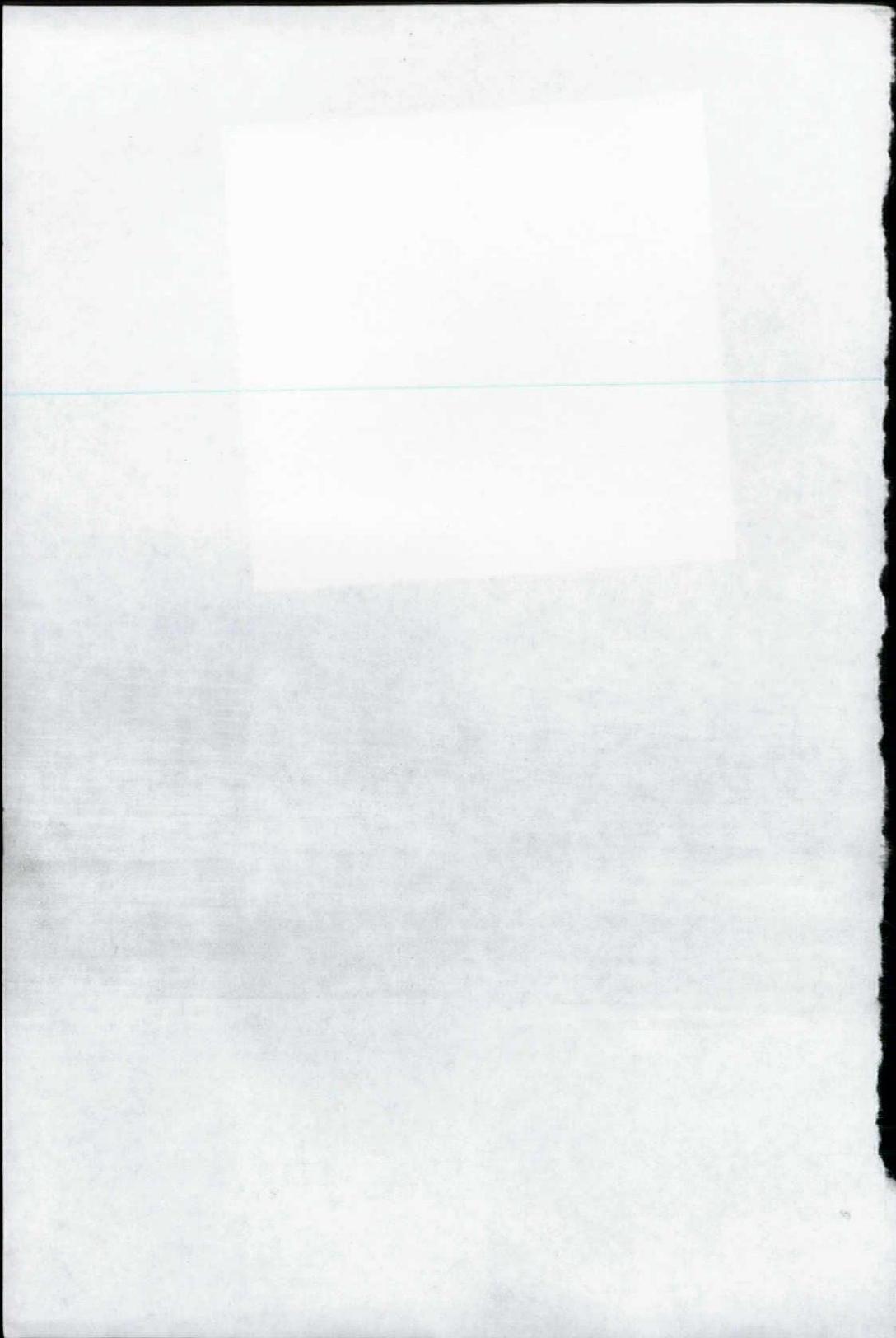
