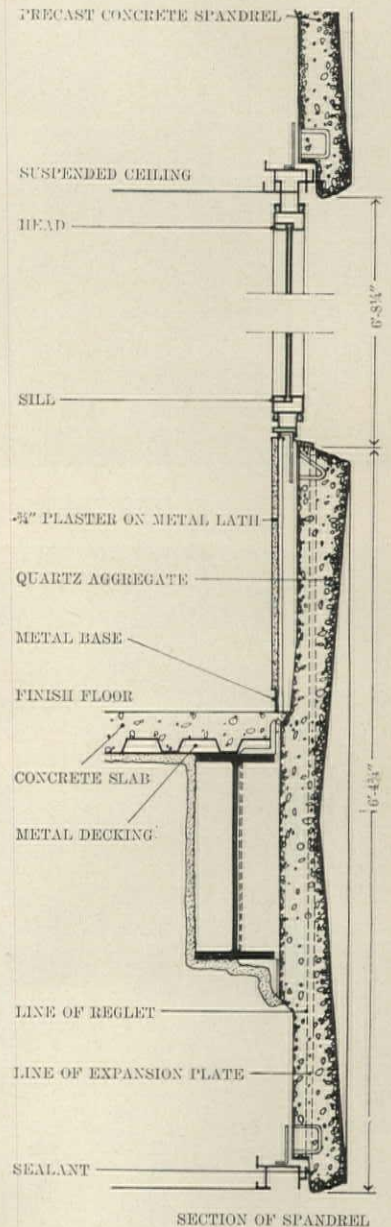
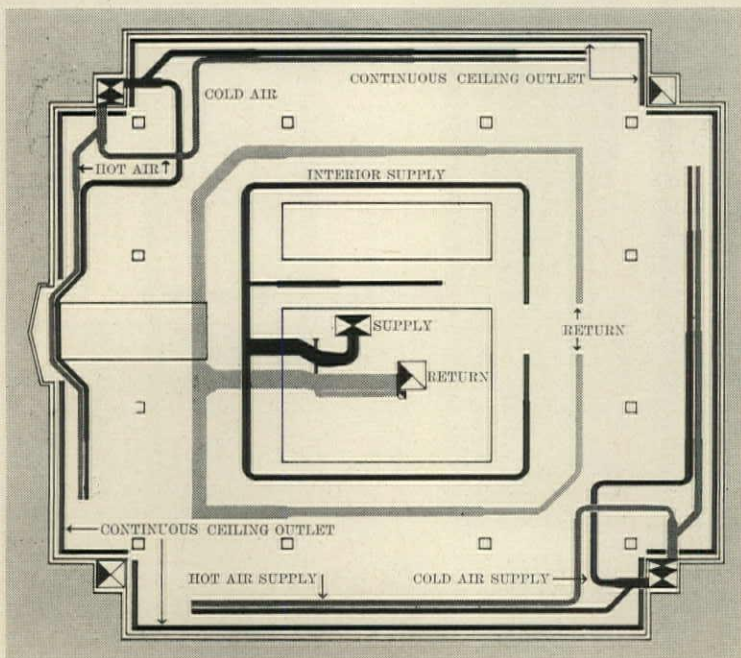
The exposed ductwork is not the only interesting aspect of the mechanical systems; there are several other new devices. For example, by distributing and exhausting air in the perimeter system through the ceiling (rather than from below the window sills), the architects were able to increase the net rentable area per floor by about 500 square feet, which, with a building cost of about \$27 per square foot, is nothing to sneeze at. Other examples of imaginative mechanical design: a supplementary air-conditioning system for use in computer areas; and a combination of high-speed



and low-speed elevators to serve the upper and lower halves of the building, respectively.

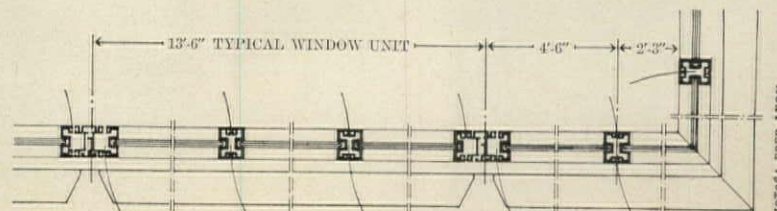
**The curtain wall** of tinted glass and precast concrete spandrels is a model of original detailing: the pivoting aluminum windows were specially designed to eliminate two fixed mullions out of three; by letting adjoining windows form jambs for one another (see details), only every third vertical is a fixed mullion. Movable sash is expected to save the owners \$10,000 a year because windows can be washed from the inside. Even the corner windows pivot (above).

The faceted, precast concrete spandrels have a quartz aggregate that glistens in the sun and makes the building look whiter than white. The facets produce an ever changing play of light and shade. Most panels measure 85 square feet, cost \$5 per square foot installed. One-piece, L-shaped panels fit around all corners. Both spandrels and windows "float" between expansion joints and gaskets to cut earthquake damage.



SECTION OF SPANDREL

PLAN OF WINDOW WALL



PHOTOS: FRED LYON







**San Francisco tower: the International Building was shaped by the special qualities of its city.**

When Architects Anshen & Allen speak of "cityism" in relation to their building, they mean that its forms and details owe much to the character of San Francisco. While the elegant Crown Zellerbach Building, by Skidmore, Owings & Merrill, with its glass and metal curtain wall, could be the product of any modern city—New York, Cologne, Toledo, or, of course, San Francisco—the International Building looks unmistakably at home in this particular locale.

This is so not only because the terracing at its base is intimately related to San Francisco's contours; it is so, more importantly, because of its brilliant white color (in a seemingly white city) and because of the faintly oriental character of some of its details, such as the diamond-shaped patterns along its white, porcelain-enameled roof fascia, and the prominent "lid" formed by the roof. Finally, as the planting takes over, decks and terraces will become hanging gardens of a sort inconceivable in most other modern cities.

Yet, the basic lessons of the International Building are not confined to San Francisco. Quite apart from some of the ingenious, technical innovations discussed on previous pages, there is the challenge to modern architecture implied by "cityism"—a challenge becoming more urgent as people tire of modern stereotypes, and as architects face the growing need of relating new buildings to existing, neighboring structures out of a fertile past. With our varied cultural heritage, it would surely seem possible to achieve a more varied expression in modern architecture, whether it be in San Francisco, Boston, New Orleans, or New York. This building is proof that it is possible and may, indeed, be highly desirable.

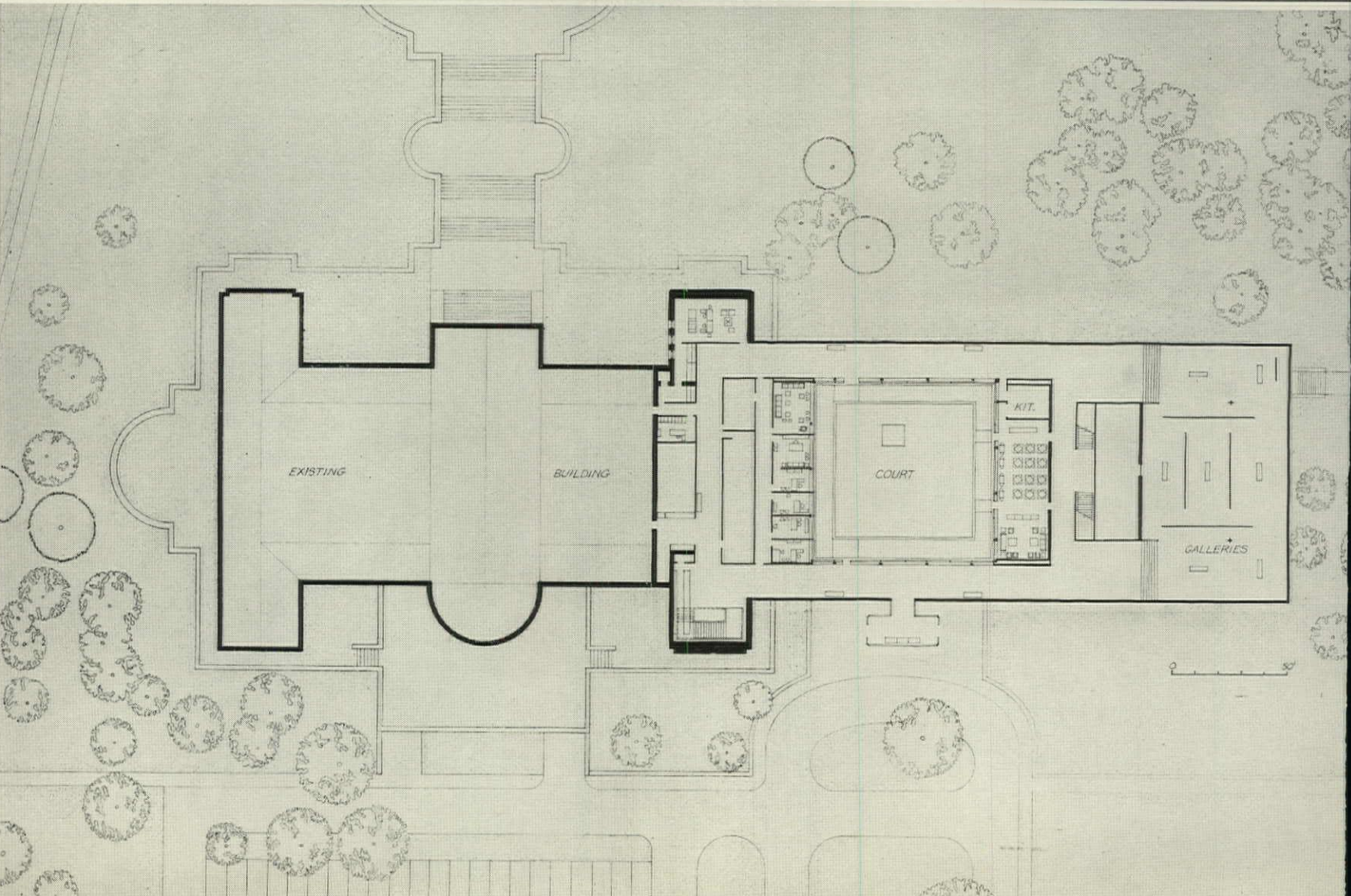
**FACTS AND FIGURES**

International Building, St. Mary's Square, San Francisco, Calif. Architects: Anshen & Allen. Engineers: John J. Gould & H. J. Degenkolb (structural); Eagleson Engineers (mechanical and electrical—Charles Kreiger, E. E.). Landscape architects: Royston, Hanamoto & Mayes. General contractor: Dinwiddie Construction Co.

Total cost of project: \$10.7 million (including cost of land, air rights, construction, improvements to site, and fees). Unit cost: \$27 per square foot. Building area: 285,000 square feet. Construction: steel frame, steel decking topped by concrete

slab, sprayed vermiculite fireproofing, hung ceilings; precast concrete spandrels, pivoting aluminum windows; porcelain-enamel finishes on exterior ducts, fascias, fire-escape balconies. Terrace floors and elevator cab walls of epoxy terrazzo. Mechanical and electrical: year-round air conditioning (14 zones per floor); 1,000 feet per minute elevators, automatically controlled; special electric circuits for business machines; emergency generator for stair and corridor lights; TV riser through full height of building. Financing: \$6.5 million loan from Aetna Life Insurance Co.





## CLASSIC GALLERY WING

Skidmore, Owings & Merrill's gleaming new wing for the Albright-Knox Art Gallery in Buffalo has a majestic dignity all its own. Nevertheless, it stands apart as if unwilling to steal the scene from the neoclassic drama of its parent. The latter, one of the finest examples of Grecian architecture in the U.S., was designed by Buffalo Architect Edward B. Green in 1905 and built in a park of stately elms which still stand.

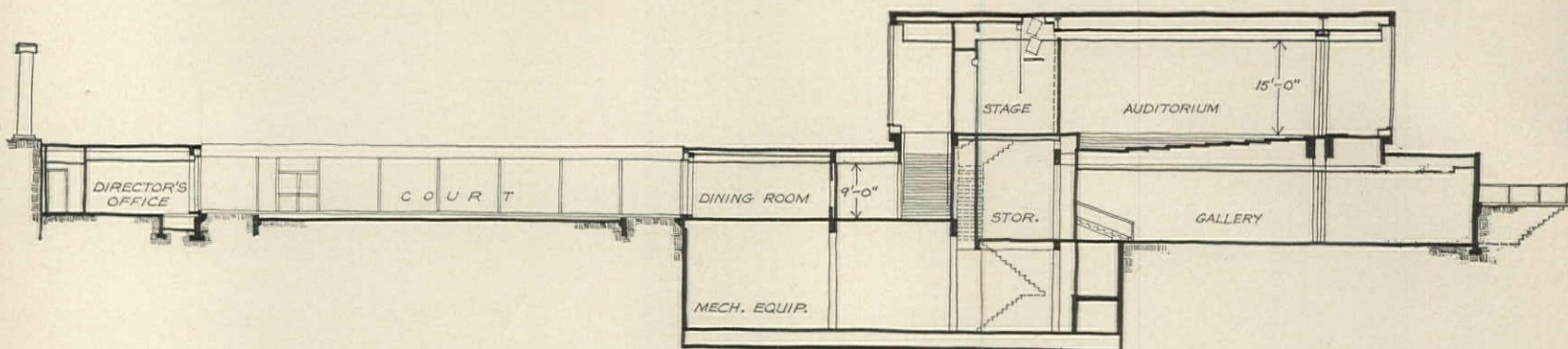
In remodeling the main building and adding onto it, the architects tried to keep as many of the magnificent old materials as possible (for example, marble floors and door trim). White Vermont marble from the original quarry was used to build the low-lying courtyard wall growing out of the base of the old gallery and leading to the new wing. The result is

a striking harmony between old and new, without any obstruction upon the handsome, Ionic-columned façades. A free-standing vestibule of gray glass breaks the horizontal line of marble and echoes the dark shape of the auditorium, right.

The interior connection between the two buildings was made where the floor of an upper gallery on the south side of the old building was broken open for a large stairwell and elevator. The extension of the new wing from the level below is so neatly executed that gallery visitors can hardly tell where the old building ends and the new one begins (plan, opposite). The new outdoor sculpture court (photo, below) is not only dramatically spacious, but also a graceful bow to an indoor, skylighted court in the old gallery. (The sculpture in the left foreground is Henry Moore's "Reclining Figure Number One"; Reg Butler's "Manipulator" is on the right.)

PHOTOS: © EZRA STOLLER ASSOCIATES





Wall-washing lights throughout the new interiors are concealed in the ceiling; they are fixed at permanent walls, attached to movable bridges above partitions. The overall effect is that of brilliant, even illumination without shadows.

Rising at the far end of the court, a square auditorium sheathed in gray plate glass offers fine views of the surrounding park. By day, when black curtains are drawn, it seems a dark, opaque mirror reflecting the Greek temple across the way. At night, when the curtains are pulled back, the auditorium glows like a lantern, flashing red accents from 350 seats upholstered in vermilion nylon. There are only two visible columns supporting the auditorium roof, so that the big space is virtually uninterrupted. Beneath, a double flight of stairs leads to a large gallery (photo, below), which houses part of the Albright-Knox's fine collection of modern art.

**FACTS AND FIGURES**

Albright-Knox Art Gallery, Buffalo, N.Y. Architects: Skidmore, Owings & Merrill. Partner in charge of design: Gordon Bunshaft. Design assistant: Sherwood A. Smith. Job captain: Herbert D. Warrington. Project manager: Frank A. Failace. Consulting engineers: Paul Weidinger (structural); Jaros, Baum & Bolles (mechanical, electrical); Edison Price (lighting and fixtures); Bolt, Beranek & Newman (acoustical). General contractor: The John W. Cowper Co. Total cost: \$2 million, including \$300,000 for renovation of old gallery. Latter included sandblasting

and restoration of exterior marble, balustrades, and steps; new hung ceilings incorporating ventilation system, insulation, and wall-washer lighting fixtures; special humidity and temperature controls in storage space for paintings. New auditorium: aluminum-framed curtain wall with 1/2-inch-thick gray glass. Interior courtyard walls are clear plate glass. All floors are rubber tiled; courtyard is paved in quarry tile. New wing has air conditioning throughout. Financing: \$1.4 million donated by Seymour H. Knox Foundation. Balance raised in private building fund drive.

PHOTOS: © EZRA STOLLER ASSOCIATES



Ten-foot plaster grid covers gallery beneath auditorium, incorporating wiring, air supply, and partition tracks in neat 2-inch slots.



An unbroken tier of seats fans out from the auditorium stage.



Boardroom-lounge looks out on courtyard and lighted galleries beyond.



*Two long galleries, a cafeteria, and offices line the court (above). "New York, N. Y." by Ellsworth Kelly dominates one gallery entrance (below).*



## PUBLIC PRIDE IS REPAID

Work on Fremont County Courthouse, in Canon City, Col., was begun in the city's hundredth year (1959) and was completed during the county's centennial (1961). But apart from achieving this tie-in with history, Architects Nixon & Jones have attained some of architecture's most elusive aims.

▶ This is one governmental building that reflects the spirit of self-government with uncommon fidelity—it inspires respect instead of awe, and it is monumental without being unapproachable.

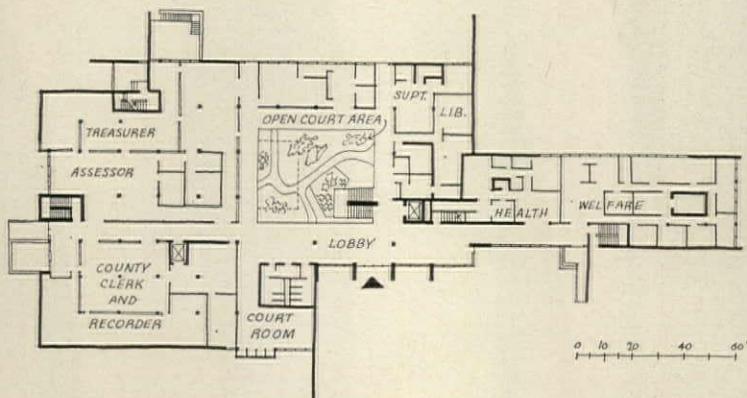
▶ In its forms and materials, the courthouse is happily wedded to its natural surroundings.

▶ Built to serve several generations (the architects tried to project the needs of the next 75 years), the courthouse pays tribute to past and present in an undated style.

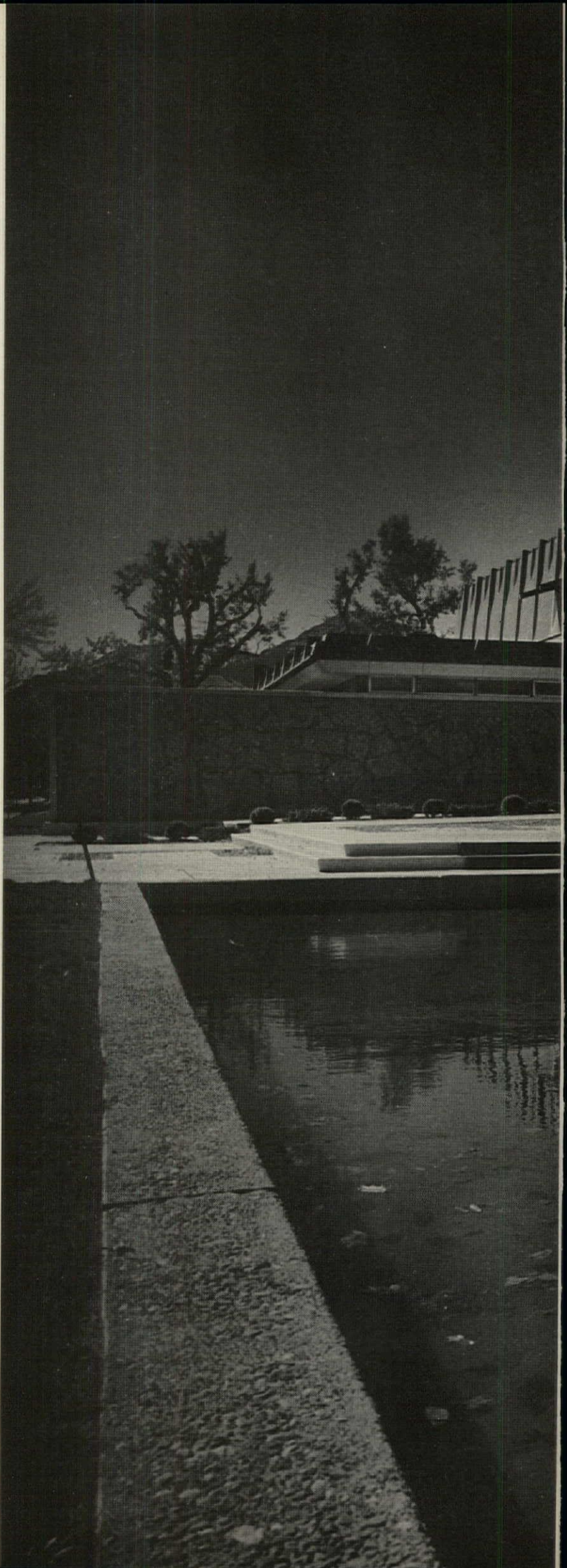
▶ Neither the architects nor their citizen-clients were satisfied to settle for the drab utilitarianism typical of so many public buildings. "Extras" testify to a civic pride that has been well repaid.

Three massive piers mark the main entrance with its four, ceiling-high, carved wood doors. Inside, across a broad corridor-lobby, is a 36 by 46-foot open well. Rising through it is a freestanding marble pier supporting cantilevered stairs leading up to the floor above and down to a formal garden (overleaf). An outdoor atmosphere is created by the garden and by natural light flooding through a skylight overhead.

County departments of engineering and sanitation occupy the basement level together with offices of the driver's license examiner and civil defense director, an auditorium, storage, two jail cells, and space for expansion. The ground level accom-



*Precast panels clad in copper sheathe the second story of Fremont County's new courthouse. Pattern echoes the shapes of nearby mountains. The projections are canopies over triangular windows.*



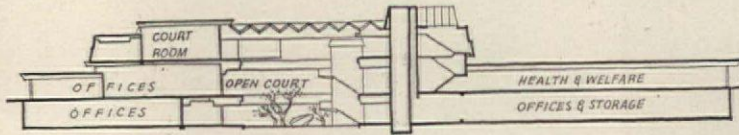




**The courthouse is centered on a skylight court**



*Patterned face of counter shows designers' attention to interior detail*



modates offices of the county commissioner, treasurer, clerk, assessor, and superintendent of schools; health and welfare services are in a one-story wing with an entrance of its own. The top-floor "Hall of Justice" contains judge's chambers, jury rooms, offices of the district attorney, justice of the peace and probation officers, a law library, and a courtroom. The courtroom, 32 by 71 feet, has a judge's bench, jury box, and witness stand at each end with a sliding wall between; the space is easily divisible into two courtrooms, which may be used simultaneously.

Inspiration for the building's character was derived from nearby foothills, whose wooded upper slopes are echoed in the tilted precast panels enclosing the upper floor. The panels are sheathed in weathered copper embossed with a pyramidal pattern. Bare rock outcroppings are suggested by ground-floor walls of locally quarried brown marble; rough slabs were broken and the pieces laid up like fieldstone.

The courthouse has a block to itself with angled parking along all four sides. This is an inelegant solution of the parking problem, but, at least, it is in the time-honored tradition of American courthouse squares. ("Mustn't make the voters walk too far—they're mad enough already.") Plenty of pleasantly landscaped space remains for future expansion. A wing may be added later to accommodate the sheriff's office and county jail, which still occupy old quarters nearby.

If unrelenting insistence upon triangularity of doorknobs, escutcheons, light fixtures, handrails and other details seems an unnecessary mannerism, it is a small one. Fremont County's second century is off to a good start.

**FACTS AND FIGURES**

Fremont County Courthouse, Canon City, Colo.  
 Architects: Nixon & Jones. Engineers: Johnson & Voiland (structural); Harmon & Beckett (mechanical); A. E. MacKittrick (electrical). Landscape architect: Gerald Kessler. General contractor: Ross E. Cox.  
 Cost: \$1,224,500. Building area: 58,000 square feet. Cost per square foot: \$21.10. Size of lot: city block,

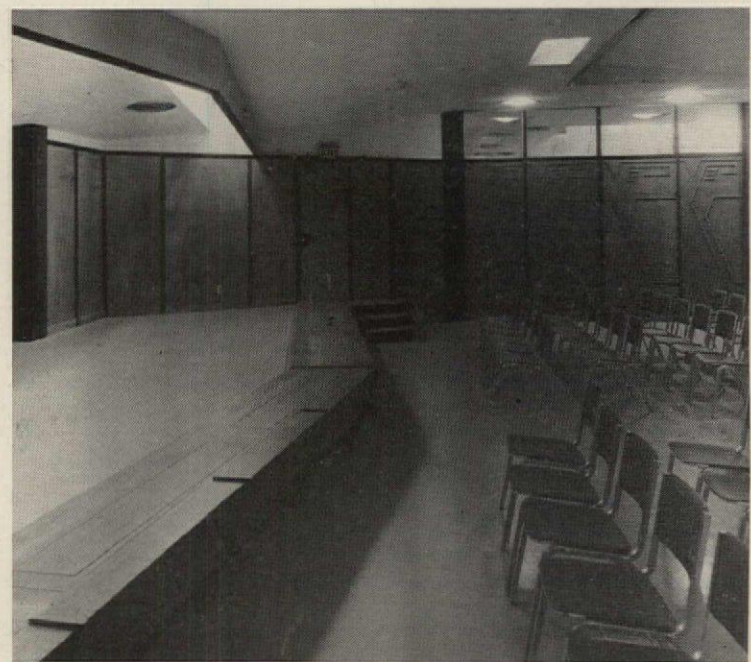
285 by 380 feet. Financing: 4¾ per cent, 25-year leasehold agreement, lease money provided by Public Works Fund.  
 Construction details: steel frame with lightweight concrete floor and roof decks, built-up roofing. Exterior walls: unpolished native marble on ground floor; 11 by 16-foot panels, 4 inches thick, of precast concrete bonded to copper on the upper floor.



*Windows under courtroom's raised roof admit light but bar distractions*

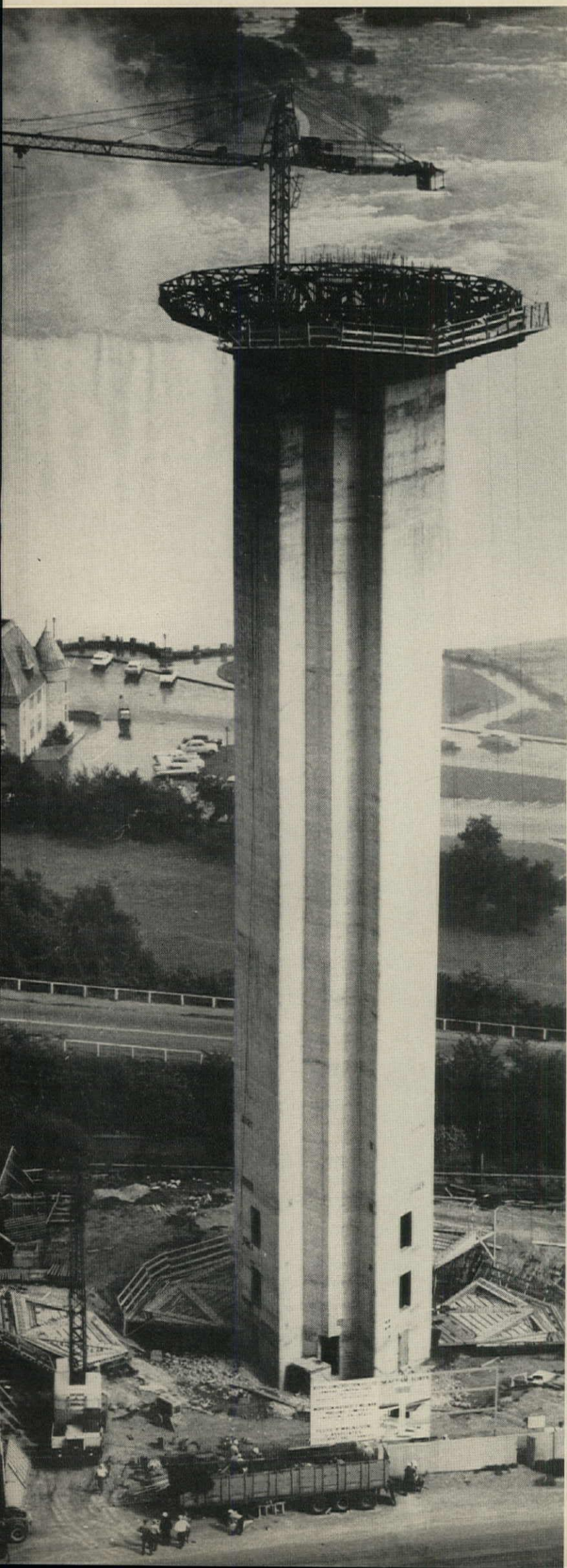
*Auditorium, adjacent to the rock garden, seats 160 at public meetings*

*Inside rooms borrow light from court through glass walls and transoms*



PHOTOS: ARNOLD GASSAN





SEAGRAM TOWER DESIGNERS: FLOYD H. MAGNUSON AND ASSOC. PHOTO: EARL G. HOFFMAN

## U.S. SLIP-FORMING ON THE RISE

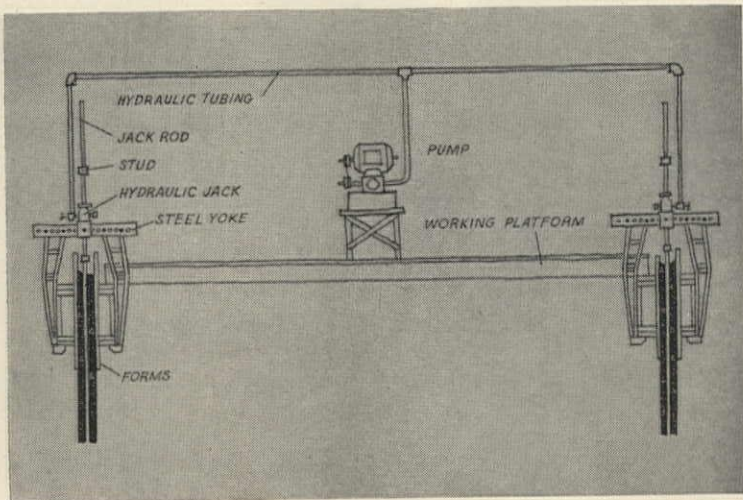
An accepted method of building in Europe, slip-forming has been limited largely to the erection of such structures as silos and bridge piers in the U.S. Recently, however, slip-forms have been used here for casting an observation tower—the Seagram Tower in Niagara Falls (photo, left)—and for the core walls of apartment and office buildings. In one case, at least, the method has been extended to the shaping of exterior bearing walls.

With slip-forming, it is possible to place concrete at the rate of two stories per day by capitalizing on a basic characteristic of the material: its rapid gain in strength. Slip-forming continuously piles wet concrete on hardening concrete. When exposed by the formwork, the concrete is just able to support itself; by the time the load reaches critical proportions, the concrete below has attained much of its final strength.

Slip-forms extrude concrete as they rise from the ground. The forms themselves, usually about 4 feet high, may be of metal, wood, or glass-fiber plastic. Locomotion is supplied by air, electric, or hydraulic jacks which inch up steel rods set in the concrete, lifting the formwork as they go. Depending upon air temperature and wind velocity, which affect the setting time of concrete, the rate of lifting may vary from 5 to 18 inches per hour, in most cases averaging 10 to 12 inches. The pace is controlled by an experienced operator armed with a thin steel rod for testing the green concrete.

Each jack has two sets of jaws which clasp the jacking rod. In operation, the lower jaws hold onto the rod and the upper jaws rise 1 inch, taking the forms along. The top jaws then grip the rod; the lower jaws let go and a spring forces them upward into the starting position. Jacking rods, usually in 10- to 12-foot lengths, are screwed together and set in the concrete in steel tubes (after casting, they are pulled out of the tubes for reuse). A central pump equalizes and synchronizes the jacks, with the operator checking plumb and level from time to time. Discrepancies can be corrected by hand jacking. Concrete is poured in layers, each a few inches deep.

Substantial cost savings are possible when slip-forming is used properly. One contractor reports a reduction of \$50,000 in the total cost of a 17-story apartment building, made possible by slip-forming the service core. In cases where walls as well as cores are slip-formed, overall savings of 10 per cent have been reported. Slip-forming becomes practical when walls exceed 30 feet in height, and can become increasingly profitable over 40 feet, as the same forms and hoisting equipment receive more use.



DRAWING AND PHOTO: COURTESY B. M. HEEDE, INC.

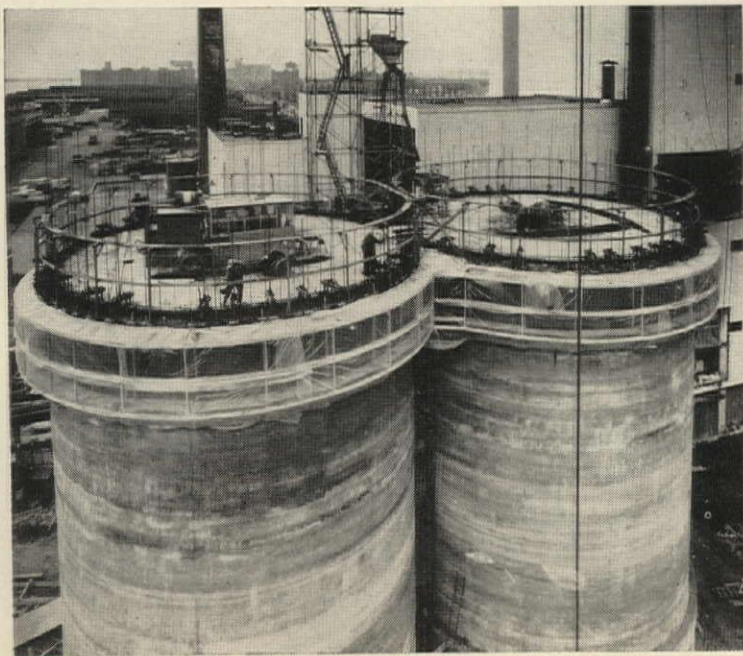
Slip-form equipment used to cast the structures shown here is explained in the drawing (above).

The simplest slip-forms are the concrete tubes used for the casting of silos (photo, below) or bridge piers. However, almost any wall which can be cast in place can be slip-formed. Ribs, setbacks, and even double-curved surfaces are possible.

The openings, door frames, and other fittings seen in the core wall

of the Chicago apartment building on the right can be placed with complete accuracy. A special form even allows insulating panels to be sandwiched into the concrete.

A platform is often hung below the forms to allow troweling and filling of pockets as the concrete is exposed by the rising forms, or for hosing down the fresh concrete to aid curing. The platform can be covered with plastic sheeting for weather protection (below).



PANDA



## LIFT DOME MOLDED WITH EARTH

An imaginative combination of new techniques turned the construction of the dome shown here, normally a formidable and complicated enterprise, into a job of almost elementary simplicity.

The problem was to construct a 7,200-seat auditorium for the annual international convention of the Church of God in Anderson, Ind. A geodesic dome was investigated initially, but because of its cost (about \$6 per square foot), Architects Johnson & Ritchhart turned instead to thin-shell concrete.

Simple economics decided another issue when the rental of scaffolding was priced and found to exceed by several times the \$22,000 necessary for bringing in and removing the dirt for an earth mold.

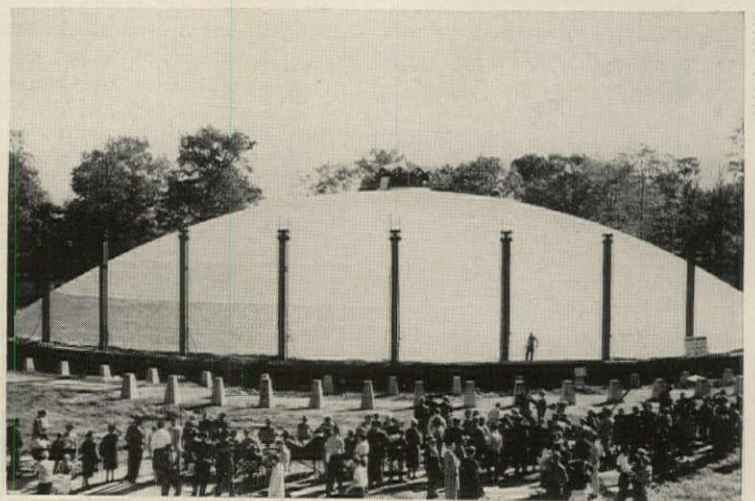
First, a mound of dirt and gravel 40 feet high and 244 feet across was groomed into a smooth dome, then covered with a thin layer of sand. Inch-thick panels of polystyrene were laid directly on the sand to serve as insulation for the dome and as a base for the interior plaster finish (top photo). Then the reinforcing rods were laid and a 4-inch layer of lightweight concrete was placed. For the lower sections, trucks merely drove up the hard-packed mound and concrete was poured down the sides. Cranes and buckets were used to finish the upper part.

After curing, the concrete was given a protective coating of pneumatically applied roofing material, and the post-tensioning of the compression ring took place. This ring is a flange 36 inches wide and 24 inches deep, containing three conduits one over the other. In each of the conduits is a tendon containing 40  $\frac{1}{4}$ -inch diameter high-strength steel wires. These tendons overlap each other by 8 feet at each end. Tensile stress is 720,000 pounds.

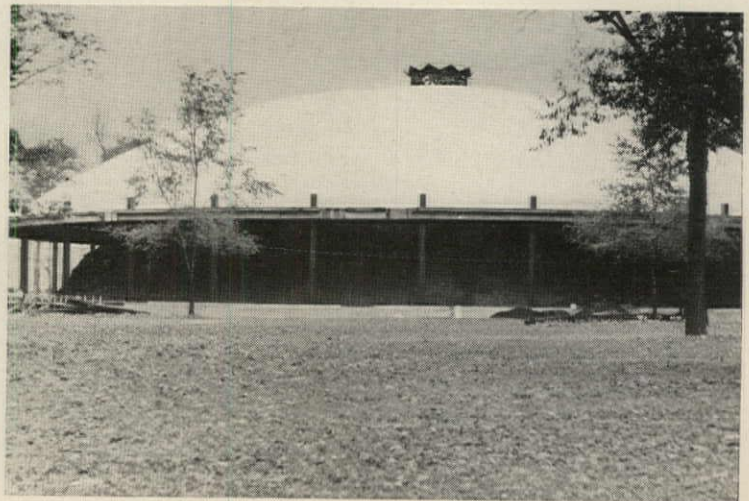
The next step was lifting the dome into position (center photo). Motive power was supplied by hydraulic jacks mounted on top of each of the 36 steel columns and connected by steel rods to lifting collars embedded in the compression ring. Once the dome was in place, these collars were welded to the supporting columns and the jacking mechanism and earth mound were removed (bottom photo).

It had been hoped that the big lift—3 million pounds—would take only five to seven hours, but friction caused the oil in the hydraulic lines to overheat and the process wound up taking five days to go the 16 feet.

Total cost for the dome, columns, footings, and a peripheral circulation canopy was \$178,000, or about \$3.15 per square foot. Overall costs of the building are expected to be about half that of a comparable structure built by more conventional means. Contractor: Lewis Construction Co.



JERRY D. BYARD



## HELICOPTERS IN CONSTRUCTION

Recovery of space capsules by helicopter has been well publicized; but, on a less glamorous level, helicopters are being used more and more for construction jobs too heavy for men to handle unaided and too awkward for normal cranes.

Helicopters have been employed for some time to place powerline poles and high-tension towers, to string wires, and even to pour concrete in mountainous and inaccessible country. In special cases, skylights, church steeples, and roof trusses have become airborne as well.

In two factories recently built in California, heating and ventilating equipment had to be placed on broad, multiacre roofs not easily accessible by normal means. So fans, heating units, and pipe were stockpiled near the buildings and then shuttled by helicopter to the roof. As the helicopter hovered, a crew of riggers jockeyed each unit into position. The carrying sling was then released and the helicopter went back to the stockpile for another load. Although charges for the helicopters came to almost \$200 an hour, each trip averaged only about three minutes, and so few men were required for the operation that money, as well as time, was saved.

Payload varies considerably in helicopters presently used for lifting jobs. For the small machines, the useful payload is about 1,100 pounds. The Sikorsky S-58, shown lowering a heating unit onto a roof (photo, right), can carry almost 4,000 pounds. These craft, however, are designed primarily for transporting people. Now that the helicopter's potential for lifting heavy objects has been recognized, several prototypes have been designed specifically for that use, and the payload has risen sharply. A prototype, piston-driven freight helicopter, the Sikorsky S-60 "Skycrane" (top right), can handle up to 4 tons. Future production models with gas-turbine engines are expected to lift over 9 tons, and helicopters with a payload of 40 to 50 tons are in the foreseeable future. When not lifting free objects, these machines may be used as airborne tractors or they may be fitted with containers for carrying personnel or freight. Their air speed, even with load, will be as high as 100 miles per hour.

Whether or not the building field will soon witness an invasion by air is problematical, but as helicopter costs go down, as labor costs go up, and as more construction takes place in undeveloped or constricted areas, the use of the helicopter in building will doubtless continue to expand. It is possible that the future may see heavy-construction equipment moved from jobsite to jobsite, and even steelwork, glazing, and roofing placed entirely this way. Perhaps Buckminster Fuller's vision of buildings delivered by air is not too far off.



UNION TRIBUNE PUBLISHING CO.

## EXPERIMENTAL TEACHING ROOM

The classroom shown at right is an outgrowth of a study begun in 1959 at Rensselaer Polytechnic Institute under a \$50,000 grant from the Educational Facilities Laboratories of the Ford Foundation. The study was based on two major premises: 1) the increasing use and importance of educational aids requires greater attention to their integration in the design of school facilities; 2) to get the most out of the new teaching equipment, entirely new concepts of space are needed.

Design and functional data were gathered by RPI's School of Architecture. Out of this came a set of criteria and a number of new designs. It was decided to build one of the schemes in order to test the assumptions under controlled conditions during actual use.

By placing the test room (Scheme "K") within a former chapel building, it was possible to use simple wood framing and to build the walls, floor, and ceiling as structurally independent, panelized systems. The shape of the room can, therefore, be changed with little difficulty.

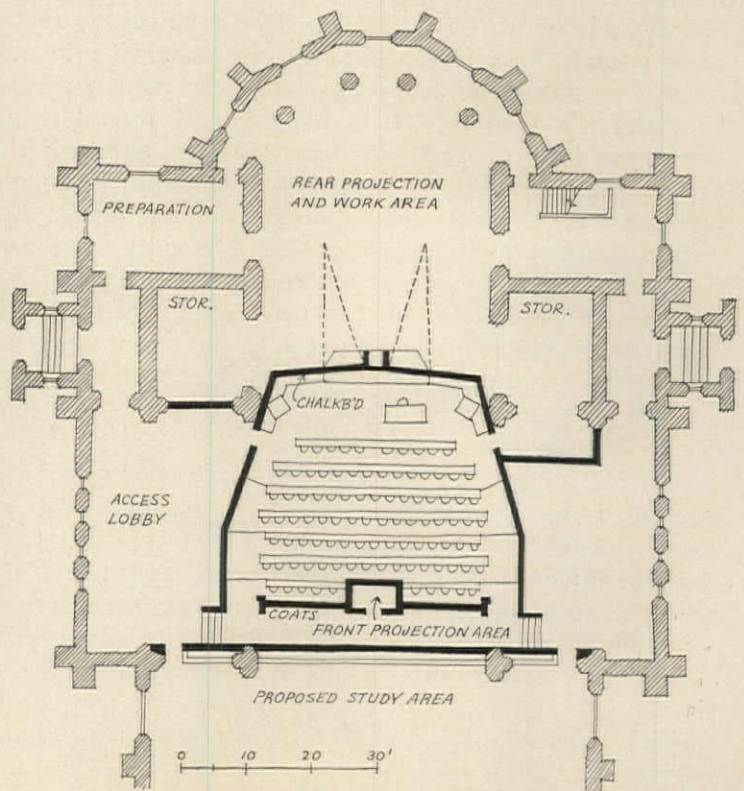
The shape chosen for a start (drawing, right) is essentially a rectangle with the corners knocked off, and as such can serve as a basis for the remodeling of conventional classrooms. For the present, the seats to the rear are raised and the ceiling is pitched from the center to the front and rear.

All 99 seats have clear sight lines to a pair of 6-foot projection screens, allowing simultaneous projection of two images. Both front and rear film and television projection will be tried so that an evaluation and comparison of the two types may be made. Regular television sets will also be installed (see drawing, right.) Lighting levels, projection, and sound will be preprogrammed for optimum coordination and efficiency. Roll-on carts will allow laboratory demonstrations to be prepared in advance. All projection equipment is accessible from outside the classroom itself.

Storage cabinets are located in the front of the room. Above them is a trough containing speakers and display lighting for blackboard and tackboard surfaces, and maps. Students sit on pedestal swivel chairs at long tables. All of this equipment can and will be shifted around to determine the most efficient combinations.

RPI put up the \$45,000 necessary for the construction of the room. Equipment worth some \$20,000 was provided by manufacturers.

Though the room is already in use as a classroom, it will be two or three years before the study will be completed. When the findings are released, factual data may well begin to replace theory in the design of rooms for teaching.







## Why damage before dedication?

Chances are this floor will receive more abuse during construction than in the next 5 years combined. As the building goes up, we forget to look down...but it's a very critical time for new floors.

The Hillyard floor treatment program will do the job better than "KEEP OFF" signs...and for a longer time. Your Hillyard Maintainer will show you how to protect all floors during construction, and he will be pleased to draft a plan that will cut maintenance costs by 50% when the owner takes over. You'll like the way flooring complaints will be eliminated. No matter what type of floor you specify—Hillyard seals and finishes are manufacturer approved.

Plan protection for your floors, with your Hillyard Maintainer...the man who follows through for you. At your request, he will survey your finished floors, and recommend proper maintenance procedures at no cost to you. District offices are listed in Sweet's, or call collect.

*"On your staff, not your payroll"* / PROPRIETARY CHEMISTS SINCE 1907



**HILLYARD  
FLOOR  
TREATMENTS**

St. Joseph,  
Missouri,  
U.S.A.

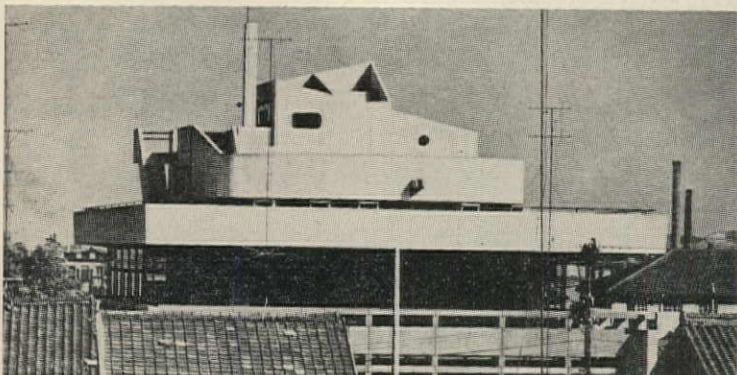
Passaic, New Jersey  
San Jose, California



COURTESY "L'ARCHITETTURA"

**GERMAN APARTMENTS.** Dutch Architects Johannes H. van den Broek and Jacob Bakema have designed the 16-story apartment house above for Berlin's new Hansaviertel District, a town-planning scheme of loosely

grouped residential blocks. The exterior is composed of prefabricated concrete panels; the 72 apartments, mostly duplex, are on staggered levels for privacy. Communal loggias provide sitting areas overlooking the city.



COURTESY "KINDAIKENTIKU"

**JAPANESE BANK.** Architect Kenzo Tange's Shinyo-Kinko (credit bank) in Imabari sails like a ship over the low tiled roofs of this coastal fishing port on the Hiuchi Sea. The nautical feeling of the

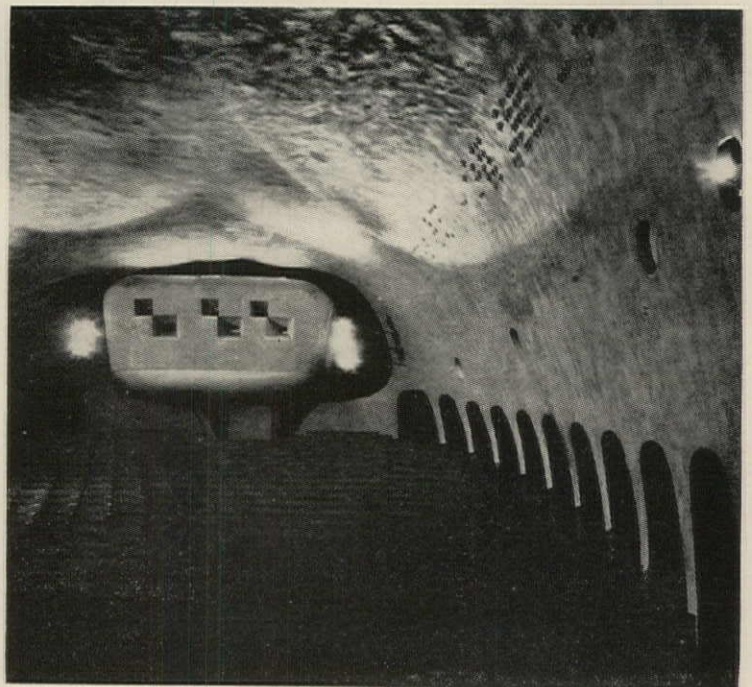
exposed concrete structure is heightened by a "captain's bridge" atop the five-story building, which actually contains meeting and dining rooms and a terrace with a view of the harbor.



COURTESY ROYAL ARCHITECTURAL INSTITUTE OF CANADA JOURNAL

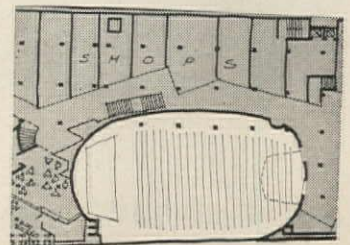
**CANADIAN CHAPEL.** In St. Boniface, Manitoba, across the Red River from Winnipeg, Architects Libling, Michener & Associates have designed a church with a distinctively rural flavor. Chapel St. Louis Le Roi was built on a wooded site adjacent to the Grotto of Notre Dame De Lourdes and is a center of worship for pilgrims

and rural parishioners. The strikingly simple exterior is sheathed in clear cedar, as are interior walls. The extensive use of naturally finished wood also includes the fir roof-deck and glue-laminated wood beams and columns. The chapel entrance is reached through a raised, paved atrium (above, right) dominated by a cross.



COURTESY "DOMUS"

**SWEDISH THEATER.** This cave-like and highly sculptural movie theater by Architect Ralph Erskine is part of an enclosed shopping center at Lulea in the extreme north of Sweden. Entrances on either side of a cantilevered, egg-shaped projection booth lead to an indoor plaza from which branch arcades lined with stores and restaurants (plan, right).

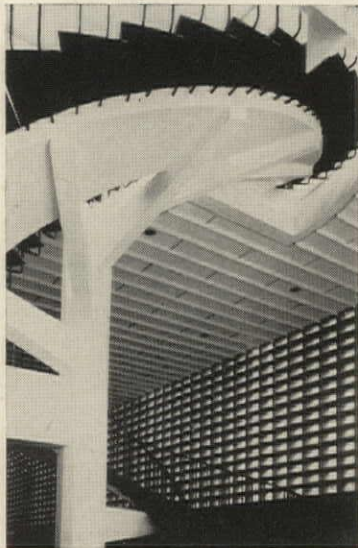




**BERLIN OPERA.** Fritz Bornemann's prize-winning design for the new \$6.8 million Berlin Opera House was the star of the Berlin Festival of the Performing Arts when it opened last September. The massive southern wall facing the street, covered with fist-sized stones imbedded in concrete, contrasts strikingly with glass curtain walls. Hans Uhlmann's abstract sculpture in steel, rising beside the southern façade, has already been affectionately dubbed the "Shishkebab" by Berliners. In the handsome 1,900-seat auditorium (right), each seat is ventilated by perforated metal tubing in the chair supports to prevent drafts.



PHOTOS: THE ROY BERNARD CO., INC.



**DIAKARTA CENTER.** The new office center-exhibition hall for the National Industrial Bank (below), designed by U.S. Architect Abel Sorensen, is the first building over four stories to be completed in Indonesia. Of reinforced concrete faced with local Tjarebon marble, the tower was also the first in that country to be built on a floating foundation. The exhibition area (foreground) is covered with precast terrazzo sun grilles, designed to keep out both the sun and torrential rains. Cantilevered stairs (left) climb to a circular penthouse restaurant. A plaza extending 200 feet back from the street adds an outdoor showcase for industrial products.