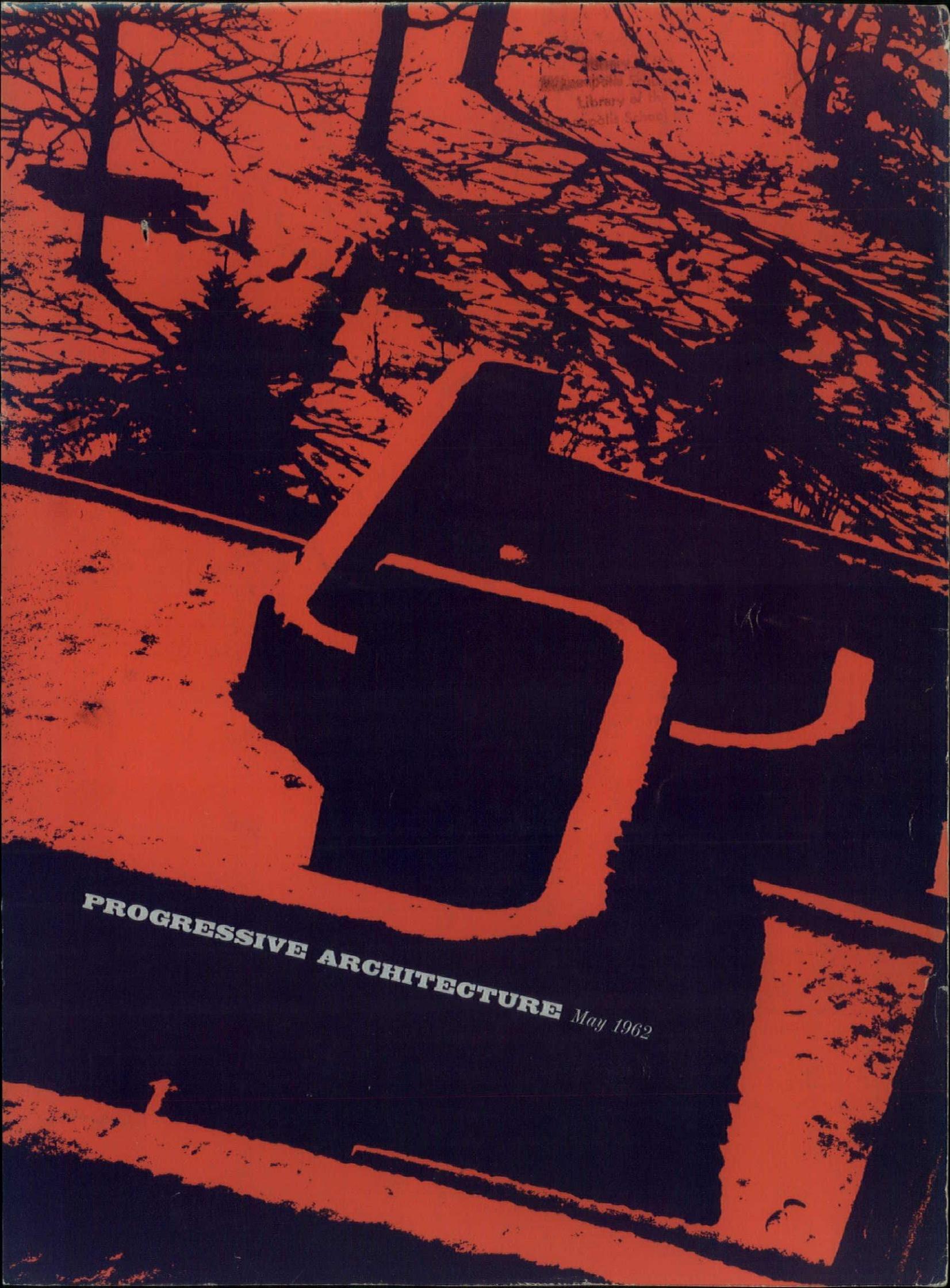