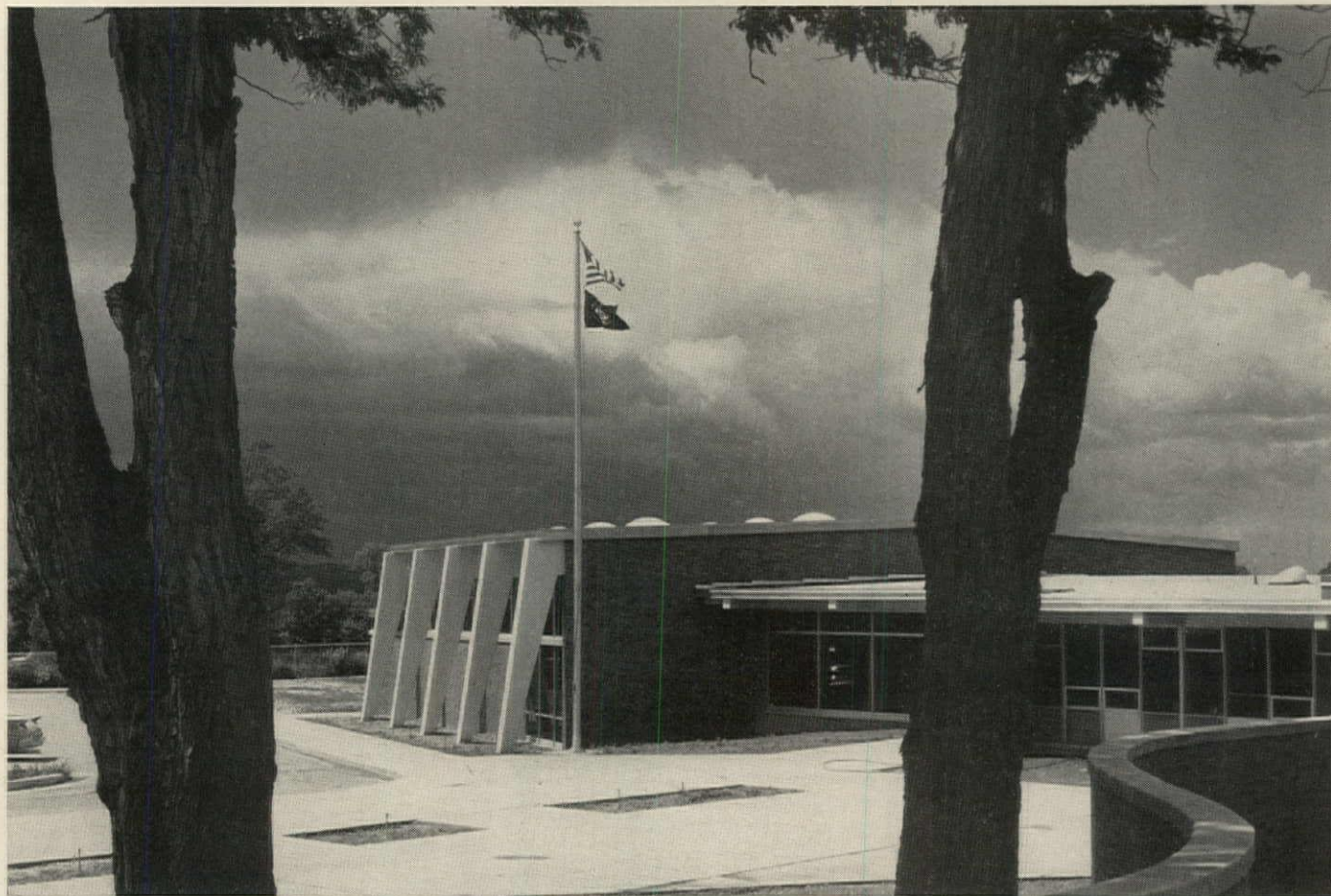


PHOTOS: ©LENNART OLSON

**STOCKHOLM CHURCH.** In the rapidly growing suburban parish of Vantör, south of Stockholm, this new church by Architects Berndt Alfreds and Gunnar Lar-sén focuses outside on Arne Jones' bell tower of gilded aluminum (right), inside on his crucifix standing starkly before a background of mosaic and brick (above). Fan-shaped wooden canopies spread out to form a frame above the altar. Below the main church are offices and a youth club. Vantör's shopping center is in foreground. END



# DUNHAM-BUSH **FIRST** FOR UTAH'S AIR CONDITIONED SCHOOL



Architect: Gardner & Rasmussen Consulting Engineer: Redd & Tregeagle Contractor: Jones & Stucki

Parowan High School is Utah's first large school to incorporate air conditioning in the original construction. Actual building cost for the 11 classroom school was \$13.58 per square foot for a 42,400 square foot area, under the national average.

First choice at Parowan was Dunham-Bush for air conditioning and heating equipment.

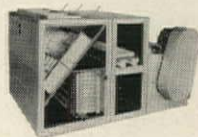
School building teams find Dunham-Bush "one source-one responsibility" fits the bill for installation economy, lower maintenance and dependable conditioning.

When thinking of design for **Air Conditioning, Refrigeration and Heating** for schools... think of **Dunham-Bush**. Consider the experience of Dunham-Bush in all facets of Heating and Cooling.

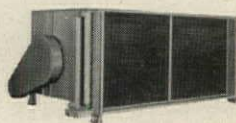
## FORMULA FOR SCHOOL CONDITIONING

(at Parowan Elementary High School)

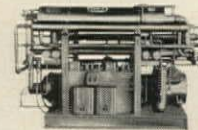
### DUNHAM-BUSH COOLING



Multi-Zone Air Conditioning Unit

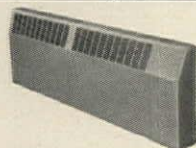


Air Handling Units

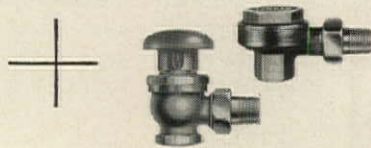


Heat-X Package Chillers

### DUNHAM-BUSH HEATING



Finned Tube Radiation



Steam Specialties



## DUNHAM-BUSH, INC.

WEST HARTFORD 10, CONNECTICUT, U. S. A.  
SALES OFFICES LOCATED IN PRINCIPAL CITIES



Installation: Sts. Philip and James School-Church-Auditorium, St. James, New York. Architect: John O'Malley and Associates. General Contractor: Schumacher & Forelle, Inc. Roofing: John Schneider Roofing Contractors, Inc.

## Drains nothing but rain

### This gleaming Nickel Stainless Steel gutter keeps maintenance money in the treasury

Few people will ever see the gleaming inside of this trough. Few people will have to, because maintenance is virtually eliminated with a Nickel Stainless Steel gutter.

The standard finish you see will stay bright for the life of the building. Corrosion-resistant all the way through, Nickel Stainless Steel can stand up against chemicals much more aggressive than plain rain water.

Designed to last for generations, this

gutter is on the roof of a church. For lasting value, the architect specified Type 302 Nickel Stainless Steel not only for gutters, but for all downspouts and flashings as well. Even the nails are Nickel Stainless.

Strong enough for light, economical gauges, Nickel Stainless Steel delivers value right from the start. This gutter is only .018" thick, but its great strength-weight ratio will withstand all expected wind stresses and snow loads. Why not specify the prac-

tical advantages—and lifetime beauty—of Nickel Stainless Steel for all your sheet metal work? There's helpful information in the 26-page *Architect's Guide to Nickel Stainless Steel Flashings*. A postcard will bring it to you.

THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street  New York 5, N. Y.

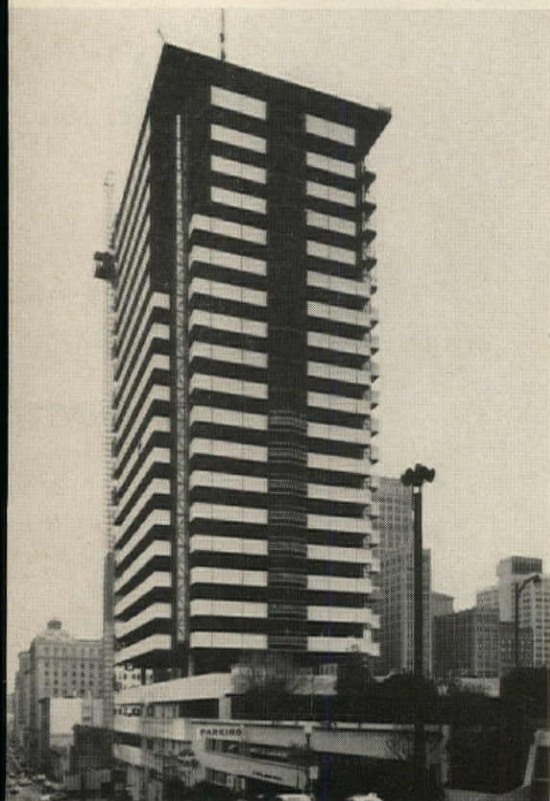
# INCO NICKEL

MAKES STAINLESS STEEL  
PERFORM BETTER LONGER





DECEMBER 19, 1960



FEBRUARY 10, 1961



Architects: Anshen & Allen / Contractors: Dinwiddie Construction Co. / Photograph: Moulin Studios

# Mo-Sai®

## GOES INTERNATIONAL

The 22-story free-standing tower of the International Building in the heart of San Francisco's financial district, has light and air space on all four sides. It also has Mo-Sai precast concrete curtain wall on all four sides. Even the corners are cast in one piece in Mo-Sai.

MO-SAI CONCRETE CURTAIN WALL PANELS ARE THREE-DIMENSIONAL . . . shaped like an inverted hip roof. This sculptured design creates changing patterns of light and shadow at different times of day.

MO-SAI ERECTION WAS FAST — averaging 20 panels per day and sometimes as high as 32 panels per day. Photos taken less than two months apart show the majority of Mo-Sai panels installed during this period. Lightweight Mo-Sai curtain wall panels, factory-made under the franchised Mo-Sai process, were anchored directly to the steel framework.

©1962 Mo-Sai Institute Inc.



**MO-SAI INSTITUTE, INC.** MEMBERS, PRODUCERS' COUNCIL, HEADQUARTERS, P. O. BOX 45, STATION A, NEW HAVEN, CONNECTICUT ● BADGER CONCRETE CO., OSHKOSH, WISCONSIN ● BEER PRECAST CONCRETE, LTD., MONTREAL 20, P. Q., CANADA ● BUEHNER & CO., INC., MESA, ARIZONA ● CAMBRIDGE CEMENT STONE CO., ALLSTON 34, MASSACHUSETTS ● ECONOMY CAST STONE CO., RICHMOND 7, VIRGINIA ● FORMIGLI SALES COMPANY, PHI LADELPHIA 3, PENNSYLVANIA ● GEORGE RACKLE & SONS CO., CLEVELAND 5, OHIO ● GOODSTONE MFG. CO., ROCHESTER 21, NEW YORK ● HARTER MARBLECRETE STONE CO., OKLAHOMA CITY, OKLAHOMA ● OLYMPIAN STONE CO., INC., SEATTLE 7, WASHINGTON ● OTTO BUEHNER & CO., SALT LAKE CITY 6, UTAH ● P. GRASSI-AMERICAN TERRAZZO CO., SOUTH SAN FRANCISCO, CALIFORNIA ● SOUTHERN CAST STONE, INC., KNOXVILLE, TENNESSEE ● SUPERCRETE, LIMITED, MANITOBA, CANADA ● TEXCRETE MOSAIC COMPANY, ARLINGTON, TEXAS ● THE DEXTONE CO., INC., NEW HAVEN 3, CONNECTICUT ● THE MABIE-BELL CO., GREENSBORO, N. C. — MIAMI 47, FLA. — PEACHTREE CITY, GA. ● THE RACKLE CO., HOUSTON 20, TEXAS — ALBUQUERQUE, NEW MEXICO ● TORONTO CAST STONE CO., LTD., TORONTO, ONTARIO ● WAILES PRECAST CONCRETE CORP., LOS ANGELES, CALIFORNIA ● WILSON CONCRETE CO., OMAHA 7, NEB.

# Keystone FUNDS

offer you a choice of Mutual Funds with these investment goals:

### CAPITAL GROWTH POSSIBILITIES

**Keystone K-2**  
GROWTH FUND

**Keystone S-3**  
Growth COMMON STOCK FUND

**Keystone**  
INTERNATIONAL FUND, LTD.

**Keystone S-4**  
Lower-Priced COMMON STOCK FUND

### CURRENT INCOME

**Keystone K-1**  
INCOME FUND

**Keystone S-3**  
Low-Priced BOND FUND

**Keystone S-4**  
Discount BOND FUND

### INCOME with GROWTH POSSIBILITIES

**Keystone S-1**  
High-Grade COMMON STOCK FUND

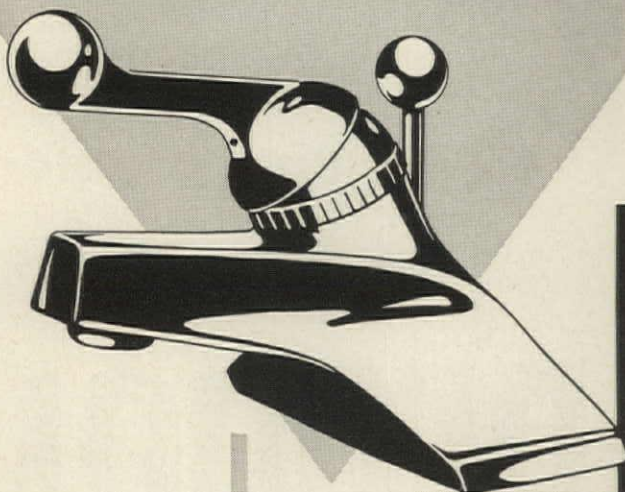
**Keystone S-2**  
Income COMMON STOCK FUND

For descriptive Prospectuses on any of these Mutual Funds see your investment dealer or write Dept. AR-1.

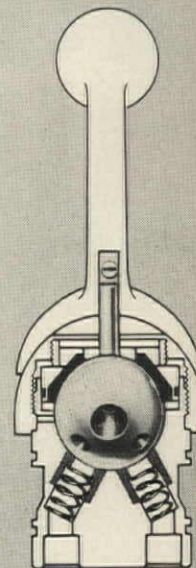
**THE KEYSTONE COMPANY**  
50 Congress Street, Boston 9, Mass.

# DELTA®

SINGLE HANDLE BALL FAUCETS



**ONLY ONE MOVING PART**



Shown here is a cut-away of the heart of the Delta Faucet. Note the expert simplicity in design excellence. Having only ONE moving part (the ball) it is readily understandable WHY the DELTA faucet is considered the finest . . .

*Positively* **THE FINEST!**

for your convenience . . . DELTA faucets are available in over 400 model applications . . . each giving years of DEPENDABLE service.



**DELTA FAUCET CORPORATION**  
GREENSBURG, INDIANA

DELTA FAUCET OF CANADA LTD.  
2489 BLOOR STREET TORONTO 9, CANADA

**CUT COSTS**  
BY SPECIFYING  
CLEAR SPAN  
STEEL FRAMING

**IDEA FILE**



# PRUDEN

Architectural design by Richard Sears Gallagher of Barnstable, Mass.

**steel framing**

"The most complete line" OF FRAMES AND TRUSSES

Pruden Clear Span Steel Building Frames afford architects freedom of design; both interior and exterior. With Pruden you get more strength, less weight, lower cost. Pruden Buildings cost far less than your client expects to pay . . . there is more profit margin for architects and builders . . . more signed contracts. Write Pruden Products Co., Evansville, Wisconsin, for architects' manual.

Write for complete specifications



**You multiply problems by dividing**

# **RESPONSIBILITY**

It is certainly possible to design an air conditioning system by specifying a variety of major components made by different manufacturers.

You may even save your clients a few dollars—with refrigeration equipment from one source, cooling and heating coils from another and fans from somewhere else.

But each added source of supply multiplies your clients' problems by dividing responsibility.

Whom will they call if mechanical trouble develops? Which component

needs attention? Where will they turn for service? The answers come easily when you specify equipment from one responsible supplier of major components—able to keep the equipment in first-class operating condition.

Although not the only air conditioning manufacturer offering a broad line of components, Carrier is best prepared to serve the owner should trouble come. For our company and our dealers maintain the largest and best-trained service organization in the business—over 11,000 men strong.

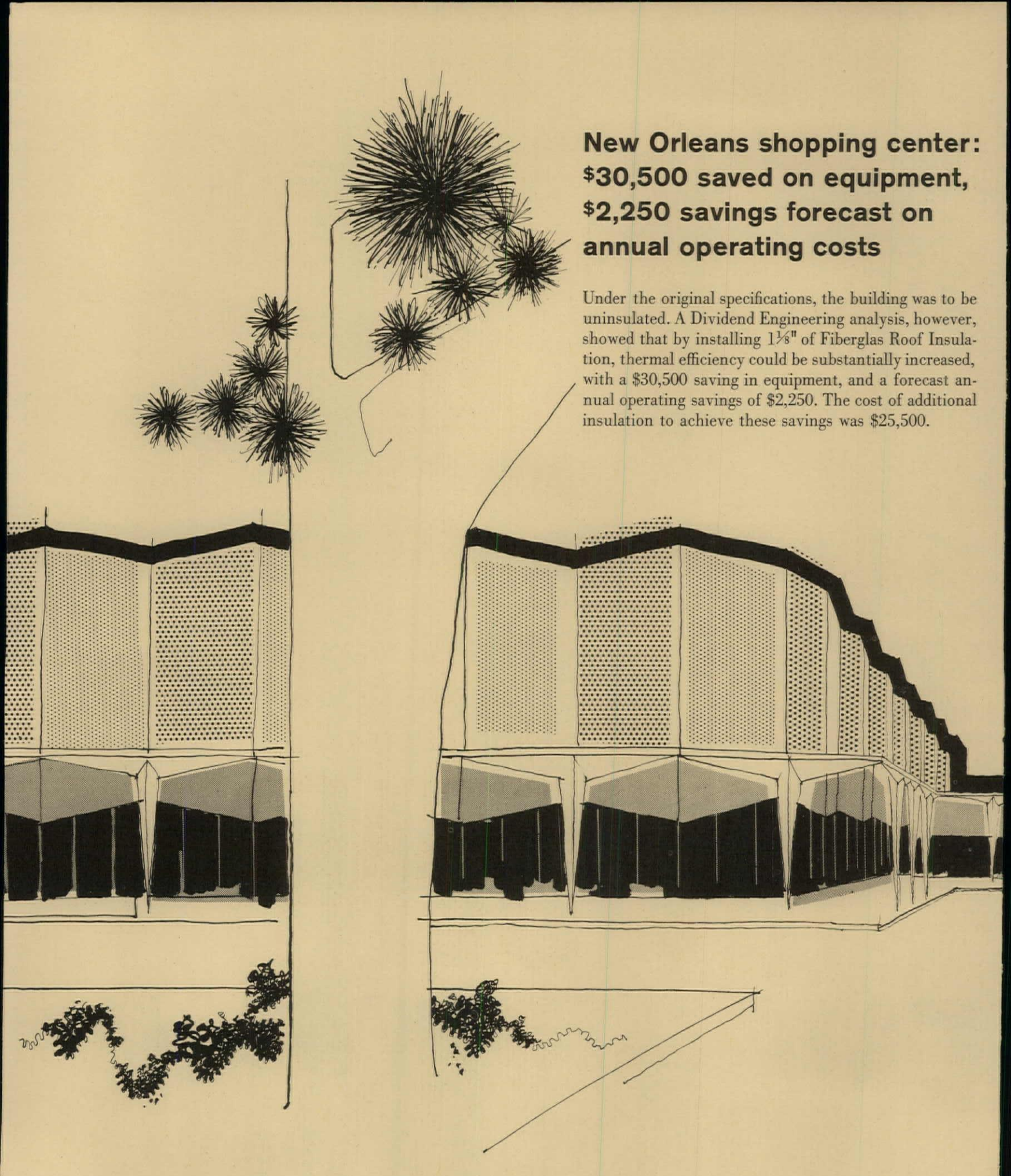
**Carrier** Air Conditioning Company



From Owens-Corning: an accurate  
and proven way to forecast optimum  
savings in any building you plan...

# **DIVIDEND ENGINEERING**

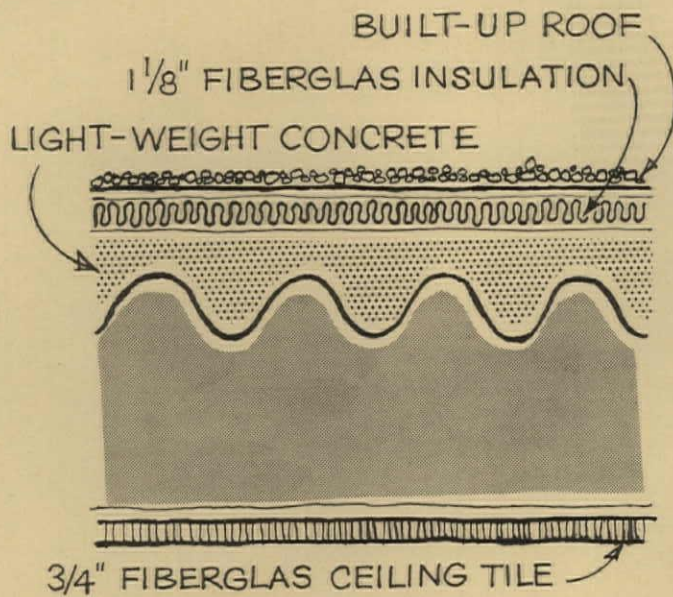
The following actual applications demonstrate its advantages...



**New Orleans shopping center:  
\$30,500 saved on equipment,  
\$2,250 savings forecast on  
annual operating costs**

Under the original specifications, the building was to be uninsulated. A Dividend Engineering analysis, however, showed that by installing 1 $\frac{1}{8}$ " of Fiberglas Roof Insulation, thermal efficiency could be substantially increased, with a \$30,500 saving in equipment, and a forecast annual operating savings of \$2,250. The cost of additional insulation to achieve these savings was \$25,500.

**DIVIDEND ENGINEERING**



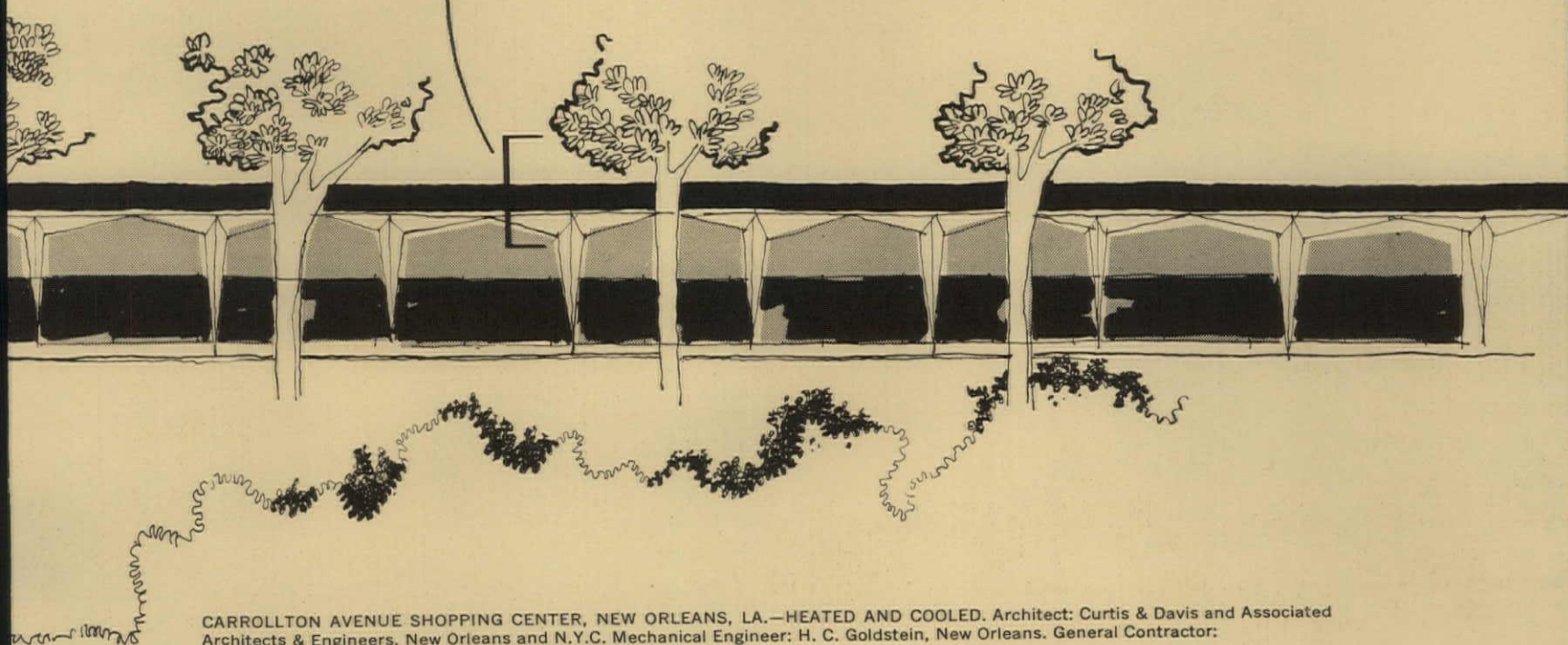
DIVIDEND ENGINEERING  
 DOLLAR-SAVING PROPOSAL

Cost of Heating  
 & Cooling Equipment

Original Specifications .....	\$277,000
Dividend Engineering Specifications .....	\$246,500
Predicted Saving .....	\$ 30,500
Additional Insulation Cost (in place) .....	\$ 25,500
Net Initial Saving .....	\$ 5,000

Projected Annual  
 Operating Costs

Original Specifications .....	\$ 15,750
Dividend Engineering Specifications .....	\$ 13,500
Annual Saving .....	\$ 2,250



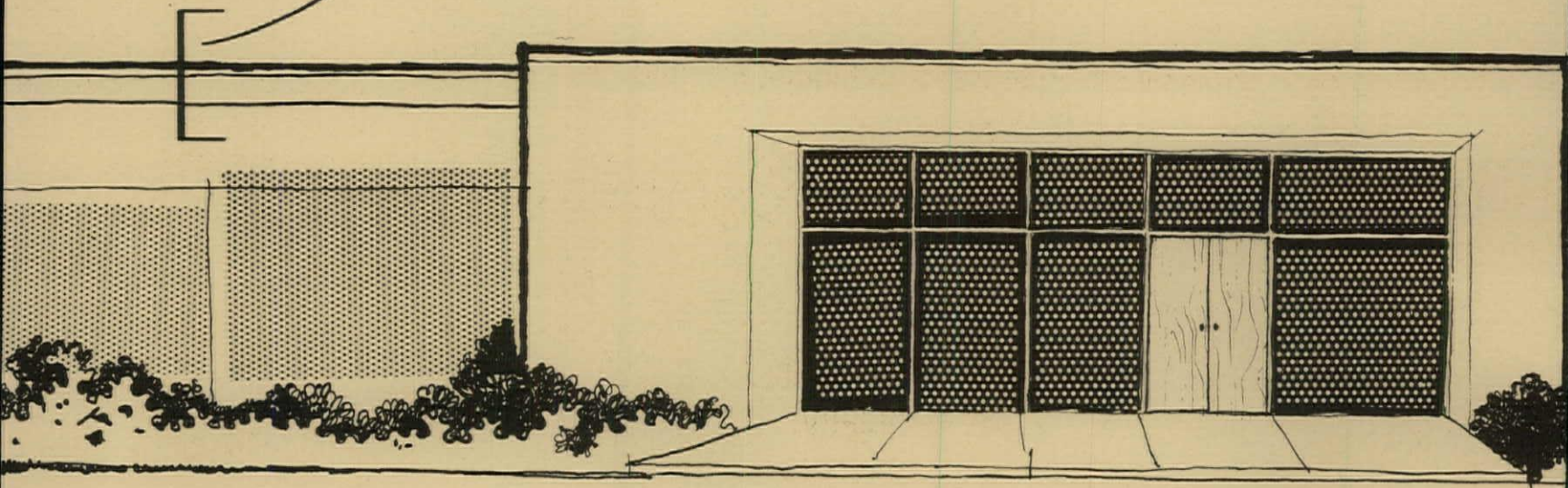
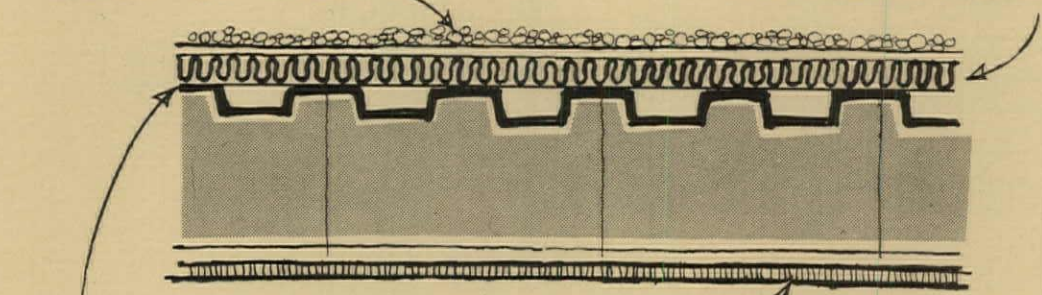
CARROLLTON AVENUE SHOPPING CENTER, NEW ORLEANS, LA.—HEATED AND COOLED. Architect: Curtis & Davis and Associated Architects & Engineers, New Orleans and N.Y.C. Mechanical Engineer: H. C. Goldstein, New Orleans. General Contractor: Gervais Favrot Co., New Orleans.  
 Fiberglas products used in this installation: Perma Ply Built-up Roofing; Roof Insulation; Ceiling Board; Duct Insulation.

BUILT-UP ROOF

1 1/2" FIBERGLAS ROOF INSULATION  
CHANGED FROM 1" FIBERBOARD

STEEL DECK

ACOUSTIC CEILING TILE



**Speidel plant and research  
laboratory:  
\$12,000 saved on equipment,  
\$1,800 savings forecast on  
annual operating costs**

Original specifications called for 1" of fiberboard roof insulation. A Dividend Engineering analysis forecast that optimum heat savings could be realized by a change to 1½" of Fiberglas Roof Insulation. The added efficiency made it possible to save \$12,000 on the cooling equipment alone, and to predict an annual operating savings of \$1,800. The change in specifications added only \$4,000 to the original estimated costs.

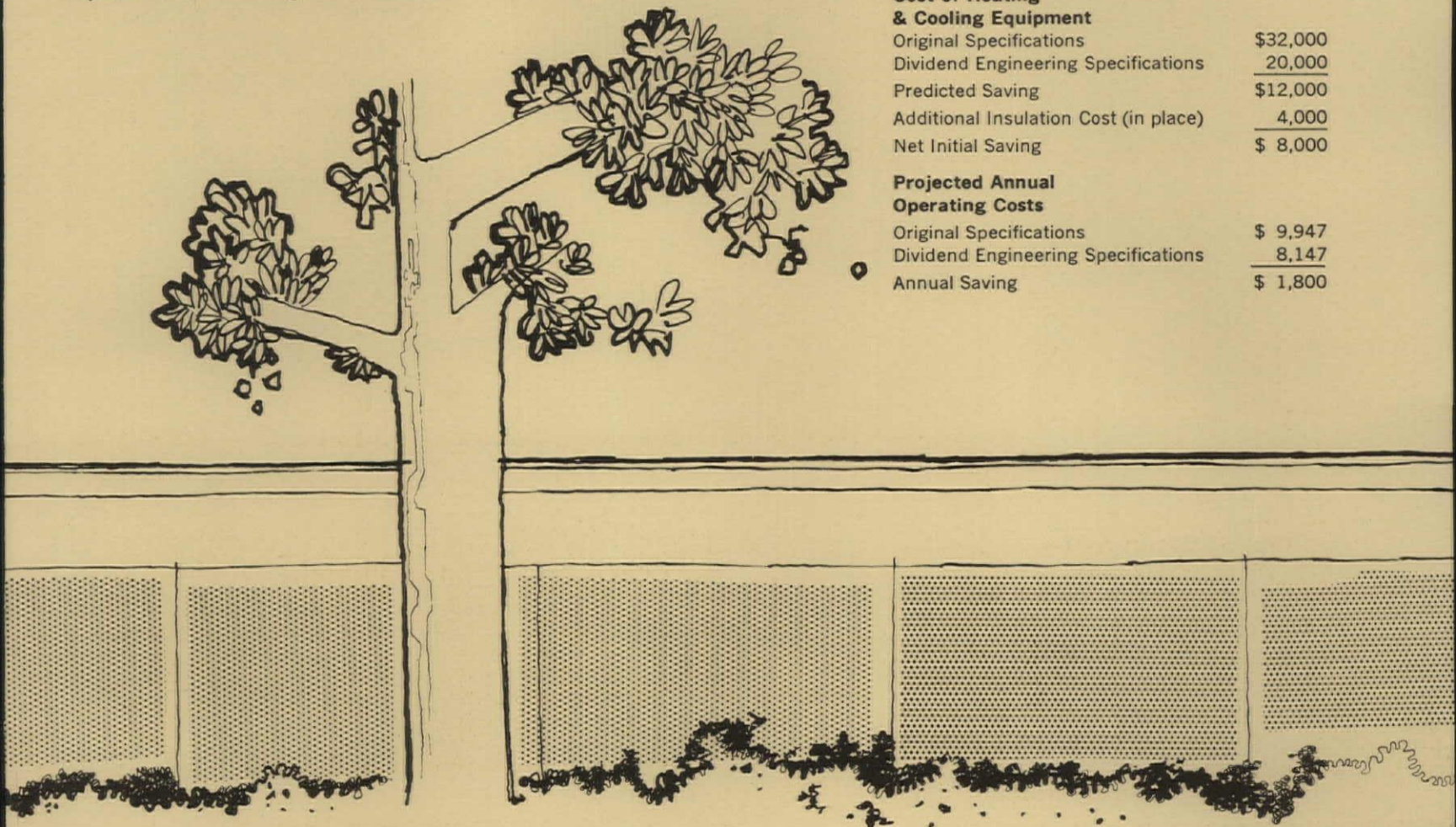
**DIVIDEND ENGINEERING  
DOLLAR-SAVING PROPOSAL**

**Cost of Heating  
& Cooling Equipment**

Original Specifications	\$32,000
Dividend Engineering Specifications	<u>20,000</u>
Predicted Saving	\$12,000
Additional Insulation Cost (in place)	<u>4,000</u>
Net Initial Saving	\$ 8,000

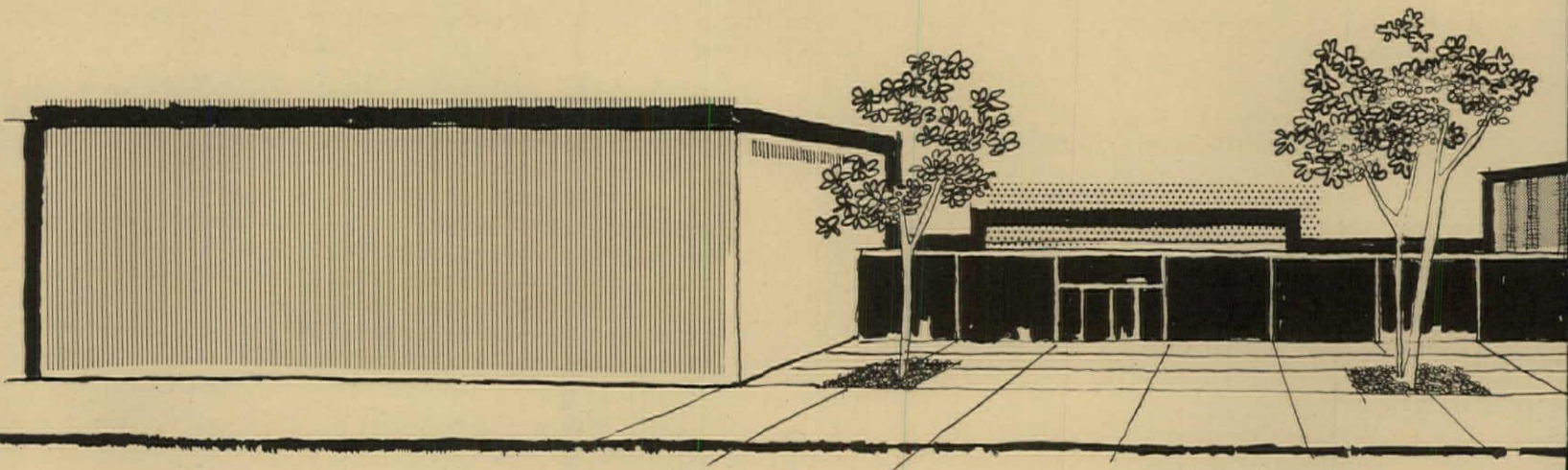
**Projected Annual  
Operating Costs**

Original Specifications	\$ 9,947
Dividend Engineering Specifications	<u>8,147</u>
Annual Saving	\$ 1,800



**Air-conditioned high school:  
\$13,950 saved on equipment,  
\$1,836 savings forecast on  
annual operating costs**

The cost of construction for this air-conditioned school had to be \$13 per sq. ft., or less. Original specifications called for  $\frac{3}{4}$ " of Fiberglas Roof Insulation, a  $3\frac{1}{2}$ " air space in the exterior walls, and plate glass windows. A Dividend Engineering analysis showed that increasing the roof insulation to 2 inches, filling the walls with Fiberglas Building Insulation, and using heat reducing plate glass would produce optimum savings: \$13,950 on the cost of equipment, and a forecast reduction in operating costs of \$1,836. An \$8,640 investment in additional insulating materials made these savings possible.



MAPLE PARK JUNIOR HIGH SCHOOL, North Kansas City School District, Kansas City, Mo.; Dr. Ruie B. Doolin, Superintendent.  
Architects: Kivett & Myers & McCallum. Mechanical Engineer: W. L. Cassell.

DIVIDEND ENGINEERING  
DOLLAR-SAVING PROPOSAL

Cost of Heating  
& Cooling Equipment

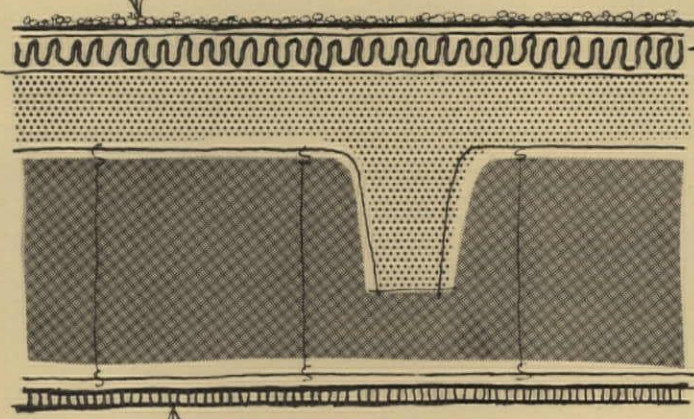
Original Specifications.....	\$20,700
Dividend Engineering Specifications.....	\$ 6,750
Predicted Savings.....	\$13,950
Additional Glass & Insulation Cost (in place).....	\$ 8,640
Net Initial Savings.....	\$ 5,310

Projected Annual  
Operating Costs

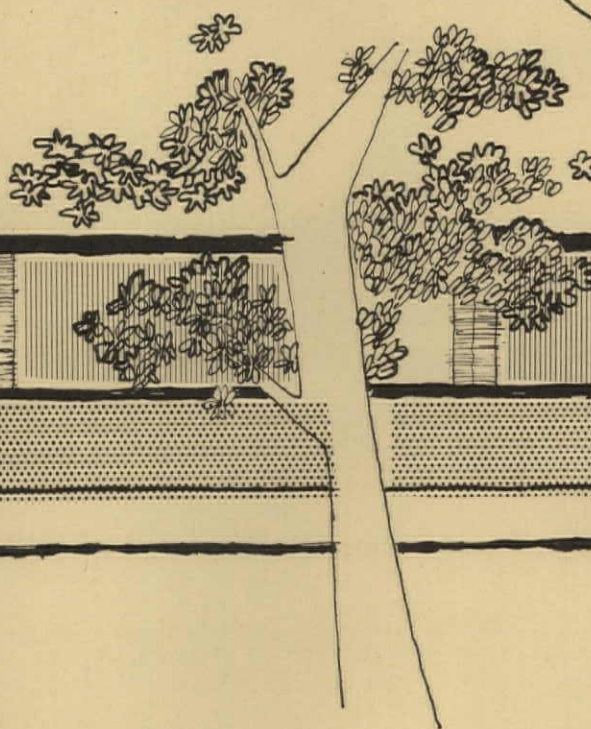
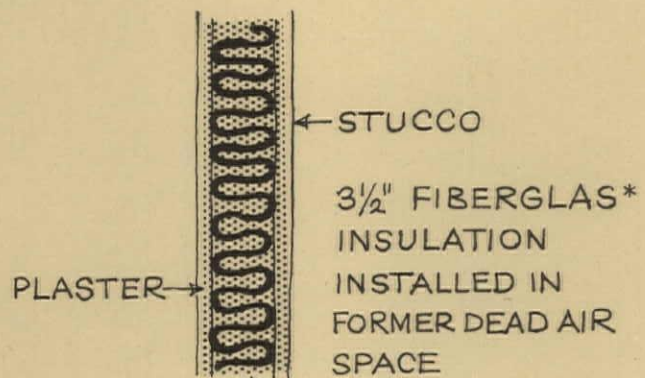
Original Specifications.....	\$16,301
Dividend Engineering Specifications.....	\$14,465
Annual Savings.....	\$ 1,836

BUILT-UP ROOF

FIBERGLAS ROOF INSULATION  
INCREASED FROM 3/4" TO 2"



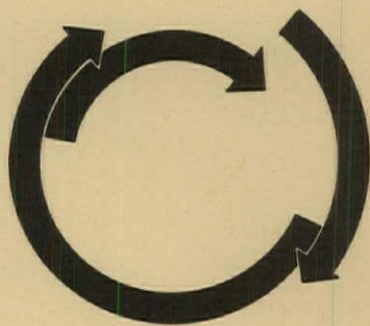
FIBERGLAS ACOUSTIC CEILING



An Owens-Corning planning service which helps reduce initial investment; saves on annual operating costs; and improves performance of the building



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

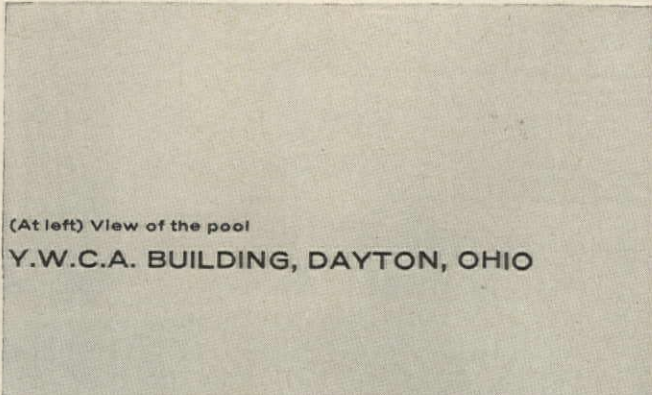


**LET US SHOW YOU** how Dividend Engineering forecasts significant savings . . . how it makes the comfort and production benefits of year-round air conditioning economically feasible in buildings of every type. Our computer department eliminates hours of laborious figuring . . . returns your analysis with electronic speed. Talk to your Fiberglas representative or write: Owens-Corning Fiberglas Corporation, Industrial & Commercial Division, 717 Fifth Avenue, New York 22, New York.

OWENS-CORNING  
**FIBERGLAS**

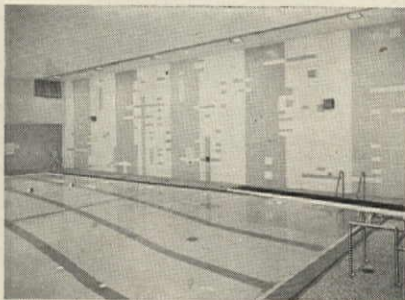
T. M. REG. U. S. PAT. OFF.





(At left) View of the pool  
**Y.W.C.A. BUILDING, DAYTON, OHIO**

CREATED WITH ARKETEX CERAMIC GLAZED STRUCTURAL TILE



ARCHITECTS  
 & ENGINEERS:  
 Yount, Sullivan  
 & Lecklider, A.I.A.  
 Dayton, Ohio

*"Any irregularity in the size or color of any tile in this application would have been unpleasantly conspicuous. However, we knew that the design could be successfully executed. We were aware of this from previous experience in airport, hospital and school projects, where we have used glazed structural tile. This wall will provide important savings through low cost, easy maintenance in an area where high standards of cleanliness must be maintained. We have also used structural facing tile of various colors in the locker rooms, showers, kitchens and other areas of this building."*

For more details, write

**ARKETEX**  
 Ceramic  
 CORPORATION  
 BRAZIL, INDIANA

THE PROGRESSIVE NAME IN STRUCTURAL CERAMICS

*Continued from page 97*

have been largely determined by explicit FHA requirements as well as by implicit FHA biases that favor a stereotyped approach. Nevertheless, there is a definite potential, still largely unrealized, within FHA for design progress.

Where, then, is the problem? The answer involves the agency's undefined role in design. Today, the FHA cannot be identified by any clearly stated philosophy of architecture; and the lack of a clear philosophy would necessarily introduce some ambiguity into its operation.

Some architects and builders argue that FHA has not been given a clear mandate to see that buildings meet aesthetic criteria, and that any departure from fiscal primacy will enable FHA to regiment design. They also argue FHA rules do not prohibit anyone from exceeding standards and enjoying considerable design freedom.

This argument ignores one striking fact: as we have seen, FHA, as an important determiner of mortgage credit, is inescapably in the business of influencing design. Perhaps the agency ought to be more aware of its tremendous power and utilize it in as conscious, intelligent a manner as possible. There is no reason why this should place FHA in the position of dictating architectural fashion. Merely by evaluating new ideas without bias or undue delay, FHA would create an atmosphere bound to attract more good architects into the rental housing field.

**FHA's "new look"**

In spite of the difficulties cited above, many builders, developers, and architects discern a new attitude in FHA. Marvin Gilman, president of Renewal Planning Associates, sponsors and redevelopers, points to a marked difference in FHA's approach to rental housing. Referring to the long-standing criticism that FHA's personnel are suburban-oriented, as evidenced by the fact that about 85 per cent of all units insured by FHA have been in sales housing, Gilman reports that "it's no longer un-American not to live in the suburbs. FHA now really wants to get good multifamily housing done."

There are several other signs that FHA is becoming more responsive to a total architectural responsibility. Its new Section 233 for experimental housing is intended to encourage innovation in products and processes by waiving the criterion for economic soundness as regards the new technique. Another hopeful straw in the wind is FHA's establishment of six zone offices to accelerate appraisals, architectural examinations, and underwriting in the local offices of multifamily and urban renewal projects. FHA's recent educational program for staff architects and appraisers is another good omen. And most important, perhaps, was the establishment last year of a special division for all multifamily housing programs.

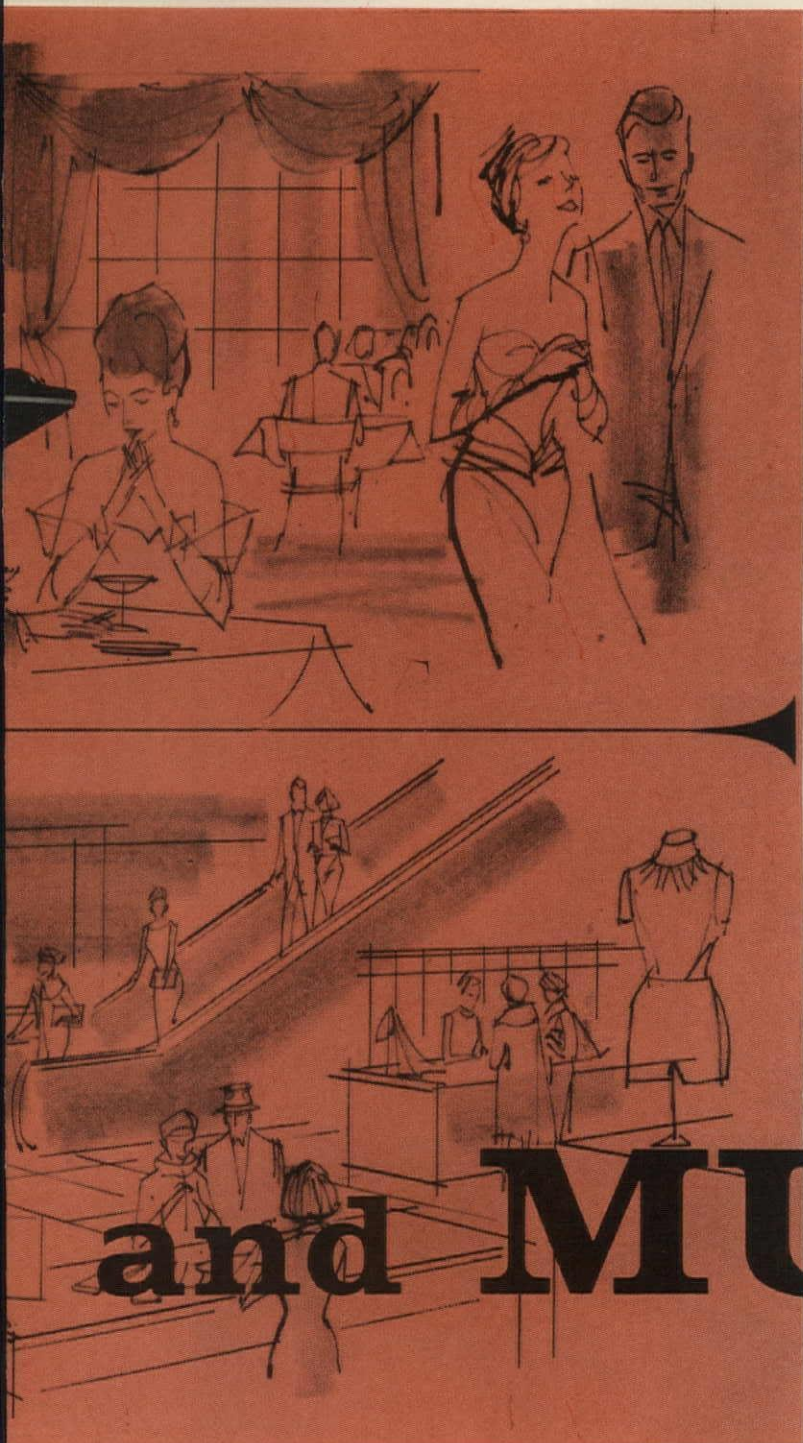
Although the trend is in a positive direction, progress is still slow, and other steps remain to be taken. John M. O'Mara, a Webb & Knapp vice president, thinks that FHA should develop construction-cost estimates per cubic foot for each city district, and thereby facilitate mortgage valuations by eliminating the need for lengthy take-offs and pricing of each set of plans. This would also eliminate the prolonged scrutiny that now discourages the introduction of design innovations. Careful cost certification would further serve as a protection against any windfall profits that might be caused by erroneous initial estimates. Processing time could be cut by as much as three months, O'Mara believes, and carrying charges could be reduced—thus encouraging builders and architects to broaden their horizons. Another positive suggestion is that the quality of architecture should be considered as a specific factor in FHA's valuation calculus; if FHA were to put a premium on creative design, this would impel builders and investors actively to seek out architectural innovators.

To achieve this, FHA might have to strengthen its architectural staff, perhaps by hiring recognized leaders in the profession on a paid consultant basis. In so doing, FHA would not only be setting a floor on housing quality, but raising the ceiling as well. **END**



## SPECIFICATIONS FOR ATMOSPHERE MUSIC BY MUZAK

1. **The Music** shall be soft and relaxing. It shall be arranged and recorded specifically for the purpose, avoiding all attention-getting musical devices, as well as extreme highs or lows.
2. **The Musical Program** shall be planned by qualified musicologists; it shall change subtly hour-by-hour to offset static environment and create a warm, pleasing atmosphere.
3. **The Music Source** shall include selections sufficient in number to minimize repetition. With exception of highly popular current favorites, no selection shall be repeated in an eight-hour program sequence within nine days.
4. **Currency of Music** shall be maintained through regular additions of recordings of latest popular tunes and modern renditions of standard favorites. All additions shall meet requirement number one, above.
5. **Objectivity in Programming** shall be maintained by avoiding individual preferences and requests. All selections shall be incorporated into an objective pattern which meets specification number two, above.
6. **Continuous Music** shall be avoided to prevent development of its own monotony. A silent recess of not more than 1½ minutes shall be provided at the end of each 13½ minutes of music.
7. **The Sound System** shall be capable of faithful reproduction of 40 to 10,000 c.p.s. It shall



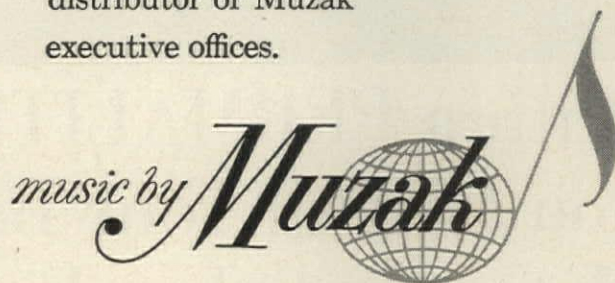
Even the most efficient layouts, restful colors and softest lighting can become *static* and monotonous. But now architects and builders have a functional tool to create a *dynamic* environment in restaurants, stores, motels, hotels, terminals and shopping centers.

Music by Muzak changes subtly hour-by-hour to create a pleasing business atmosphere, to ease human tensions, to build good will and enhance buying moods . . . important benefits for your clients.

# and MUZAK®

Specifications are listed for your convenience. AIA File No. 31-I-7. Sweet's Catalog insert 33a/Mu. For further information contact your local Muzak franchised distributor or Muzak executive offices.

- include provision for paging or signalling and zone control of volume.
- 8. **Equipment Maintenance** shall be the responsibility of the music supplier.
- 9. **The Music Player** shall not be located on the subscriber's premises. The subscriber shall not be responsible for operation or maintenance of any music-playing source.
- 10. **A Signed Warranty** shall be provided by the music supplier. It shall specify that the service is provided subject to the above mentioned requirements. The music supplier shall provide proof that his service and equipment have been tested and proven under conditions similar to those under consideration.
- 11. **Performance Licenses** shall be obtained by the music supplier. The subscriber assumes no liability in connection with performance or mechanical license obligations.

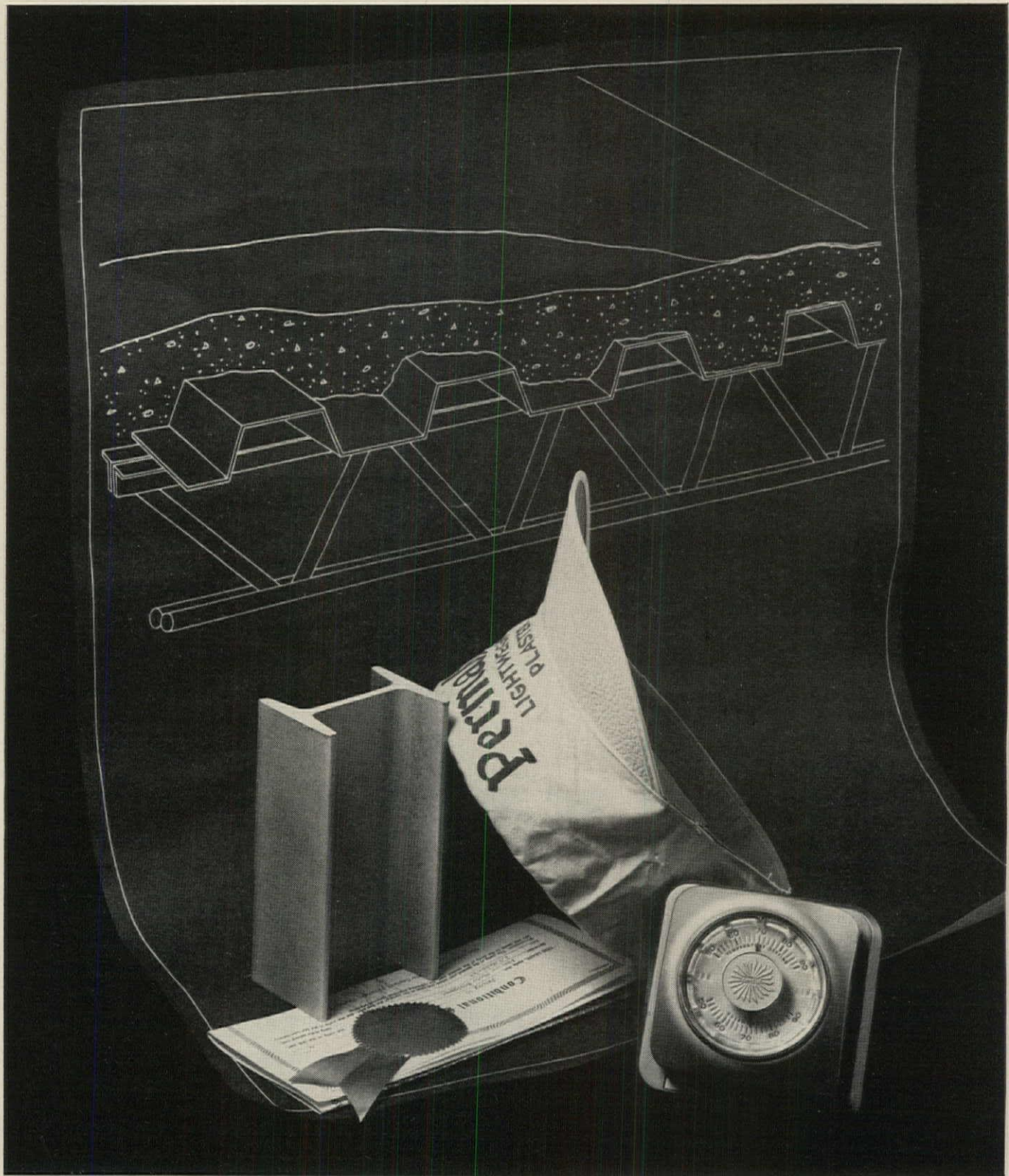


Muzak Corporation  
229 Park Avenue South  
New York 3, New York



an International Subsidiary of Wrather Corporation

United States • Canada • Mexico • Argentina • Brazil • Colombia • Peru • Great Britain • Belgium • The Philippines • Australia • Finland



With a PERMALITE Roof Deck System\*  
 You Cut All Four Basic Building Costs:  
 Materials, Labor, Financial, Operating



\*3 Basic Systems: Lightweight, Fireproof Permalite Insulating Concrete Over (1) Metal Form Units, (2) Ribbed Metal Lath, (3) Paper-Backed Wire Mesh.

**MEGALOPOLIS.** By Jean Gottmann. Published by The Twentieth Century Fund, Inc., 41 E. 70th St., New York, N. Y. 810 pp. 6" x 9 1/4". Illus. \$10.

"Ideas," writes Geographer Jean Gottmann in the conclusion of his book, "precede and shape the appearance of new facts," and perhaps without intention he therein explains very well his idea of the evolving nature of the vast urbanizing area stretching from Massachusetts Bay to the Valley of the Potomac. It is obvious that, to Gottmann—who worked ten years on the idea, much of the time at the Institute of Advanced Studies in Princeton—"Megalopolis" was itself a concept before it was a fact. Yet, to the reader of his eloquent and passionate book, Gottmann's thoroughly documented facts are both convincing and finely tuned to the idea. (The term Megalopolis was first used to describe the "city of ideas" in the philosophy of the Alexandrian, Philo Judaeus.)

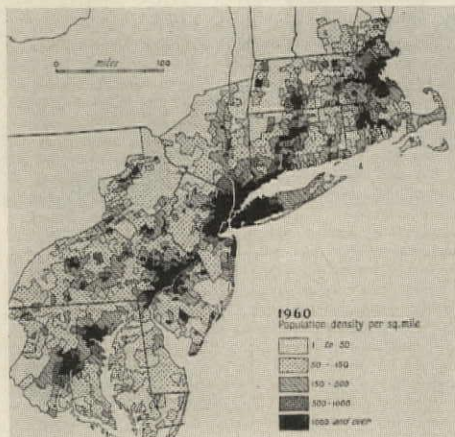
To a generation stuffed with the impression of disorder in our metropolitan structure, Gottmann's idea is, oddly enough, precisely the reverse. Indeed, he writes: "Nowhere else have men ever built anything comparable, and with such a rhythm."

The rhythm is demonstrated throughout the book, from the maps of the almost crystalline growth of populous settlement and functional accommodation to it (illustrated above), to the discussion of symbiosis in urban and rural land use patterns.

This discernment of balance and pattern is one anchor for Gottmann's idea. The other is the uniqueness of Megalopolis: its wealth, its concentration, its powerful movements of people. Its population, writes Gottmann: ". . . is the richest, best educated, best housed, and best serviced of similar size in the world." In nearly every respect—in shipping tonnage, highly paid personnel, industrial authority, white collar workers, bank deposits, physical plant—Megalopolis is unique and preeminent.

But, if it is unique and preeminent, it is so in terms of debits as well as credits. Gottmann relentlessly ticks them off: "In many parts of Megalopolis the air is not clean any more, the noise is disturbing day and night, the water is not as pure as one would wish, and transportation at times becomes a nightmare."

The significance of Megalopolis is not, however, the fact of its preeminence; it is the fact of its precedence. It is the first case of a condition which will, in the future, shape itself in five or six places in the U.S., as well as in western Europe, Japan, Africa, and South America. Although the book proposes no plans for the prototype or its successors, the facts and analysis are bound to influence the planning that Gottmann feels must come. A moving conclusion testifies that, for better or for worse, Megalopolis is the ultimate outcome of the idea that the U.S. ought to be a "New Order of the Ages."



to use the stirring phrase on the Great Seal of the U.S. Thus, the responsibility of Megalopolis is to demonstrate this order in its highest and best sense.

Gottmann writes: "The prime responsibility of the people in Megalopolis is, however, to themselves. Once they are satisfied they have done all they can . . . to manage their own region and its problems, then they may face boldly the judgement of the rest of the world. . . ." —RICHARD A. MILLER.

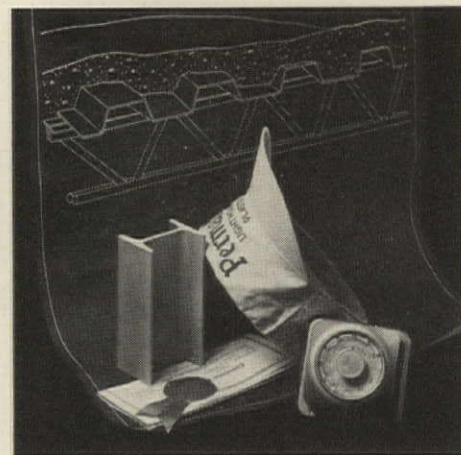
**THE ARCHITECTURE OF MICHELANGELO.** By James S. Ackerman. Published by The Viking Press, Inc., 625 Madison Ave., New York 22, N. Y. Vol. I: 140 pp. 7 1/4" x 9 3/4". Illus. \$12.50. Vol. II: 155 pp. 7 1/4" x 9 3/4". \$12.50.

James S. Ackerman is an art historian who believes that most history of art leaves a great deal to be desired. All too often, he maintains, the analyzers of form line up on one side, and those who prefer to consider art as the illustration of culture line up on the other. Similarly, criticism and historical research tend to go their separate ways. Furthermore, Mr. Ackerman feels that, as a nineteenth-century hangover, most art historians treat monuments in terms of the development and progression of styles rather than as unique monuments in themselves. Ideally, he maintains, all these disciplines should be brought to bear at the same time.

Mr. Ackerman is well qualified to carry out such a task. He is presently professor of fine arts at Harvard; he has taught at the University of California at Berkeley, has been a research fellow at the American Academy in Rome, and has been editor in chief of the *Art Bulletin*. His first book, *The Cortile del Belvedere*, gave scholarly research the excitement of an artistic detective story.

One would, therefore, assume that this two-volume study of the architecture of Michelangelo would be an attempt to realize Mr. Ackerman's theories. Such was probably the original intention, but, along the line, it was decided that a detailed and documented study would be altogether too scholarly for the general market. Consequently, the project was divided into a pair of books. One is a book of general essays on Michelangelo's

*continued on page 166*



## PERMALITE SAVINGS IN SCHOOL CONSTRUCTION

**MATERIALS** Save 2 lbs. per lineal foot on steel by using a size smaller joist. Insulating concrete mixed with Permalite perlite aggregate weighs only 4 1/2 to 6 lb/ft<sup>2</sup>, 2" thick. Saves up to 4 lb/ft<sup>2</sup> over other commonly-used poured-in-place materials.

**LABOR COSTS** Insulate, slope to drain, and form cants and saddles—all in one operation with Permalite concrete. Can be job-mixed or transit-mixed.

**FINANCIAL** Highest fire ratings are earned by a Permalite roof deck. Has saved thousands of dollars a year in insurance costs for many schools.

**OPERATING COSTS** Permalite insulating qualities hold heating and air conditioning costs to minimum levels. Provide up to 20 times the insulating value of ordinary concrete. These roof deck systems, using a 2" thickness of Permalite concrete, 1:6 mix, will have a "U" value of about 0.20.



# Permalite

612 So. Flower St., Los Angeles 17, Calif.

Permalite Expanded Perlite Aggregate is produced by Licensed Franchisees of Great Lakes Carbon Corporation, World's Largest Producer of Crude Perlite.

COLORADO—Permalite Products, Inc., Denver • FLORIDA—Airlite Processing Corp. of Florida, Vero Beach • ILLINOIS—Silbrico Corp., Chicago, Ryolex Corp., Champaign • INDIANA—Airlite Processing Corp., Scottsburg & Vienna • MASSACHUSETTS—The Whittemore Co., Cambridge • MICHIGAN—Gregg Products Co., Grand Rapids • MINNESOTA—Minnesota Perlite Corp., Minneapolis • MISSOURI—J. J. Brouk & Co., St. Louis • NEW JERSEY & NEW YORK CITY—Certified Industrial Products, Inc., Hillside, N. J. • NEW YORK—Buffalo Perlite Corp., Buffalo • PENNSYLVANIA—Pennsylvania Perlite Corp., Allentown, Pennsylvania Perlite Corp. of York, Pa., York, Perlite Manufacturing Co., Carnegie • TEXAS—Perlite of Houston, Inc., Houston, Texas Lightweight Products Co., Irving • VIRGINIA—Virginia Perlite Corp., Hopewell • CANADA—Western Perlite Co., Ltd., Calgary, Alta. Perlite Products Ltd., Winnipeg, Manitoba, Perlite Industries, Reg'd., Ville St. Pierre, Quebec • CUBA—West Indies Perlite Mfg. Corp., S. A., Habana • MEXICO—Materiales Carr, S. A., Mexico City

Get The 1962 Roof Deck Information Now

Since

# HOPE'S ALUMINUM WINDOW WALLS

1818



ADDITION TO MOREWOOD GARDENS, WOMEN'S RESIDENCE HALL  
CARNEGIE INSTITUTE OF TECHNOLOGY, PITTSBURGH, PENNSYLVANIA

*Alfred D. Reid Associates, Architects*

*Navarro Corporation, General Contractor*

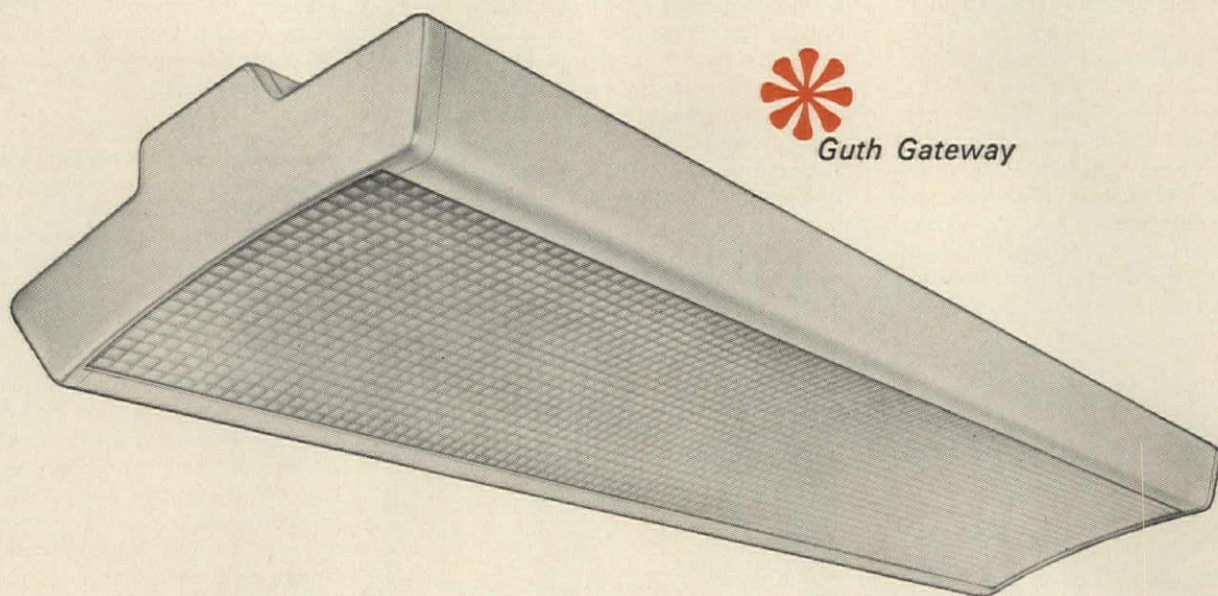
In this distinguished college dormitory the study and bedroom windows are Hope's Aluminum Casements (Tubular Series 110) set into stone masonry surrounds. At the ends of the building, giving light to the corridors and the stair well, are Hope's Multi-story Window Walls rising six floors. In these units Hope's Aluminum Casement and Projected Windows alternate with Hope's Porcelain Enameled Insulated Panels. The example of this construction re-emphasizes the

flexibility of Hope's systems and the complete freedom in layout enjoyed by the architect who uses them. Hope's experienced engineering department works closely with architects in planning. The extra quality of Hope's aluminum specifications and the superior workmanship by Hope's factory and erecting crews assure lasting satisfaction with construction and performance.

*Write for Hope's catalog 172*

**HOPE'S WINDOWS, INC., Jamestown, N. Y.**

HOPE'S WINDOWS ARE MADE IN AMERICA BY AMERICAN WORKMEN



\*

## Sure it looks good, but why specify it for *your* office?

Gateway's intrinsic beauty is obvious. But that's only half the story. Here is the other half — engineering and construction features that make Gateway worthy of your specification. Gateway is *not* a wrap-a-round. The concave bottom actually hinges separately from the rugged 20-gauge steel ends. Simplifies relamping considerably — one strong panel, not an unwieldy basket, to hinge down.

The steel ends won't warp; also they add extra rigidity to the fixture in continuous-row mountings, or as individual units. (No glue or piano wire holding it together.) The 4' or 8', one-piece *tubular* plastic side wings with capped ends (minimize dust and dirt from holding conventions therein) offer greater strength and lower side-brightnesses.

The *concave* Gratelite\* bottoms (choice of Prismoid\*\* or Standard Gratelite) are solidly molded with built-in ultra-violet resistant additives. Both Gratelites feature  $\frac{3}{8}$ " open cubicles — dust and dirt filter thru — doesn't mar beauty.

All the steel parts, including the channel, are formed from electrolytic, *zinc-coated* and phosphatized steel.

There's hardly any chance of their rusting regardless of humidity or climate. Each steel part is finished in the new super hard, super efficient *Acrylic* enamel. This is the finish automakers use, and say "never needs polishing". Paint people tell us "it most closely approaches the physical properties of porcelain enamel"

Of course, each unit includes a CBM/ETL Ballast, plus — we heat test Gateways to insure that ballast-case operating temperatures will not exceed 90°C in a 75°F room ambient temperature. (Add these last 13 words to every specification and watch competitors back away!)

Gateway is available in 2, 3 or 4 lamps — in the same "full-width" fixture — not a corridor looking unit in a carload.

For the final test, write us on your letterhead. We'll have our salesman show you a "live" demonstration of Gateway. If you just don't like salesmen, write us and we'll send our Gateway Brochure. In either case, you'll like Gateway, a fixture that proves itself.

**THE EDWIN F. GUTH CO., 2615 WASHINGTON BLVD., BOX 7079, ST. LOUIS 77, MO.**

\* © U.S. PAT. NO. 2,745,001 — CAN. PAT. 1957, NO. 538,245 — \*\* © U.S. PAT. NO. 2,904,673



Continued from page 163

major architectural designs, very well illustrated by plates and drawings. The other volume is a meticulous and often fascinating compilation of documentation and research.

This division may result in the first volume having a far wider appeal than it might otherwise have had, but it would appear to be the cause of an often unhappy drawback. Mr. Ackerman has chosen the always difficult task of justifying the ways of a great artist to mortal men, and, unfortunately, his best tools—precise data, example,

and detailed explanation—are usually locked away in the companion volume. As a result, he is often forced to attempt to make many of the points in the essays with adjectives alone, or with such jargon as “flowing form” or “volumetric space”—blunt weapons for dealing with a fine art. By contrast, the companion volume is almost overwhelmingly detailed.

But, this is not to say that these are not successful works all told. The subject matter alone ensures that both are important and

engaging volumes, although for different interest groups. One may quarrel with Mr. Ackerman's approach, but it would be difficult to fault him. —WARREN COX

**THE HOMELESS MAN ON SKID ROW.** Prepared by the Tenants Relocation Bureau of the City of Chicago. Available from: D. E. Mackelmann, Director, Tenants Relocation Bureau, 320 N. Clark St., Chicago 10, Ill. 109 pp. 8 1/4" x 11". Illus. Paperbound. Free.

This readable, well-organized study is the best of a growing number of urban investigations (others have been done in New York, Sacramento, Kansas City, Philadelphia, Minneapolis, Detroit, and Los Angeles) into the causes and treatment of “skid row.” Chicago has three large skid row areas, “. . . neighborhoods with a concentration of cheap hotels and rooming houses, numerous taverns, employment agencies, missions, and cheap restaurants . . . communities of homeless men, most of whom are exceedingly poor and many of whom have acute personal problems.” These areas cover a total of 315.5 acres and house some 13,000 men. There are almost no women.

The study, carried out with the aid of federal funds, traces the growth and causes of skid row, and the special problems it presents for the city. It concludes that “. . . despite numerous problems and previous unsuccessful experiences, the most significant finding of this study is that the elimination of skid row is feasible as well as desirable.” This is true not only because skid row is an uncomfortably visible scar on the cityscape, but also because it seems to have outlived whatever usefulness it might once have had.

Chicago's skid row developed in the nineteenth century out of the city's need for a vast pool of unskilled labor. But the growing pains of urban industrialization and the vicissitudes of the business cycle led to an accretion of flophouses, saloons, and lunch counters serving a population increasingly composed of derelicts and problem cases. By World War I, skid row's population in Chicago was about 60,000, and it went as high as 75,000 during the first postwar depression. But post-World War II prosperity had by 1960 trimmed that peak back to around 13,000.

The population of skid row today is composed largely of unemployed or pensioned men, 74 per cent of whom have incomes under \$2,000 a year, and many of whom have no income whatever. They are on skid row because they are either very poor or very sick, or both. Somewhat surprisingly, they are not all chronic alcoholics: about one-third of skid row men are either heavy drinkers or “alcoholic derelicts” but another 40 per cent are light drinkers or teetotalers.

The biggest human problems are not the drunks, as a group, but the sick and unemployable. Most of these men need assistance for their livelihood and their housing,

continued on page 168

**HI-LO COOLERS**  
Trim wall hung models with convenient child-height bubbler; single cooler available, too, in varying capacities.



# Specify the LEADERS in DESIGN and SERVICE



▲ **“FLUSH-TO-WALL” COOLERS**  
HWF-Series coolers in many capacities; fit flush-to-wall to end cleaning cares;

When you specify HAWS, you are sure of getting the best fountain or cooler for any particular location. For over 50 years, HAWS has set the pace with better materials, fine design and superior workmanship. Why settle for less? See the complete array of HAWS products in the detailed catalog—yours for the asking. Write today.



▲ **FIBERGLASS WALL FOUNTAIN**  
Model 71, available in choice of colors at no extra cost.



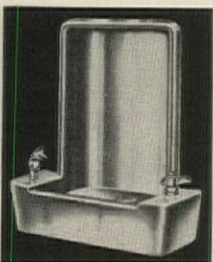
▲ **VITREOUS WALL MODEL**  
Model 61, in smooth vitreous china, features tasteful Haws styling.



▲ **STYLE LEADER**  
Model 1505, a Haws “trend-maker” in vitreous china, with cast wall bracket.



▲ **ENAMELED IRON**  
Model 7X, a rugged classic design in acid resisting enameled iron.



▲ **RECESSED BEAUTY**  
Model 73 fits in the wall, smoothly contoured in stainless steel.

Since 1909



products of **HAWS DRINKING FAUCET CO.**  
1441 FOURTH STREET • BERKELEY 10, CALIFORNIA



SHOWN HERE: THE ORIGINAL STAINLESS STEEL EXIT DEVICE. THE VON DUPRIN 66 . . . IN RIM, MORTISE LOCK AND VERTICAL ROD MODELS. ALSO IN BRONZE. WRITE FOR YOUR FREE COPY OF VON DUPRIN BULLETIN 581.



**Von Duprin**®

***First name in exit hardware . . .  
last word in design and craftsmanship!***

The clean, classic look of stainless steel . . . the warmth and charm of color-coordinated units . . . the finest accessories and trim . . . all that's new and noteworthy in exit hardware design comes to you from Von Duprin. And, behind the design, there is traditional Von Duprin craftsmanship. Every Von Duprin device can be trusted to provide "the safe way out" . . . no matter how often or how seldom used. Always suggest Von Duprin . . . for exit devices that look right and work right!

VON DUPRIN DIVISION • VONNEGUT HARDWARE CO. • INDIANAPOLIS 25, INDIANA

Continued from page 166

and most get minimal shares of both despite the generally good works of skid row missions. And, although total skid row population is declining, a rising proportion of the total consists of young men, many of whom are already chronic alcoholics.

These problems complicate the city's formulation of a plan for action, but the study forthrightly suggests a program. First, it recommends that a Bureau of Migrant and Homeless Persons be established to handle relocation of skid row residents and also to

act as a central reference point for them. Medical treatment and special care for alcoholics, and the physically and mentally disabled, are also prescribed. The physical redevelopment of the area would be accomplished by rehousing elderly pensioners in already-established public and private institutions (presumably with subsidies), and by providing special public housing for the elderly under the federal Section 231 program. The worst of the dormitory hotels would be razed, and the best of them and

other housing rehabilitated. Zoning and building codes would then be rigorously enforced. Some new construction, both residential and commercial, would be necessary.

Although all of this fine study's recommendations suggest that skid row can be erased, and, more important, that its residents can be infused with new hope for better lives, there is one serious admonition. As the report points out, cleaning up skid row depends on how high a priority it gets among city problems. —DAVID B. CARLSON.

**THE THEATER OF THE BAUHAUS.** By Oskar Schlemmer, Laszlo Moholy-Nagy, Farkas Molnar. Edited and with an introduction by Walter Gropius. Translated by Arthur S. Wensinger. Published by the Wesleyan University Press, Middletown, Conn. 110 pp. 7" x 10". illus. \$7.50.

Reviewed by Nicholas Benton

Out of the past, from one of the world's tiniest stages, came some of the theater's biggest and most imaginative ideas.

The theater was located in Walter Gropius' Bauhaus in Dessau, Germany; the period was the late 1920s. Although this theater was short-lived, new approaches in stage design, mechanical equipment, and a unique (for then) concept of "total theater" emerged. Regrettably, the revolutionary experiments executed at the Bauhaus Theater by Oskar Schlemmer, Laszlo Moholy-Nagy, and their disciples were held in check by the rude turns of political history. Fortunately, they can be reborn and reappraised through this remarkable little volume.

Originally published in 1924, *The Theater of the Bauhaus* appears now for the first time in English. The book's typography, layout, and illustrations, accurately reproduced from the 1924 original, are often as startling and bizarre as the thoughts and ideas expressed in Schlemmer and Moholy-Nagy's text, lucidly translated by Arthur S. Wensinger.

According to Schlemmer, the art of the stage, like architecture, is essentially a spatial art. Form must yield to meaning. Schlemmer was primarily concerned with the geometric and mechanical relationship of (stage) space and man. Each, he found, has different laws of order. Whose laws should prevail? Schlemmer answered his own question in a later chapter: "Since we do not have a perfected mechanical stage, man remains perforce our essential element. And of course he will remain so as long as the stage exists."

Moholy-Nagy was the visionary "scientist" of the Bauhaus. His experiments in combining form, motion, sound, light, color, and scent, all by mechanical means, were the first tentative steps toward a "total theater." Largely due to these original theatrical concepts, Gropius later designed his Total Theater in 1926 for Erwin Piscator, a project

continued on page 174

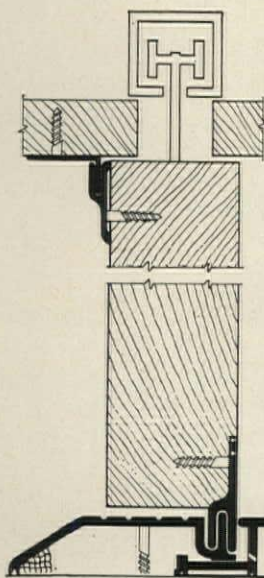
# ZERO HAS THE WEATHER STRIPPING YOU NEED



Get ZERO's new 1962 Catalog, with full size details of our complete line of stripping. Write for saddles & weather your copy today!

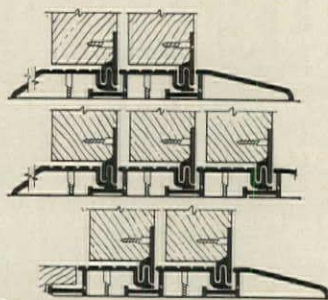
**ZERO Weather Stripping for:**

- Doors
- Windows
- Lightproofing
- Soundproofing
- Sliding Doors
- Saddles
- Saddles for Floor Hinged Doors



**SLIDING DOOR SADDLES**

This effective, versatile equipment provides positive interlocking — allows easy operation. Available in extruded aluminum and bronze.



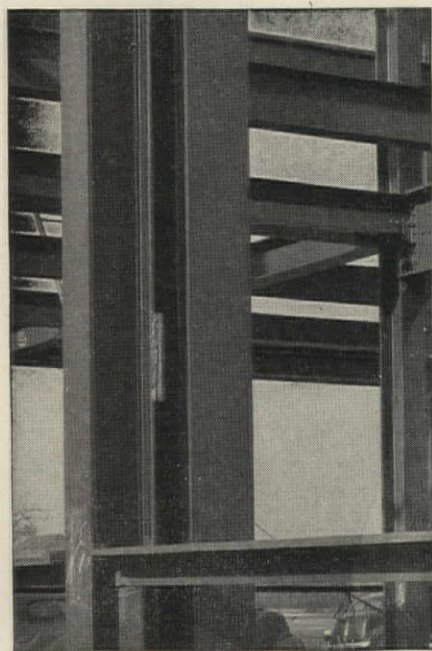
19b-ZER



**ZERO WEATHER STRIPPING CO., INC.**

451 East 136th St., New York 54, N.Y. • LUdlow 5-3230

# There can be no compromise here!



The prime coat is the basic foundation that determines the long-lasting performance of coatings

There can be no compromise with the prime coat — it is the *basic* foundation, it must take hold and adhere tightly, it must provide a sound, compatible base for the finish coating. It is here that Rust-Oleum's experience as corrosion-resistant specialists can help you. Whether it's a shop coat by the fabricator, or job site application over structural steel, Rust-Oleum has the right primer for the specific job — from quick-drying primers for shop coating, unique primers to apply directly over rust, or bare metal primers. For the fullest measure of protection — specify the Rust-Oleum *System* of primer and finish coat. Your nearby Rust-Oleum Industrial Distributor and your Rust-Oleum Factory Specialist will be happy to work hand-in-hand with you.



See our complete catalog in Sweets featuring actual color chips.



# RUST-OLEUM®



There is only one Rust-Oleum. Distinctive as your own fingerprint. A matter of excellence.

## STOPS RUST!®

RUST-OLEUM CORPORATION  
2514 Oakton Street  
Evanston, Illinois

New 30-page Rust-Oleum Architectural Specifications Catalog Features actual color charts. Clip coupon to your letterhead for your free copy of Form No. 259-A.



# Step up

to advanced water service with sanitary, efficient foot control systems...



## PEDAL VALVES & SERVICE FITTINGS



Hospitals, Doctors, Dentists



Maintenance



Laboratories



Fountains



Washrooms



Meat Handling, Kitchens



*Sanitary water flow—at the touch of a toe*

The forward-thinking systems for forward-thinking planners

Architects, engineers, specifiers, plumbing contractors, fabricators... all experienced professionals, who take a hand in the design of water service, have taken the progressive step forward with T & S foot control systems. They're sanitary! They're quick! They're automatic! A simple touch of the toe activates the T & S system for rapid filling, cleaning or spraying in literally hundreds of commercial, industrial and institutional applications. Sensitive, variable flow control with positive, automatic shut-off improves efficiency and water conservation. System layouts accommodate any combination for wall, floor or deck mounting. Learn why leading planners today recommend and specify T & S quality-built pedal valves and service fittings for their newest, most advanced design water flow installations. Investigate the advantages for your organization now. A T&S field man will gladly discuss it with you. Write or call for Catalog No. 442PV.

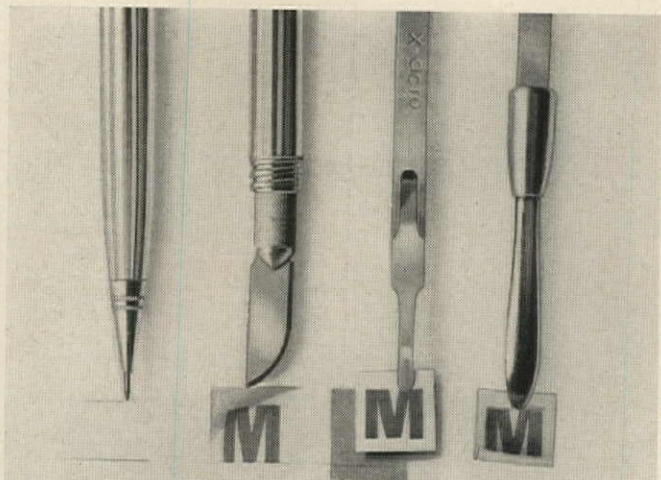
**T & S BRASS AND BRONZE WORKS, INC.**

134 Magnolia Avenue, Westbury, L.I., N.Y.

Area Code: 516 / EDgewood 4-5104

NATIONWIDE SALES AND STOCK COVERAGE

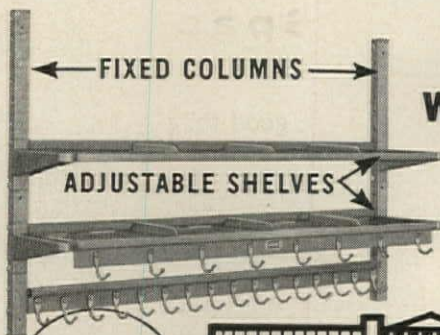
PRE-RINSE • GLASS FILLERS • WATER STATIONS • FAUCETS • PEDAL VALVES & SERVICE FITTINGS • POT FILLERS • KETTLE KADDIES • SPRAY HOSES • ACCESSORIES • LAB-FLO LAB. SERVICE FIXTURES



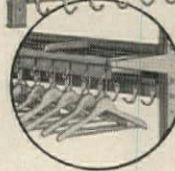
## x-actographic cut & paste-up set

SCIENTIFICALLY DESIGNED FOR WORKING WITH PRESSURE SENSITIVE MATERIALS. Speed, accuracy and flexibility are at your fingertips with the new X-Actographic CUT & PASTE-UP SET. Ideal for the preparation of graphic presentations—charts, graphs, drawings, maps, technical illustrations, mechanicals. Surgically sharp, the X-Acto knife with its clip-on transparent safety cap assures precise cutting. The mechanical pencil is on the opposite end of the knife for marking guide lines. Cross-action pick-up forceps hold the smallest materials, which can be securely affixed with the burnishing end of the forceps. Also included are three interchangeable blade styles in a five-blade pack. The new X-Actographic CUT & PASTE-UP SET #61, luxury-packaged in a clear, compact, protective polystyrene container is just \$3.00. Components are also available individually from your X-Acto dealer.

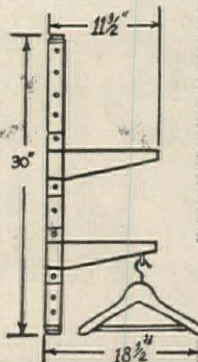
X-ACTO PRECISION TOOLS, INC., 48-41 Van Dam St., Long Island City 1, N.Y.



**Adjustable WALLMOUNT Hat and Coat Racks**



**Schooline® WARDROBE SYSTEMS**



Mount directly on any wall—shelves adjustable for height on permanently fixed columns to accommodate any age group 3'2" and 4'2" long. Units fit in anywhere or interlock to make continuous racks of any length or desired capacity. Double rails below double hat shelves take coat hooks or coat hangers. Holds wraps spaced apart in orderly, healthful manner, 5-6 hooks or 3-4 coat hangers per running foot. Fireproof, vermin-proof, strong beyond need. Lifetime construction—welded heavy gauge steel, baked enamel finish.

**Matching Overshoe Racks**

Mount on wall at baseboard—keep overshoes paired, and off the floor.



Write for Schooline Catalog SL-48

**VOGEL-PETERSON COMPANY**

RT. 83 AND MADISON ST. • ELMHURST, ILL.



## Control of Space is Nothing New...

The ancients had a good thing going.

The stars controlled the affairs of men . . . and only the astrologer knew how to interpret the secrets of the heavens.

Well, perhaps . . .

But there is little doubt that the space around us has been studied, mulled over, and discussed since man first blinked at the sun.

Some answers we do have.

In 1911 — the Dark Ages by modern technical reckoning — John T. Fairhurst developed a new principle now known as "Space Engineer-

ing." Here was the first, long step toward control of the inflexible inner spaces in which we live.

Today the Fairhurst Company marks a half century of close collaboration with Architect and Designer. Today, a Movable Wall by Fairhurst can solve the most demanding problems arising from the multiple use of space.

This experience is yours for the asking. When you think of Space . . . Think of Fairhurst First.

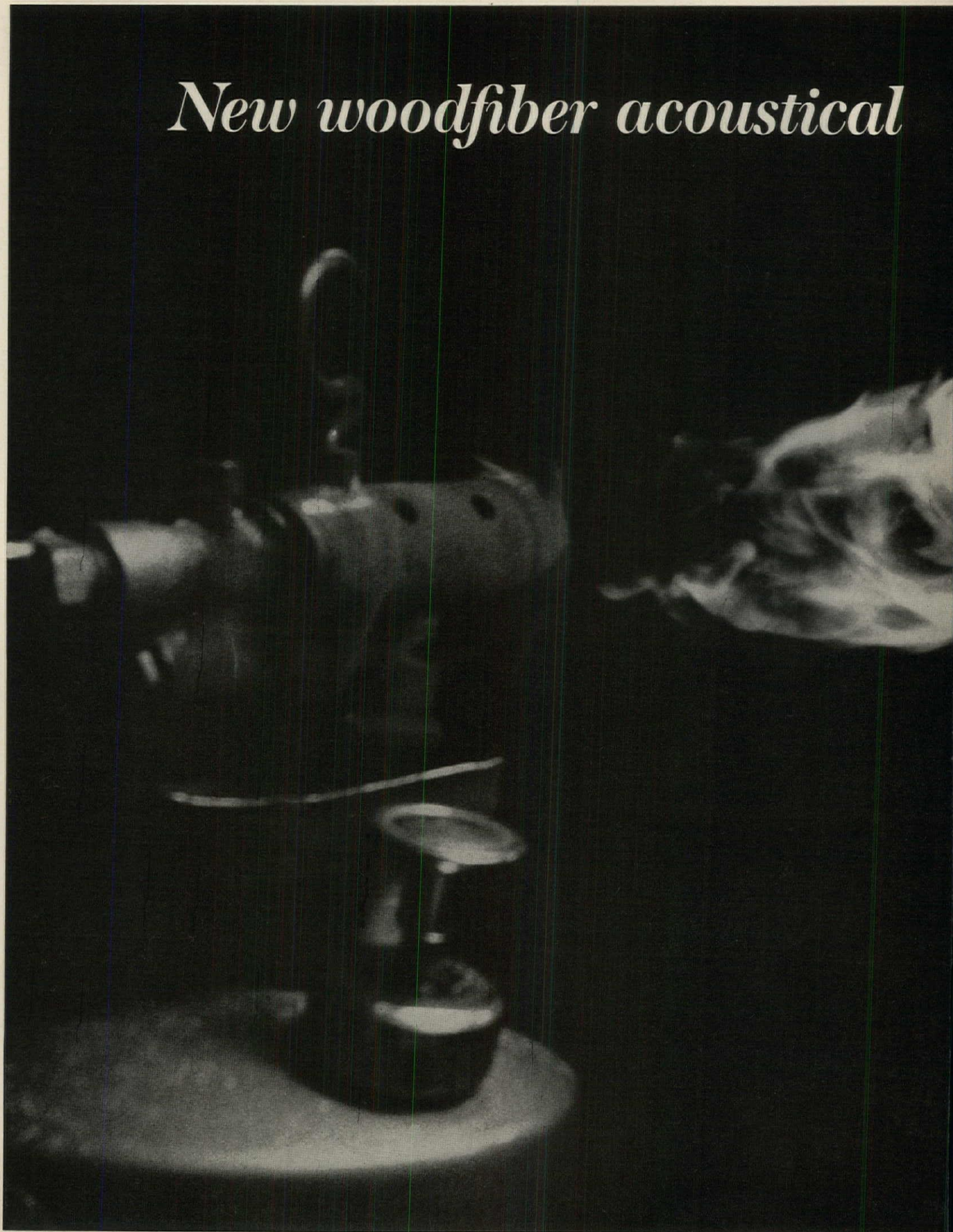
*Write for free illustrated brochure describing in detail specific applications of Space Engineering*

JOHN T.  
*Fairhurst*  
 ®

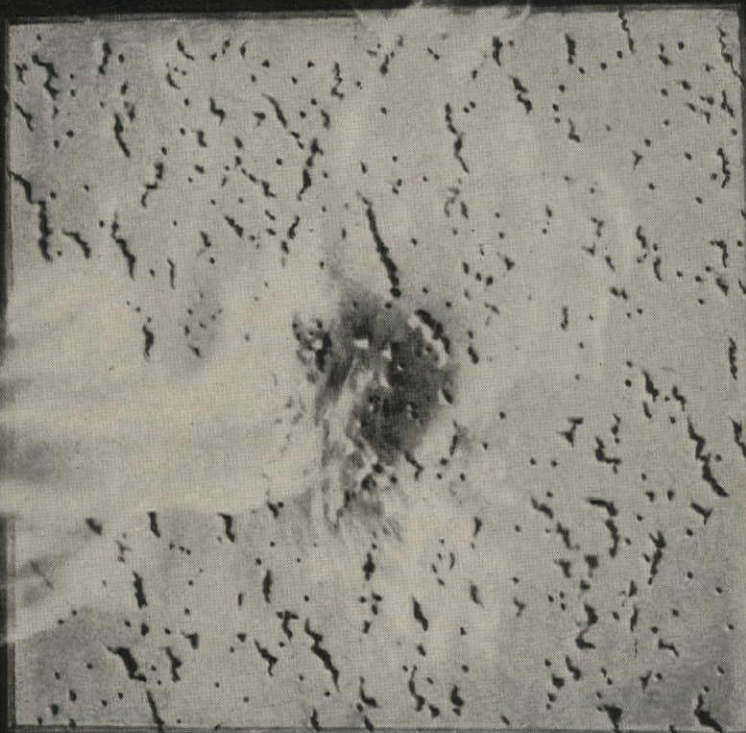
COMPANY, INC.  
 45 WEST 45th STREET, NEW YORK 36, N. Y.

Manufacturers of Unitfold®  
 & Unitslide® Folding Walls

*New woodfiber acoustical*



# tile that can't spread fire



## First time ever! Incombustible tile safety at "woodfiber tile" prices!

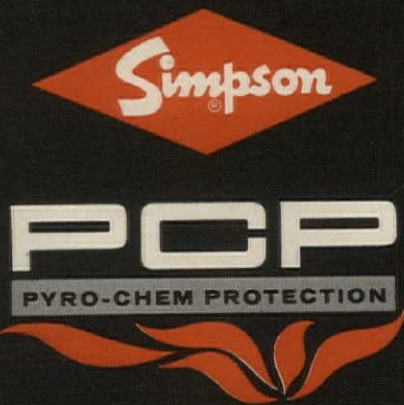
Underwriters' Laboratories, Inc., inspects and labels Simpson PCP ceiling tiles. Like mineral tile, Simpson PCP has a Type 1 flame spread rating of less than 25.

In many ceiling installations PCP woodfiber tiles are now replacing mineral tiles that cost up to 50% more.

Pyro-Chem Protection is an exclusive Simpson process. Not just a surface treatment, every fiber throughout the tile is impregnated with special PCP fire-proofing chemicals.

Simpson PCP Acoustical tiles are not only safe and economical, they are acoustically efficient: NRC ratings up to 70. Room-to-room attenuation factors average 37.6-41.5 db. Available in 4 beautiful Forestone® sculptured textures and 2 perforated designs.

Check the Yellow Pages under "Acoustical" for your nearest Simpson Certified Contractor. Or write today for PCP samples and detailed information.



**Simpson Timber Company, 2085-1 Washington Building, Seattle 1, Washington**

**For Better Doors,  
EVERYTHING POINTS  
To Kinnear...**

For the extra advantages of coiling, interlocking-steel-slat action (originated by Kinnear) —and ...

... for doors that open completely out of the way ...

... for efficient doors that offer even greater convenience when power-operated ...

... for all-metal protection against wind, weather, intrusion and vandalism ...

... for doors that permit full use of surrounding floor, wall, and ceiling space at all times ...

... for doors that often deliver 30, 40 — even 50 or more years of low-cost service ...

... for heavily galvanized doors that give many extra years of corrosion-free service ...

# Kinnear Metal Rolling Doors

used in the  
INTERNATIONAL  
BUILDING  
San Francisco, Calif.



—and for exclusive REGISTERED doors for which all parts are always replaceable from master details kept in fireproof vaults, insist on —

**The KINNEAR Mfg. Co.**

FACTORIES:

1640-60 Fields Ave., Columbus 16, Ohio  
1742 Yosemite Ave., San Francisco 24, Calif.  
Offices and Agents in All Principal Cities

**KINNEAR**  
ROLLING DOORS  
Saving Ways in Doorways

*Continued from page 168*

which had to be abandoned when Hitler came to power. (Ironically, the only example which begins to approach Gropius' Total Theater in America is the Loeb Theater at Harvard, designed by Hugh Stubbins in Gropius' own stamping ground.)

The principles of the theater advanced by Schlemmer and Moholy-Nagy had virtually no application to the American theater of the thirties, forties, and fifties. At best there may have been parallel movements, notably in the field of the dance (Doris Humphrey, Charles Weidman, etc.). But now with the publication of this book, the revolutionary ideas of the old Bauhaus theater could be far reaching, indeed, with U.S. architects and theater professionals.

*Mr. Benton, FORUM's advertising promotion manager, is a sometime theatrical producer and a minor theatrical angel.*

**EXCHANGE BIBLIOGRAPHY No. 19, HISTORY OF CITY PLANNING.** Compiled by Thomas Mackesey. Edited by Rolland Mills. Published by the Council of Planning Librarians, 6318 Thornhill Dr., Oakland 11, Calif. 65 pp. 8½" x 11". Mimeographed. \$2.

The Council of Planning Librarians was organized five years ago with the worthy goal of bringing order to the chaotic state of source materials on planning. Since then, a series of bibliographies has appeared covering such topics as aircraft noise control, automatic data processing in the urban planning process, and industrial parks. This, the nineteenth in the series, lists an extensive variety of material on the history of city planning from ancient Egypt to the present.

**MID-CENTURY ARCHITECTURE IN AMERICA.** Edited, with an introduction, by Wolf Von Eckhardt. Published by The Johns Hopkins Press, Homewood, Baltimore 18, Md. 254 pp. 9" x 11". Illus. \$12.50.

This picture book provides an inclusive, and occasionally revealing, catalog of the 228 buildings which received A.I.A. awards from 1949 through 1961. The 54 Honor Awards are accorded two pages each, the 174 Merit Awards, a picture apiece. Buildings are grouped by type, and an index and biographical notes on the architects appear at the back. No attempt is made to go beyond material originally submitted by the architects in the awards program, and no building is analyzed in any depth or detail. A book for the record, for clients, and for those who are curious about the architecture of awards.

**THE TURNING POINT OF BUILDING.** By Konrad Wachsmann. Published by Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y. 232 pp. 9¼" x 10½". Illus. \$15.

The English translation of famed Engineer Wachsmann's *Wendepunkt im Bauen*, published in 1959.

END





# DEPTH OF EXPERIENCE

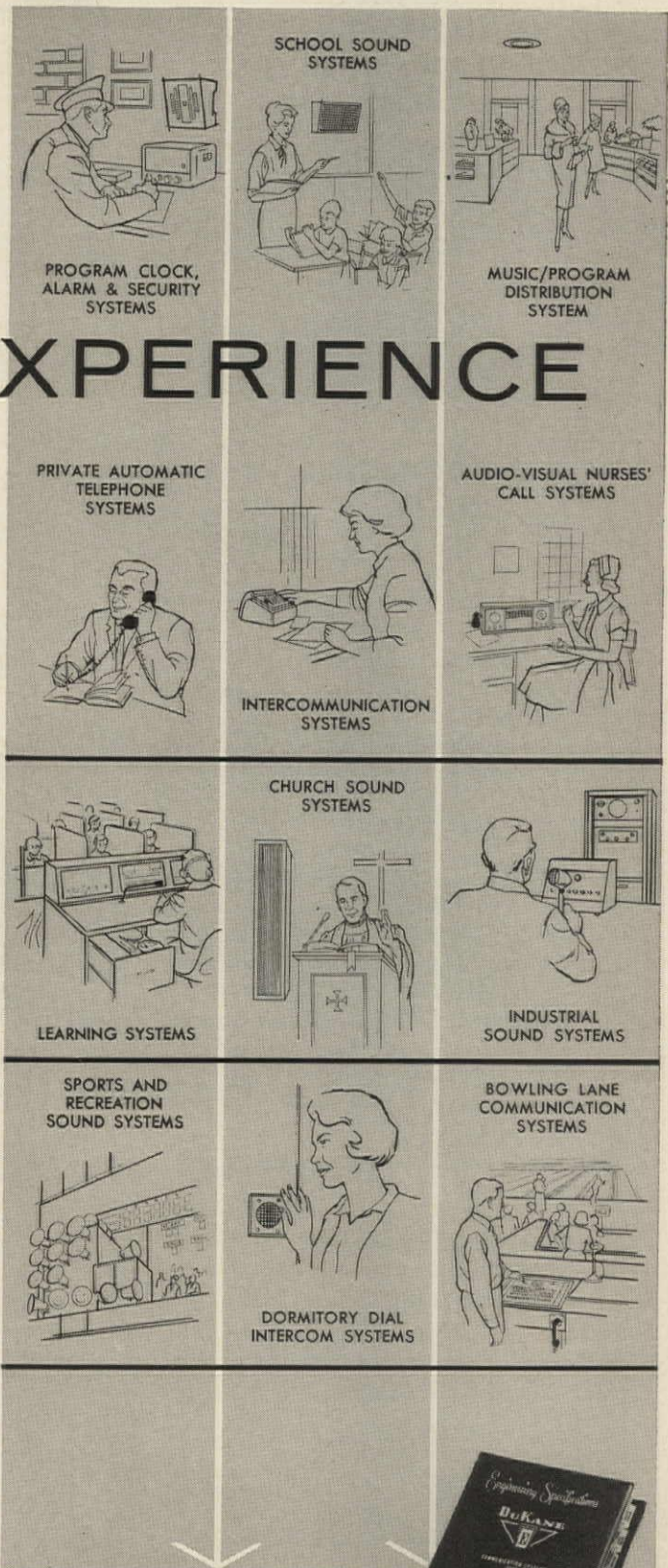
## IN SOUND AND COMMUNICATION SYSTEMS

*Experience counts—  
count on DuKane!*

Thousands of DUKANE commercial sound and communication system applications are turning in enviable daily records of efficiency, dependability, low maintenance and long life. All of this experience is as near as your telephone.

A call to your local DUKANE distributor provides you with a sound and communication system expert completely familiar with paging, program distribution, internal communications, clock signals, private telephones and many more. Your DUKANE distributor is fully trained to assist you in planning and selecting an appropriate system to meet all sound and communication needs, supervising its installation for maximum life, serviceability and good looks and following up the system installation with service to maintain complete customer satisfaction in the years to come.

Schools, hospitals, churches, industrial, business, institutions, hotels, motels, recreation and sports areas, etc., rely on the local DUKANE distributor for Depth of Line, Depth of Experience and Depth of Services. Contact him—get his know-how working for you now.



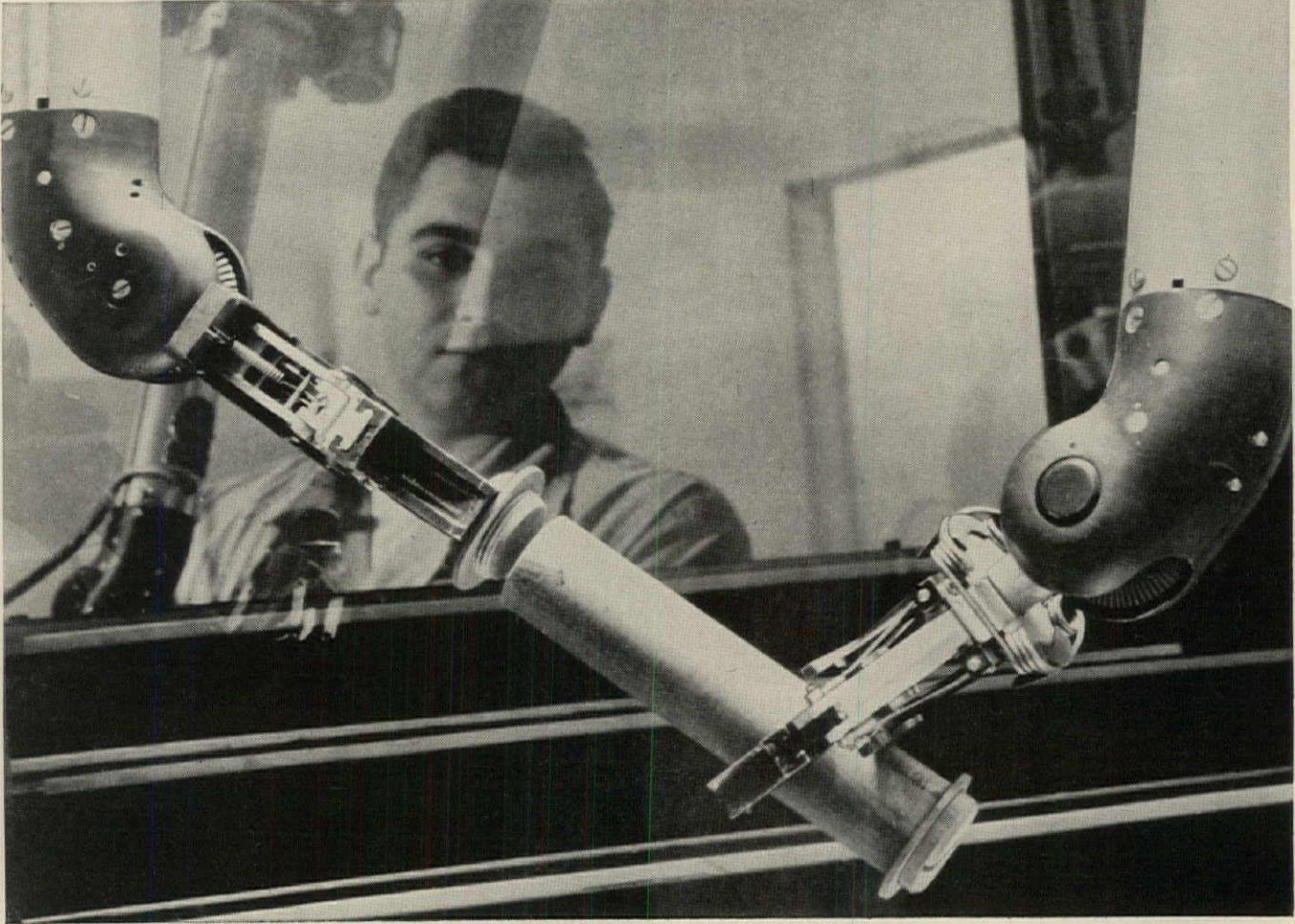
WRITE TODAY FOR FULL DETAILS & SPECIFICATIONS ON ALL DUKANE SOUND AND COMMUNICATION SYSTEMS

NAME \_\_\_\_\_  
 TITLE \_\_\_\_\_  
 FIRM \_\_\_\_\_  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_



**DUKANE**  
**CORPORATION**  
 COMMERCIAL SOUND DIVISION  
 DEPT. AF-32 / ST. CHARLES, ILLINOIS

Is STAND-BY a big enough word in your POWER PLANNING?



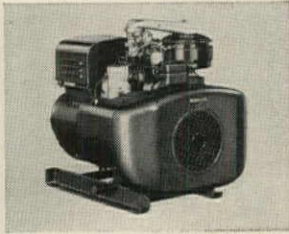
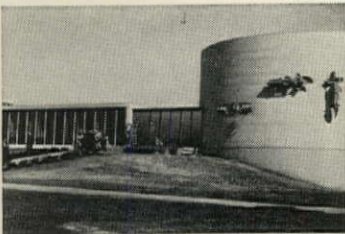
## These hands that must not fail depend on unflinching power

These nuclear research master-slave manipulators must not fail, cannot fail—and will not fail, even under the duress of electric power failure. Here, at Western New York Nuclear Research Center, in Buffalo, a Kohler 5 KW standby generator provides assurance against disaster due to power loss in nuclear experiments. The

master control console, reactor tank ports and other major electrically powered facilities will receive power instantaneously from the Kohler stand-by plant in the event of sudden normal power loss.

Kohler stand-by plants have proved their capacity to handle power emergencies in a routine manner in countless applications. In hospitals and schools, laboratories and industries, offices and commercial houses, adequate emergency-power planning has included Kohler plants. In planning reserve power needs, consider the toll exacted by power failure.

Full information on the many Kohler electric plants in sizes from 500 to 115,000 watts for stand-by (and sole) power use is available from your nearest Kohler Distributor. Or, write direct to the address below.



New York Nuclear Research Center uses Kohler 5 KW stand-by unit

# KOHLER OF KOHLER

Kohler Co., Established 1873, Kohler, Wisconsin

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS



everybody sells  
chrome-plated  
fittings...

## Kohler sells what's underneath: ALL-BRASS

Why fret about what's underneath? Well, some fittings just don't hold water—literally. Underneath a fancy chrome finish the metal is soft. It tires easily. And then the trouble starts: leaks and drips; complaints and service calls.

Kohler fittings are All-Brass. Every part of every fitting. (Correction: there's a nylon washer in the Velvet—the anti-drip valve unit. The *rest* is brass.)

Ask a plumber, he'll tell you brass is best. Brass resists alkalinity and salinity in water.

Brass works like new long after others call it quits. And brass is the ideal base for holding on to a bright chromium finish.

Above is the "Centaur" fitting. All-Brass, of course. It's from the Kohler Aquaric line—priced to prove you don't have to pay a premium for quality brass fittings.

Keep this thought in mind: All that glitters is not brass. Specify Kohler fittings and you *know* they're All-Brass.

That's the only kind we make.

## KOHLER OF KOHLER

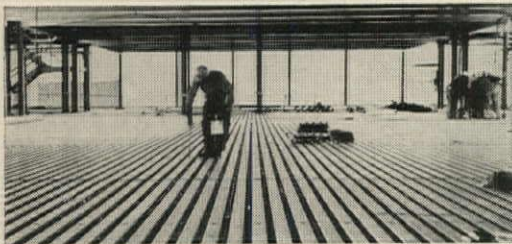
Kohler Co., Established 1873 • Kohler, Wisconsin

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

# ROBERTSON Q-FLOOR

## SOLVES STRUCTURAL AND ELECTRICAL PROBLEMS AT THE NEW INTERNATIONAL BUILDING

In this fine new structure, just as it has for thousands of buildings, large and small, during the past three decades, Q-Floor—the *original* cellular steel sub-floor—continues to add its special advantages. Strong and light in weight, it is quickly and cleanly installed in any weather and its ability to make floor area 100% available for wiring either immediately or far in the future has made it a favorite with owners and designers. Call your Robertson man. He can show you how another new Robertson construction "first" . . . Q-Air Floor . . . can help you build a better building.



Robertson Q-Floor construction is precise. The cells line up accurately, permitting easy and safe pulling of wires.

**H. H. ROBERTSON COMPANY**  
2403 Farmers Bank Bldg., Pittsburgh 22, Pa.

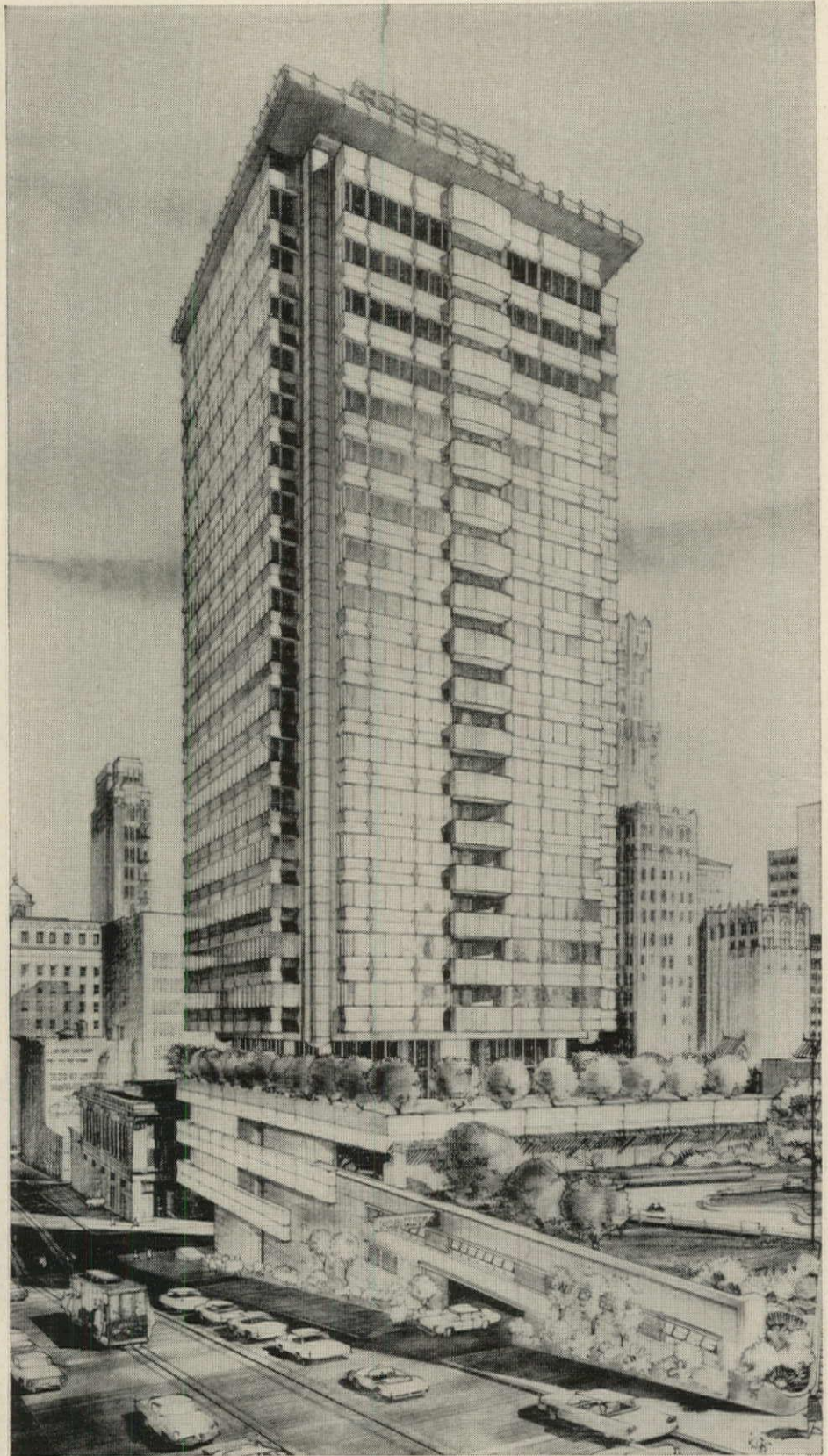
Please send me a copy of Q-Air Floor booklet . . .  
"20 REASONS".

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_



**INTERNATIONAL BUILDING**—San Francisco, California; Anshen & Allen, architects; Gould & Degenkolb and Robert D. Dewell, structural engineers; Eagleson Engineers, mechanical engineers; Charles Krieger, electrical engineer; Dinwiddie Construction Co., contractor. All are San Francisco firms.

# H. H. ROBERTSON COMPANY

PLANTS AT AMBRIDGE, PENNSYLVANIA AND STOCKTON, CALIFORNIA  
IN ENGLAND — ROBERTSON THAIN LTD., ELLESMERE PORT, CHESHIRE • IN CANADA —  
ROBERTSON-IRWIN LTD., HAMILTON, ONTARIO • EDMONTON, ALBERTA

## ARCHITECTS • INTERIOR DESIGNERS!

For more than three decades, **SCALAMANDRÉ** has been called upon to furnish Fabrics, Trimmings and Wall Coverings for America's leading Historical Shrines, Restorations, Reproductions and Modern Interiors; Commercial, Institutional and Residential. Our experience is vast, unlimited and diversified. Avail yourself of our newly established Courtesy Consultation Service. Call or write:

**Gino Scalamandr , Vice President**  
**Architectural Contract Division**  
**37-24 24th Street — Long Island City 1, N.Y. — ST 4-0794**

**OR VISIT OUR SHOWROOMS LISTED BELOW**  
 Fabric and Wallpaper coordinations; Jacquard and Hand Printed on finest Silks, Cottons and Imported Linens; selected synthetic fibres. 20,000 patterns to choose from.

**WHEN IN NEW YORK BE SURE TO VISIT OUR MILL. NO ORDER TOO LARGE OR TOO SMALL. SAMPLE CUTTINGS AVAILABLE.**

*Scalamandr *

Main Showroom: 63 East 52nd St., N. Y. C.

ATLANTA • BOSTON • CHICAGO  
 LOS ANGELES • PHILADELPHIA • SAN FRANCISCO

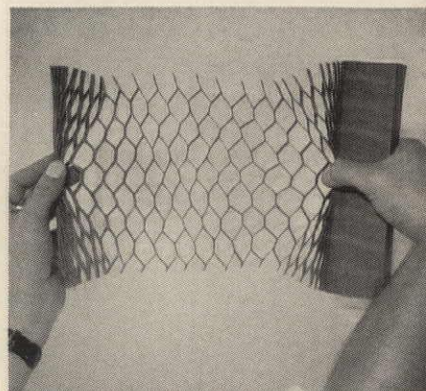
## WHERE THE BLUE CHIPS ARE...

Year after year Architectural FORUM has consistently reported the most significant new buildings designed by America's architects. In the last decade, for example, FORUM has published 82 American Institute of Architects award winning buildings—more than the next two magazines combined.

And, 1961 was no exception. Of the 16 buildings receiving AIA awards, seven appeared exclusively in FORUM and another three appeared first in FORUM.

If you would like to have the publishing box-score of the 1961 AIA award winning buildings, send for a copy of the brochure, "Where the Blue Chips Are...", Architectural FORUM, Room 18-23, Time and Life Building, Rockefeller Center, N. Y. 20, N. Y.

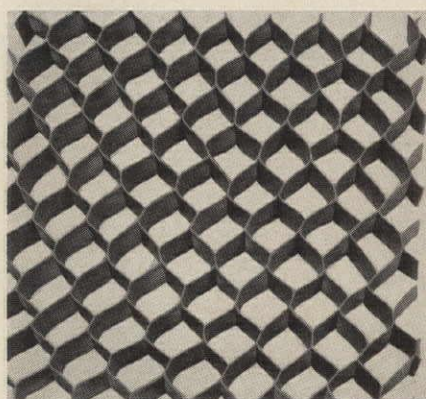
A. I. A. NO. 17  
 SWEET'S CATALOG 9A  
 UN




**EXPANDING SLICE.** HONEYCOMB made from untreated or impregnated Kraft has inherent durability. It is available in unexpanded slices or expanded sheets. Weighs only 1 to 2½ lbs. per cubic foot. An ideal core material for doors, office partitions, interior panels.

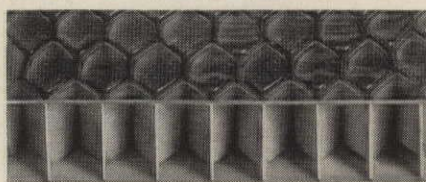
## Architect's guide to Union Honeycomb core: [FORMS]

On a weight for weight basis, UNION HONEYCOMB is the strongest—and most economical—core material known. Write today for full information and the names of fabricators near you.

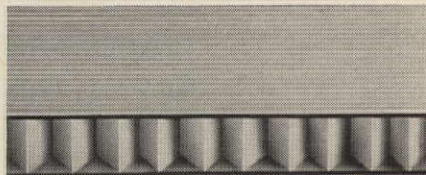


**EXPANDED SHEET.** For critical structures—roofs, floors, walls and other components—specify UNION HONEYCOMB impregnated with phenolic resin. This tough Kraft core resists moisture, decay, temperature extremes.

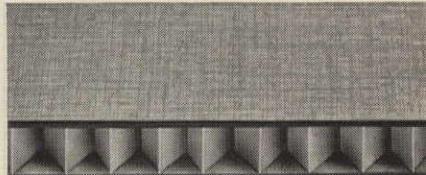
 **UNION-CAMP.**  
 HONEYCOMB CORE  
 Union Bag-Camp Paper Corporation  
 Dept. AF-1, 233 Broadway, New York 7.



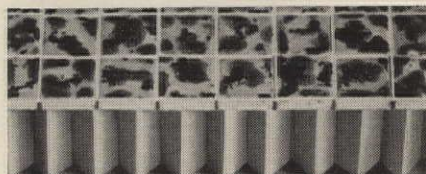
FIBRE GLASS



METAL




PLASTIC



TILE

**SANDWICH PANELS.** UNION HONEYCOMB inner core can be faced with metal, wood, asbestos, gypsum-board, hard-board, plastic—even marble. Decorative idea: HONEYCOMB sandwiched between transparent or translucent plastic sheets for handsome interior panels.



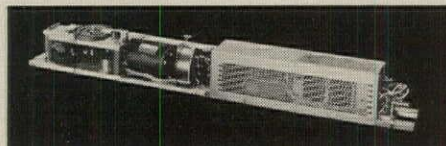
*The only automatic entrance  
you can trust a child around...*

## Kawneer, the SAFE automatic entrance

□ In an accident analysis for two supermarket chains, an insurance company found that each chain had 98 accidents per year involving automatic entrances (53% struck by the door, 36% hands or arms caught in closing door). Children from 2 to 5 were involved in 60% of the accidents. Cost of settling the 196 accidents studied: \$26,000. (No Kawneer Automatics were involved.) □ Specifying the safe Kawneer automatic entrance spares a great many innocent people injury and pain, and saves your client considerable money. □ The Kawneer Automatic is safe because it provides finger and hand protection at

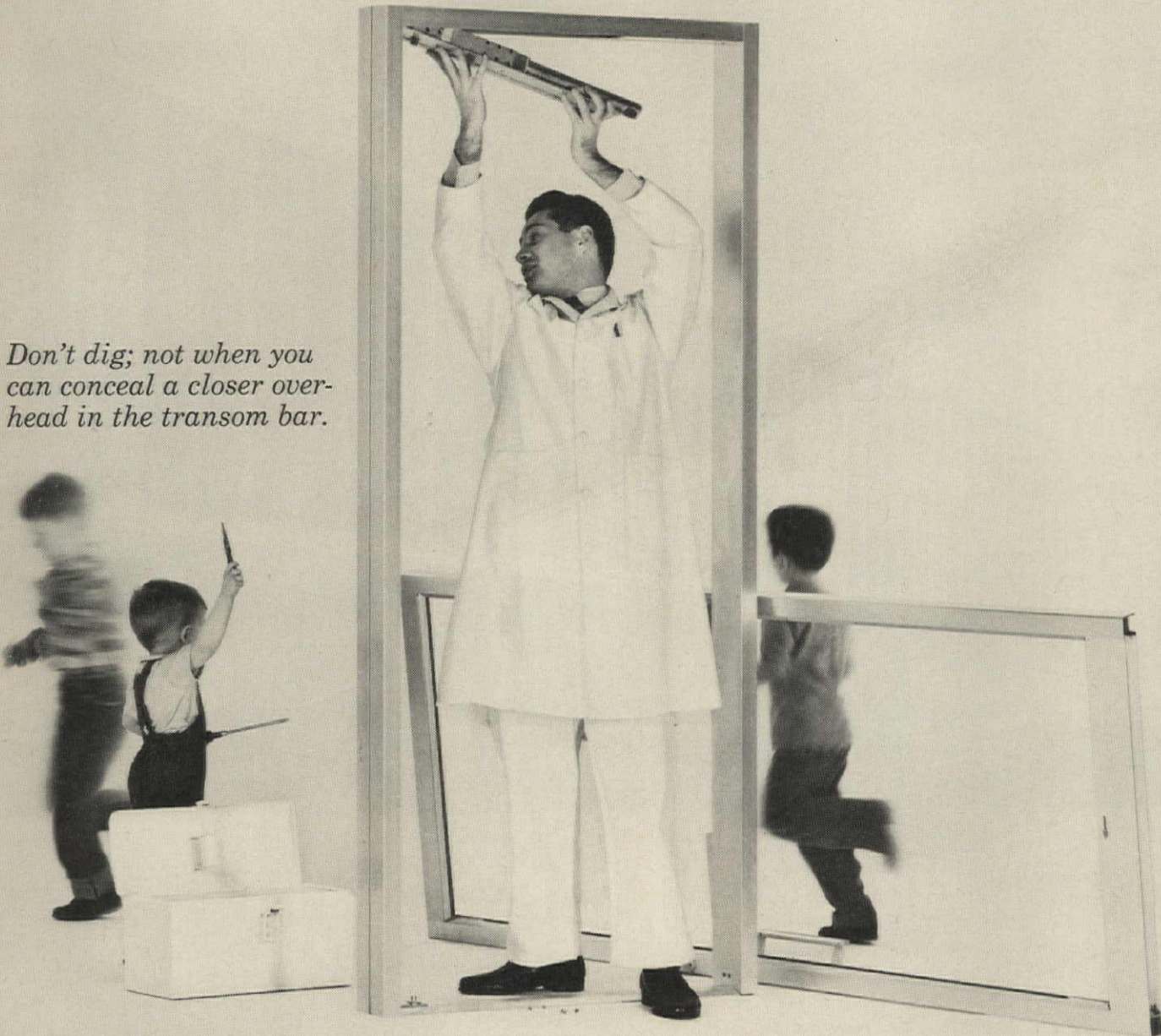
both jambs. It is well-nigh impossible for the door to swing back and hit those who go through it the wrong way, because when the door is pushed through the wrong way, the power cuts off. This also serves as a panic breakaway.

□ The new Kawneer A5 Automatic is most reliable... it is the only automatic in which the whole entrance—operator, mat, door and frame—carries the UL and CSA labels. Service is now excellent, and being improved upon every day by a growing network of service agencies. □ But first and foremost, remember that when you specify Kawneer, you specify the safe automatic entrance.



One of the reasons why the Kawneer Automatic is priced so competitively is that the operator is so easy to install... it slips right into the transom bar.

*Don't dig; not when you can conceal a closer overhead in the transom bar.*



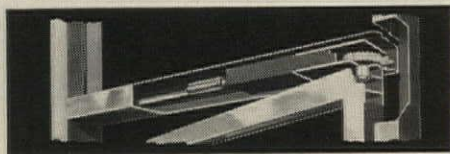
## Kawneer's ECONOMICAL way to conceal a closer

□ It costs time and money to locate a cement case for a floor closer in exactly the right spot. And it costs even more when, in spite of all precautions, the cement case ends up located in the wrong spot. Not to mention the fact that ripping into the cement with a jackhammer in an effort to correct the mistake can be dangerous . . . broken reinforcement or ruptured waterproofing. □ Kawneer provides a simple, easy solution; a closer concealed overhead in the transom bar. □ Consider the advantages. The architect gets a clean looking entrance—same as with a floor closer, but doesn't have to allow for the reinforcement and waterproofing being

placed deep into the slab. □ Contractors can pour floors faster, without waiting for cement case forms to be built and located. □ The sub-contractor saves because his installation costs are much lower than with floor closers. □ Yet, even though it offers all these advantages, The Kawneer Concealed Overhead Closer sells for the same or less than floor closers. □ The Kawneer Concealed Overhead Closer comes complete with door and frame. □ Specify a Kawneer Concealed Overhead Closer entrance package; it's the economical way to conceal a closer.



KAWNEER CO., Niles, Mich., Richmond, Calif.  
KAWNEER CO. CANADA, LTD., Toronto, Ontario.



The Kawneer Concealed Overhead Closer fits neatly into the 1 3/4" x 4 1/2" transom bar. It is the only concealed overhead closer that has been time and work-proved for over four years.



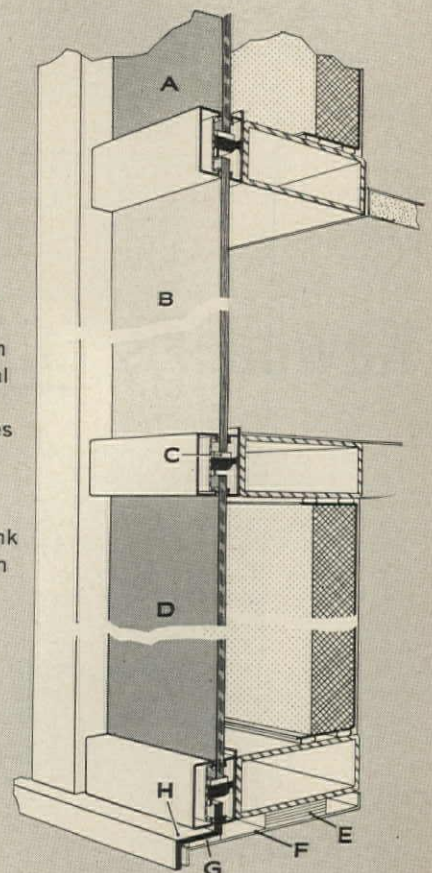
Motorola Western Military Electronics Center, Phoenix, Arizona  
 Architect: Edward L. Varney—Associates, Phoenix, Arizona  
 Contractor: T. G. K. Construction Co., Inc., Phoenix, Arizona



Manchester Savings Bank, Manchester, N. H.  
 Architect: W. G. Knoebel, AIA, St. Louis, Missouri—Associate,  
 John D. Betley, AIA, Manchester, New Hampshire  
 Consultant & Contractor: Bank Building & Equipment Corporation  
 of America, St. Louis, Mo.

## PITTCO 82-X

Weep-vent system and flexible, metal joint sealing compound assures leak-proof construction. Prefabricated components shrink on-site installation costs.



- A.  $\frac{1}{4}$ " SPANDRELITE
- B. Clear glass
- C. Setting Block
- D.  $\frac{1}{4}$ " SPANDRELITE

- E. Leveling shims
- F. Flashing
- G. Sectional aluminum shim
- H. Drainage and ventilation



Gibraltar Savings & Loan Association, Houston, Texas  
 Architects: Greacen & Brogniez, Houston, Texas  
 Assoc. Architect: J. Victor Neuhaus III, Houston, Texas  
 General Contractor: Marshall Construction Co., Houston, Texas



## PITTCO® curtain wall systems offer you design flexibility plus reliability

Whether the plan you have in mind is a large project or a small one, you will find a greater degree of design flexibility when you use PITTCO Architectural Metal. Here's why:

First of all, you can work with *several* curtain wall framing systems—82X, 25X, "900" series and the new 670—they're *all* precisely engineered to meet the most rigid architectural requirements.

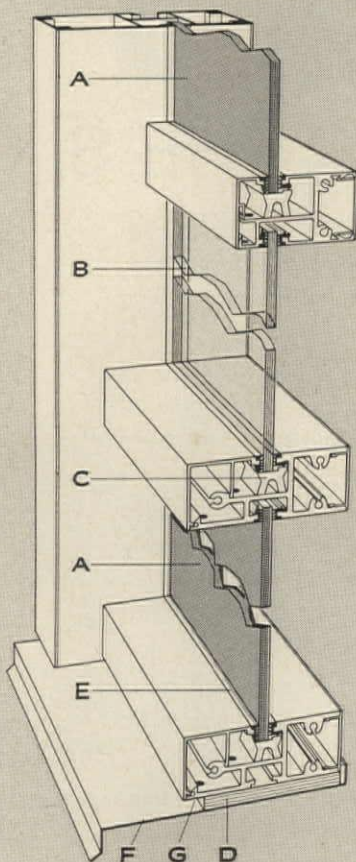
You'll find the widest variety of rolled and extruded components—sash, jambs, sills, facing moldings, division bars—to suit any architectural style. When your plans call for double-glazing, the PITTCO 25X provides a framing system especially designed to accommodate TWINDOW® Insulating Glass.

The related components of the 82X and 25X systems come in aluminum, bronze or stainless steel. The all-aluminum mullions and muntins of the "900" series are interchangeable.

Every PITTCO curtain wall has the unique weep-vent system that drains water condensation. And the rigid construction of these PITTCO curtain walls stands up to high wind loads.

All these PITTCO curtain wall features give you greater design flexibility . . . mean more opportunities to make your design ideas materialize.

What's more, PPG will assume full responsibility for providing a complete curtain wall job—from your design to job completion.




### PITTCO "900"

Interchangeable, all-aluminum mullions and muntins mean greater design potential for high-rise, as well as, low-rise buildings. Clean, simple lines of sections add good looks to durability.

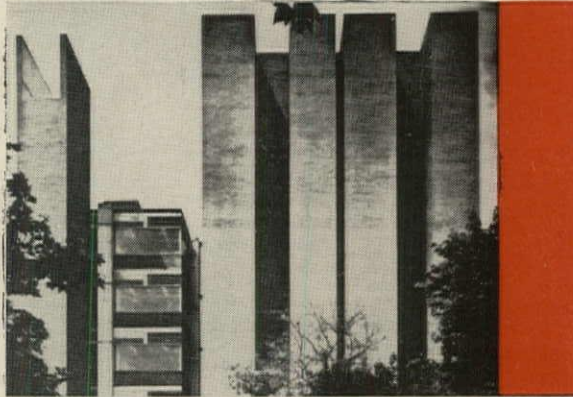
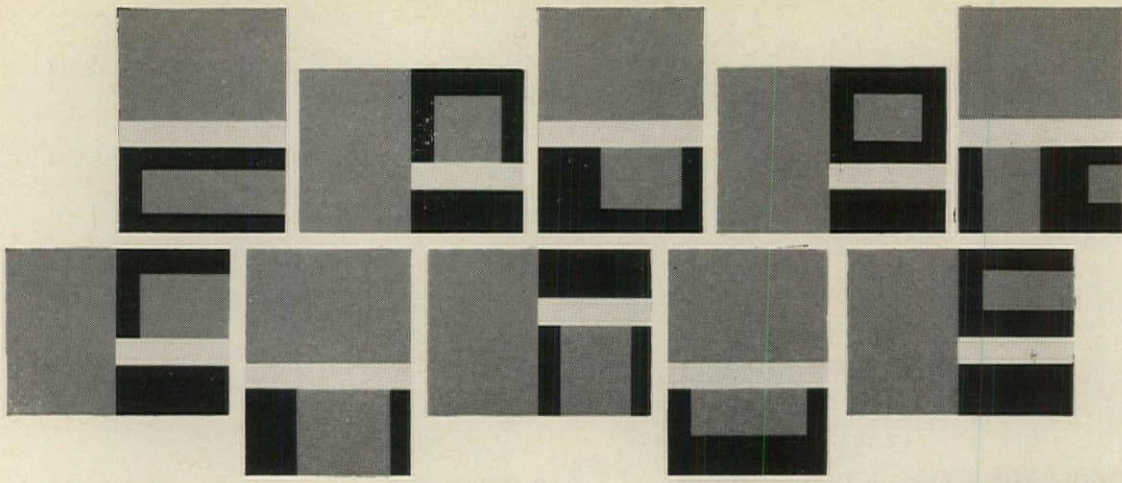
A. 1/4" SPANDRELITE  
 B. 1/8" to 1/4" thick clear glass  
 C. Setting block

D. Leveling shims  
 E. Neoprene glazing inserts  
 F. Continuous flashing  
 G. Weeping and drainage

 **PITTSBURGH PLATE  
GLASS COMPANY**

Paints • Glass • Chemicals • Fiber Glass

In Canada: Canadian Pittsburgh Industries Limited



GREAT ARCHITECTURE FOR THE SIXTIES



A GRAPHIC EXHIBIT  
FOR BETTER PUBLIC UNDERSTANDING  
AND APPRECIATION  
OF MODERN ARCHITECTURE

# GREAT ARCHITECTURE FOR THE SIXTIES

The editors of Architectural FORUM recently selected ten new buildings\* around the world which have contributed significantly to the developing art of architecture.

FORUM is now producing for public exhibition a limited edition of color posters, incorporating handsome photographs of these buildings and brief explanations of their unique features.

Designed by Walter Allner, one of America's leading graphic artists, the ten posters are particularly suitable for display in schools, colleges, libraries, museums and other public areas such as convention halls, banks and department stores.

Each poster measures 19" x 26"; but the full set is designed to hang handsomely as a unit in an area 5' x 12' (as suggested in the above diagram).

Cost: \$5.00 per set post paid while the supply lasts. Address all inquiries to Architectural Forum, Room 1939, Time & Life Building, Rockefeller Center, New York 20, New York.

\*ABBEY CHURCH OF ST. JOHN'S UNIVERSITY BY MARCEL BREUER / ART MUSEUM FOR MUNSON-WILLIAMS-PROCTOR INSTITUTE BY PHILIP JOHNSON ASSOCIATES, / BRASILIA SENATE AND ASSEMBLY BUILDINGS BY OSCAR NIEMEYER AND LUCIO COSTA / GREEK ORTHODOX CHURCH OF THE ANNUNCIATION BY FRANK LLOYD WRIGHT / INDUSTRIAL LABOR EXPOSITION HALL BY PIER LUIGI NERVI / PEPSI-COLA HEADQUARTERS BY SKIDMORE, OWINGS & MERRILL / RICHARDS MEDICAL BUILDING, UNIVERSITY OF PENNSYLVANIA BY LOUIS KAHN / SANTA MARIA DE LA TOURETTE MONASTERY BY LE CORBUSIER / TWA TERMINAL BUILDING BY EERO SAARINEN / UNITED AIR LINES HANGAR BY SKIDMORE, OWINGS & MERRILL



SERIES  
7000W  
—WOOD  
COVERED  
FOR  
WOODEN  
DOORS

SERIES  
P-7000  
—WITH  
METAL  
COVER  
FOR  
METAL  
DOORS

**Norton® Series 7000 Closers.....**  
**The Custom Look for every door**

Only Norton's Series 7000 can assure you of a perfect match between door and closer throughout your entire building. Available with metal covers painted to match or contrast with the finish of metal doors. Available chrome plated to match other door hardware. Available covered with wood to assure a perfect match between door and room panelling.

Get complete details from your Norton representative today or mail coupon.

**NORTON DOOR CLOSERS**  
*for complete Architectural Compatibility*

1021

Norton Door Closers, Dept. AF-32  
 372 Meyer Road, Bensonville, Illinois

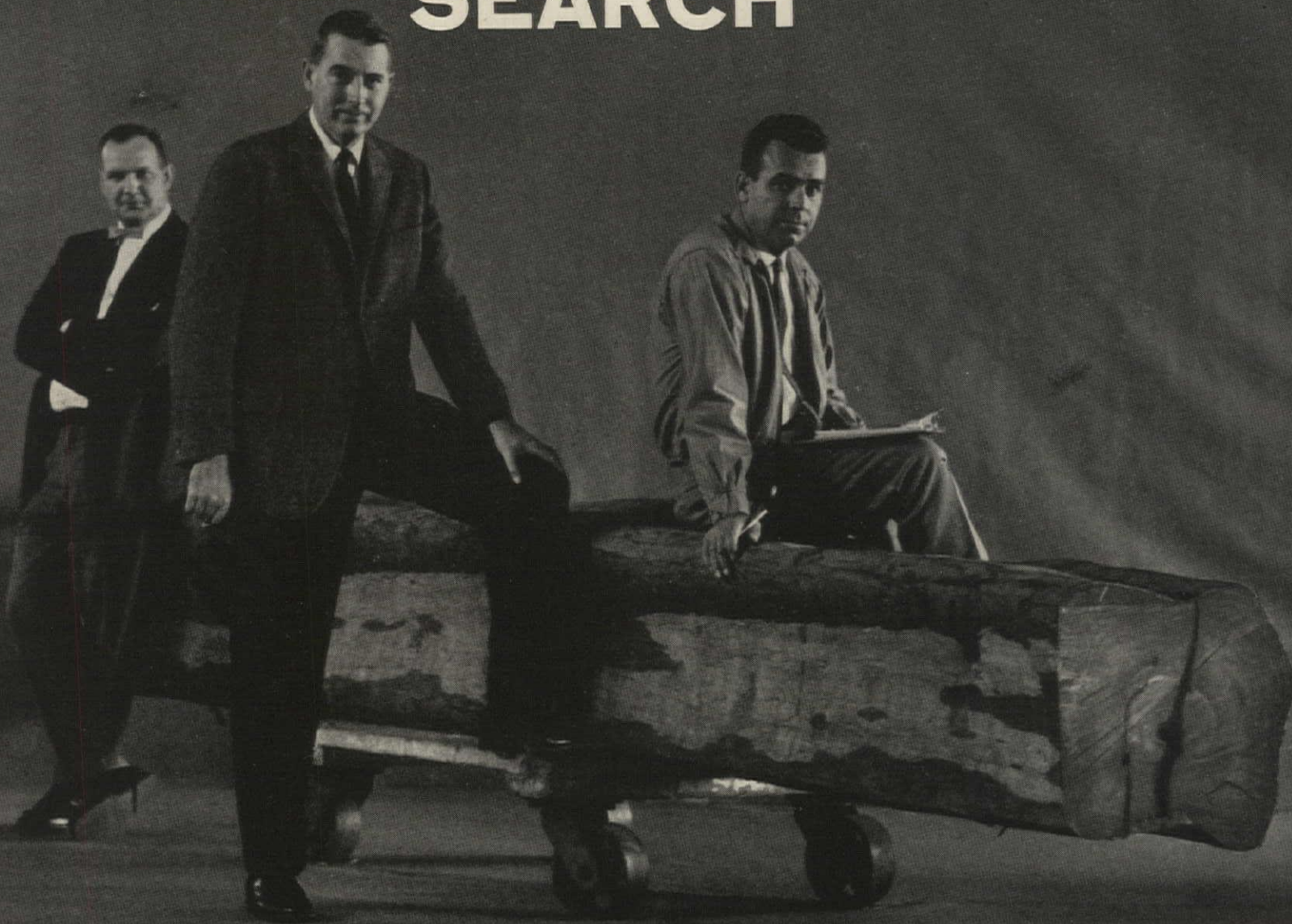
Please send Manual N-1   
 Have my representative call

Name \_\_\_\_\_  
 Firm \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_

*Italic line indicates advertising agency*

<b>A</b> luminum Company of America..... 32 <i>Fuller &amp; Smith &amp; Ross, Inc.</i>	Guth Company, The Edwin F. .... 165 <i>H. George Bloch, Inc.</i>	Robertson Company, H. H. .... 178 <i>Bond &amp; Starr, Inc.</i>
American Cyanamid Co., (Building Products Division)..... 40 <i>The Bresnick Co., Inc.</i>	<b>H</b> auserman Co., The E. F. .... 38 <i>Meldrum &amp; Fewsmith, Inc.</i>	Royal System ..... 58 <i>Harold J. Siesel Co., Inc.</i>
American Gas Association .....70, 71 <i>Ketchum, MacLeod &amp; Grove, Inc.</i>	Haws Drinking Faucet Co. .... 166 <i>Pacific Advertising Staff</i>	Ruberoid Company, The ..... 6 <i>Kastor, Hilton, Chesley, Clifford &amp; Atherton, Inc.</i>
American Olean Tile Co. .... 61 <i>Arndt, Preston, Chapin, Lamb &amp; Keen, Inc.</i>	Hillyard Chemical Company ..... 131 <i>Bozell &amp; Jacobs, Inc.</i>	Russell & Erwin Div. (The American Hardware Corp.) ..... 36 <i>Noyes &amp; Company, Inc.</i>
American-St. Gobain Corp.....21, 22, 23, 24 <i>G. M. Basford Co.</i>	Hollingshead Corp., R. M. ....52, 53 <i>W. B. Doner and Company</i>	Rust-Oleum Corp. .... 169 <i>O'Grady-Andersen-Gray, Inc.</i>
American Telephone & Telegraph Co. .... 67 <i>N. W. Ayer &amp; Son, Inc.</i>	Hope's Windows, Inc. .... 164 <i>The Moss-Chase Company</i>	
American Walnut Mfrs. Assn..... 25 <i>Isker &amp; Adajian, Inc.</i>	<b>I</b> nland Steel Products Co. .... Cover II <i>Hoffman, York, Paulson &amp; Gerlach, Inc.</i>	<b>S</b> anymetal Products Co., Inc., The ..... 60 <i>Belden &amp; Frenz &amp; Lehman, Inc.</i>
American Welding & Mfg. Co. (Building Products Division)..... 14 <i>Howard Swink Advertising, Inc.</i>	International Nickel Co., The ..... 137 <i>McCann-Marschalk Co., Inc.</i>	Scalamandre Silks, Inc. .... 179 <i>D. M. Grattan Co.</i>
Arketex Ceramic Corp. ....158, 159 <i>Keller-Crescent Co., Advertising</i>	Johnson Service Co. .... Cover IV <i>Hoffman, York, Paulson &amp; Gerlach, Inc.</i>	Schlage Lock Company ..... 8 <i>J. Walter Thompson</i>
Arkla Air Conditioning Corp.....68, 69 <i>Ketchum, MacLeod &amp; Grove, Inc.</i>	<b>K</b> awneer Co., The .....180, 181 <i>Fuller &amp; Smith &amp; Ross, Inc.</i>	Simpson Timber Co. ....172, 173 <i>Lennen &amp; Newell, Inc.</i>
Armstrong Cork Company ..... 2, 3, 28 <i>Batten, Barton, Durstine &amp; Osborn, Inc.</i>	Kentile, Inc. .... Cover III <i>Benton &amp; Bowles, Inc.</i>	Sloan Valve Company ..... 4 <i>Reincke, Meyer &amp; Fiam, Inc.</i>
Automated Building Components, Inc..... 156 <i>E. J. Scheaffer &amp; Associates Adv. Agency, Inc.</i>	Keystone Company, The ..... 143 <i>Doremus &amp; Company, Inc.</i>	Soss Manufacturing Co. .... 20 <i>Harry H. Goldberg, Jr., Adv. Inc.</i>
	Kinnear Mfg. Co. .... 174 <i>Wheeler-Kight &amp; Gainey, Inc.</i>	Standard Electric Time Co., The 139, 140, 141, 142 <i>William Schaller Co., Inc.</i>
<b>B</b> urgess-Manning Co. .... 62 <i>Merchandising Advertisers, Inc.</i>	Kohler Company .....176, 177 <i>Clinton E. Frank, Inc.</i>	Steelcase, Inc. .... 72 <i>Aves Advertising, Inc.</i>
	<b>L</b> amson Corporation .....44, 45 <i>Chapman-Nowak &amp; Associates, Inc.</i>	Steelcraft Mfg. Co. .... 66 <i>John L. Magro Advertising, Inc.</i>
<b>C</b> arrier Corporation ..... 144 <i>N. W. Ayer &amp; Son, Inc.</i>	Lightolier, Inc. ....56, 57, 58 <i>Sudler &amp; Hennessey, Inc.</i>	Stem, Inc., Chester B. .... 187 <i>Robert E. House Advertising Consultants</i>
Chicago Hardware Foundry Co..... 156 <i>Wilson Advertising Service</i>	<b>M</b> ichaels Art Bronze Co., Inc., The ..... 43 <i>Seery &amp; Company</i>	Structoglas Div. of Brookpark, Inc. .... 63 <i>Nelson Stern Advertising</i>
Consoweld Corporation .....145, 146 <i>Hoffman, York, Paulson &amp; Gerlach, Inc.</i>	McPhilben Lighting Company ..... 19 <i>Harold Schor Associates</i>	
	Mo-Sai Institute, Inc. .... 138 <i>David W. Evans &amp; Associates</i>	<b>T</b> & S Brass and Bronze Works, Inc. .... 170 <i>Beecher Associates, Inc.</i>
<b>D</b> elta Faucet Corp. .... 143 <i>R. C. Robison And Associates, Inc.</i>	Muzak Corp. ....160, 161 <i>Geyer, Morey, Madden &amp; Ballard, Inc.</i>	Taylor Co., The Halsey W. .... 42 <i>The Advertising Agency of William Cohen</i>
Dow Chemical Company .....48, 49 <i>MacManus, John &amp; Adams, Inc.</i>	<b>N</b> ational Gypsum Company .....68, 69 <i>Fuller &amp; Smith &amp; Ross Inc.</i>	Thomas Industries, Inc. (Benjamin Division) .....54, 55 <i>Marsteller, Inc.</i>
DuKane Corp. .... 175 <i>Connor Associates</i>	National Tube Division (United States Steel Corp.) .....64, 65 <i>Batten, Barton, Durstine &amp; Osborn, Inc.</i>	Union Bag-Camp Paper Corp. .... 179 <i>Smith, Henderson &amp; Berey, Inc.</i>
Dunham-Bush, Inc. .... 134 <i>William Schaller Co., Inc.</i>	Nesbitt, Inc., John J. .... 189 <i>George Moll Advertising, Inc.</i>	United States Plywood Corp. ....135, 136 <i>Kenyon &amp; Eckhardt, Inc.</i>
	Northrop Architectural Systems Western Edition W-1 <i>West Associates</i>	United States Steel Corp. (National Tube Division) ..... 64, 65 <i>Batten, Barton, Durstine &amp; Osborn, Inc.</i>
<b>F</b> airhurst Co., Inc., John T..... 171 <i>J. C. Bull, Inc.</i>	Norton Door Closer Co. .... 185 <i>Erwin Wasey, Ruthrauff &amp; Ryan, Inc.</i>	Universal Atlas Cement Co. (United States Steel Corp.) ..... 157 <i>Batten, Barton, Durstine &amp; Osborn, Inc.</i>
Ferro Corporation .....26, 27 <i>Fuller &amp; Smith &amp; Ross, Inc.</i>	<b>O</b> wens-Corning Fiberglas Corp. ....147-154 <i>McCann-Erickson, Inc.</i>	
Fiat Metal Mfg. Co.....50, 51 <i>Christopher Advertising Counsel</i>	<b>P</b> ittsburgh Plate Glass Co. ....16, 17, 46, 47, 182, 183 <i>J. Walter Thompson Co.</i>	<b>V</b> endo Company, The ..... 12 <i>Hill, Rogers, Mason &amp; Scott, Inc.</i>
Float-Away Door Company ..... 29 <i>Tucker Wayne &amp; Company</i>	Portland Cement Association ..... 30 <i>J. Walter Thompson Co.</i>	Vogel-Peterson Co. .... 170 <i>Ross, Llewellyn, Inc.</i>
Formica Corp. .... 155 <i>Perry-Brown, Inc.</i>	Powell Steel Lath Coporation ..... 45 <i>Alex T. Franz, Inc.</i>	Vonnegut Hardware Co. .... 167 <i>Caldwell, Larkin &amp; Sidener-Van Riper, Inc.</i>
	Pruden Products Co. .... 143 <i>Ralph Timmons Incorporated</i>	
<b>G</b> eneral Bronze Corp. .... 59 <i>G. M. Basford Co.</i>	<b>R</b> ambusch Decorating Co. .... 58 <i>Roeding &amp; Arnold, Inc.</i>	<b>W</b> ashington Steel Corp. .... 188 <i>Cabbot &amp; Coffman, Inc.</i>
Great Lakes Carbon Corporation (Perlite Dept) .....162, 163 <i>Boylhart, Lovett &amp; Dean, Inc.</i>	Realities ..... 18 <i>The Albert Woodley Company, Inc.</i>	Wilkinson Chutes, Inc. .... 156 <i>The Carpenter Advertising Co.</i>
Great Lakes Carbon Corp. (Palos Verdes Stone Dept.) Regional Edition A1, 2 <i>Boylhart, Lovett &amp; Dean, Inc.</i>		Wright Manufacturing Co. Western Edition W-4 <i>The Curran Morton Company, Inc.</i>
Great Lakes Carbon Corp. (Palos Verdes Stone Dept.) Western Edition W-3 <i>Boylhart, Lovett &amp; Dean, Inc.</i>		
Great Lakes Carbon Corp. (Perma Products Dept.) Regional Edition E-1, 2 <i>Boylhart, Lovett &amp; Dean, Inc.</i>		<b>X</b> -Acto Precision Tools, Inc. .... 170 <i>The Lampert Agency, Inc.</i>
Goodyear Tire & Rubber Company..... 10 <i>Kudner Agency, Inc.</i>		
Grassi, P.—American Terrazzo Co. Western Edition W-2 <i>David W. Evans &amp; Associates</i>		<b>Z</b> ero Weather Stripping Co., Inc. .... 168 <i>Harold Marshall Advertising Co., Inc.</i>

# END OF A SEARCH



■ Shown above are several members of Stem's acquisition team who search the world over for logs offering unusual architectural promise.

The artistic awareness of these skilled men leads the search to far flung reaches of the earth, and to prize logs. This never ending quest results in a complete collection of dramatic veneers, in large flitches, for every architectural specification. Samples of many of these beautiful veneers are available for your personal inspection.

## STEM...EMINENCE IN WOOD

CHESTER B. STEM, INC.. / NEW ALBANY, INDIANA

SHOWROOMS:

CHICAGO, LOS ANGELES, NEW ALBANY, NEW YORK

### Some of the flitches now available for Specification

SPECIES	FLITCH NUMBER	FOOTAGE	LENGTH
<b>Figured White Ash</b>	13-2388	4,740 ft.	13'7"
<b>Butternut</b>	15-9577	3,376 ft.	11'6", 16'
<b>Figured Maple</b>	10-435	11,335 ft.	16'6"
<b>Brazilian Rosewood</b>	44-1237	4,329 ft.	17'3"
<b>Teak</b>	11-1457	9,357 ft.	15'2"
<b>East Indian Rosewood</b>	78-52	3,029 ft.	12'2"
<b>Wormy Chestnut</b>	42-127	3,244 ft.	14'2"
<b>Macassar Ebony</b>	39-64	2,775 ft.	8'8", 8'10"
<b>Hawaiian Koa</b>	18-53	7,253 ft.	14'2"
<b>Figured English White Harewood</b>	53-20	8,902 ft.	10'6"
<b>English Brown Oak</b>	29-119	9,429 ft.	10'3"
<b>Australian Walnut</b>	35-67	2,606 ft.	10'9", 11'4"
<b>Quartered American Walnut</b>	8-9523	3,209 ft.	12'10", 14'8"
<b>Jeweltree</b>	33-39	8,372 ft.	15'4"
<b>French Walnut</b>	61-74	19,138 ft.	8'2", 8'4"
<b>Amazoue</b>	79-1	3,699 ft.	10'4", 11'2"
<b>Yewtree</b>	49-67	7,261 ft.	9'3"

**STAINLESS  
STEEL  
CURTAIN  
WALL**  
for  
**\$7.50/sq. ft.**



Pittsburgh's Four Gateway Center is one of the most dramatic architectural uses of stainless steel in the world today. Even more dramatic to the architect, builder and owner is the remarkably low \$7.50 per

sq. ft. erected cost of the stainless steel curtain wall. Washington Steel's gray ColorRold provided the means for accenting the vertical lines that make this edifice one of the most talked about buildings of our era.

4 Gateway Center, Pittsburgh  
Harrison & Abramovitz, Architects  
Limbach Co.,  
Curtain Wall Contractor

**WASHINGTON STEEL CORPORATION**

*and ColorRold®*

PRODUCERS OF *MicroRold®* STAINLESS SHEET & STRIP

WASHINGTON, PA.

The world's most beautiful perimeter radiation



**P**erimeter heating with eye appeal . . .  
None of its many imitators has been able  
As with the well dressed woman,  
(all precisely die-formed)  
Add one of six fashion-right colors  
to grace the finest interiors.  
are proved reliable; and considering  
14 types of heating element  
and manual or controlled operation,

that's Nesbitt Sill-line Radiation!  
to duplicate the style and beauty of Sill-line.  
Sill-line's conforming **accessories**  
complete the distinctive ensemble.  
and you clothe your comfort in form, fit and finish  
It goes without saying that Sill-line's ratings  
the seven standard lengths, five enclosure heights,  
(steam, hot water, and electric),  
you have 385 choices in application.



Optional utility: Sill-line Radiation  
integrated with Nesbitt storage cabinets

Gown by Gothé

**Nesbitt SILL-LINE RADIATION**

Made and sold by John J. Nesbitt, Inc., Philadelphia 36, Pa.—Publications 30-2 and 31-2.

**GOLD MEDALIST**

So they have chosen to give a posthumous AIA Gold Medal for Architecture to Eero Saarinen. How wonderfully appropriate! The whole AIA Board is to be congratulated on its wise choice, but perhaps a special palm is due to Architect Morris Ketchum Jr., who presented Saarinen's case with his usual quiet diplomacy and skill. It is hardly a secret that fellow Finlander Alvar Aalto and Italian Engineer Pier Luigi Nervi are great favorites for the next one.

**MASTERS OF EVERYTHING?**

This issue of FORUM seems to have scooped up an unusual amount of heartfelt controversy. For example there is the new-found splendid anger of Edmund R. Purves, known for a score of years as AIA's soft-spoken diplomat in Washington. (See pages 102-105.) Apparently Ned's tour of duty, just terminated, gave him an overdose of what he calls the architects' "superman delusion." He despairs of finding that paragon architect who, on top of giving his client the best plan, design, specifications, and cost estimates, can also give the best advice on real estate, building finance, and construction procedure. In short,

he feels that the regard, which some architects want, has not been earned.

But may there not be value in the effort of leaders of the profession to get architects to fit themselves for "expanded services"? The necessary studies may rarely make "good businessmen" out of the hottest designers and may never make hot designers out of the "business architects," but the fact remains that total naïveté in either direction makes a very poor architect and is bad for all concerned. In all the instances when some architect combines the ability to produce beauty with awareness of business factors (by himself or by his partner), this knowledge of business becomes a gate opener for his design abilities. Understanding real estate and building investment and urban relationships, he reaches whole clusters of opportunity closed off from his ignorant brethren. Take Ieoh Ming Pei, for example, the architect *par excellence* who has made a specialty of studying the mind and milieu of the better speculative builder, and with no damage to his own fine architect's hand. While esthetes come to meetings at New York's Museum of Modern Art where

darts are thrown at the speculators whose operations are said to be ruining the Park Avenues of America, men of the type of Mr. Pei, and they alone, are able to restore architecture.

**FORGOTTEN CONTRACTORS**

Now that the "modern movement" has a history, American historians are busy compiling lists, all too short, of "great makers," while the younger British historians make the whole development look like a fast fight of cats on a hot tin roof. Yet where would all these "form-giver" architects be without the pioneering contractors who gave form to their creations? That wonderful old architectural client, Mr. Frederick C. Robie, whose famous house in Chicago was built by Frank Lloyd Wright back in 1906-1907, still remembers his contractor. This was a "Mr. Barnard, a go-getting, two-fisted, high-spitting sort of a guy" whose experience and manpower handling got the job done so well, and so well on the nose, that Robie "felt like kissing him." A client's recollection like that, across half a century, says things. Without men like Barnard progress either in architecture or building would never be. Anybody ready to furnish other names for a list of form-giving *contractors*?

**THROWAWAY CRITICS**

Speaking of history, James M. Fitch, historian, has pulled together quite a few pieces by Jimmy Fitch, journalist, to make a mighty fine book on *Architecture and the Esthetics of Plenty*. He has added a chapter on critics. I have a bone to pick with him. Nowadays heroes march by fours, and Fitch reduces the formative critics to four, matching no doubt the four "great maker" architects. They—the critics—are "Mumford, Hitchcock, Giedion, and Johnson," all excellent. I have nothing except jealousy against them. But what about the "throwaway" critics? What about all those hard-working magazine guys down in the back rooms, making their day-by-day architectural selections, keeping their treasurers off their backs while feeding the form-

givers (using hidden fractions of the budget) until the public might catch on and start hiring these men of genius? Modern architecture in America grew through magazines, "throwaway" literature.

My list of great men includes Michael Mikkelsen, who as a publisher fed Wright in the late twenties, and Howard Myers, who was



Wright's best friend in the thirties and forties. Howard, who ran this magazine, worked hard and died young; there is scarcely an American architect of note today who is not under obligation, readily confessed, to Howard as his early publisher and often his discoverer, if not his job-getter. How too about Lawrence Kocher?

Probably Jimmy, who knew them all, would grant this. But why throw to the great men every piece of stray credit? Fitch says that Mumford, in his "prescient" *Sticks and Stones* of 1924, was "largely unaware of the modern movement." Well, he wasn't really, but Lewis was wary. The other three had not yet been heard from, but I myself was better and funnier on this. By 1925 I had in print some ludicrously youthful praise for Wright and Sullivan, and, perhaps as the first in America, for Mendelsohn, Dudok and others, being still somehow undeclared on Gropius or Le Corbusier or Mies. How did it happen? Throwaway criticism. A student magazine.

Douglas Haskell



As an architect's "expanded service" Ernest Born designed the stock certificate and the trademark (above and right) for the Bank of Trade of which Architect John S. Bolles is one director. Far right, a "throw-away" analysis of Wright by an intrepid editor.