PA-1962-05



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Social Science

**PROGRESSIVE ARCHITECTURE** *May 1962*





Colors: V-352 French Walnut with black and white accents

## *Vina-Lux*® WOOD TONES

*mellow floor beauty that won't "walk off" . . .*

. . . because the distinctive wood-grain pattern is distributed through the full thickness of the tile. Wood Tones in Vina-Lux vinyl asbestos tile retain their beauty and pattern under the heaviest concentrations of traffic . . . deliver so much more value than surface patterns . . . yet cost no more. Specify Vina-Lux Wood Tones, for installation over concrete — above, on or below grade, or over wood or plywood subfloors. Consult Sweet's Catalog — or let us send you samples, color charts and detailed architectural specifications. Azrock Floor Products Division, Uvalde Rock Asphalt Company, 523A Frost Building, San Antonio.

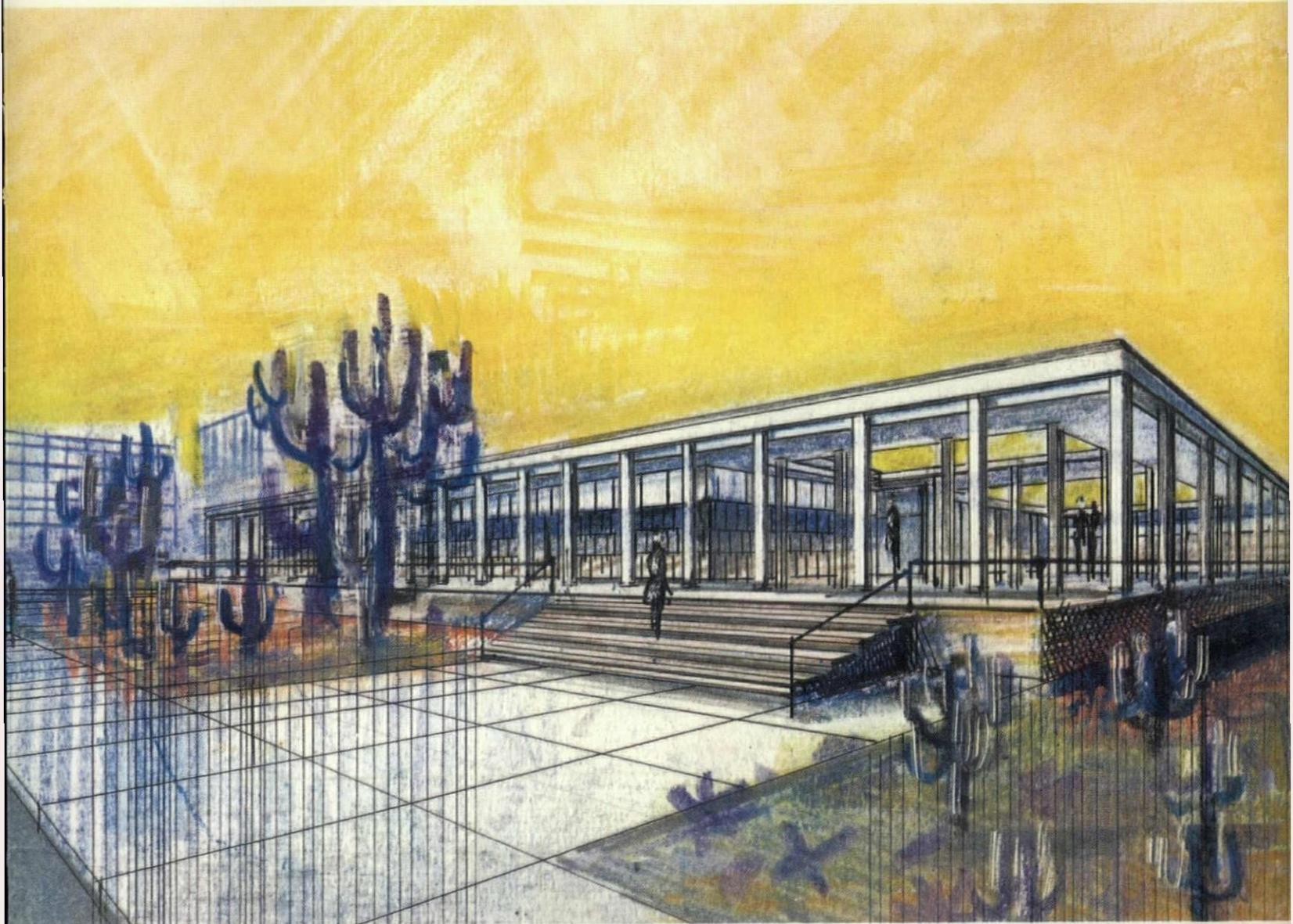
Magnified view shows pattern distribution through full thickness of tile. Available in 1/8", 3/32", 1/16" gauges.

Visit us at the  
AIA Convention  
Exhibit No. 82

another fine floor by **AZROCK**®

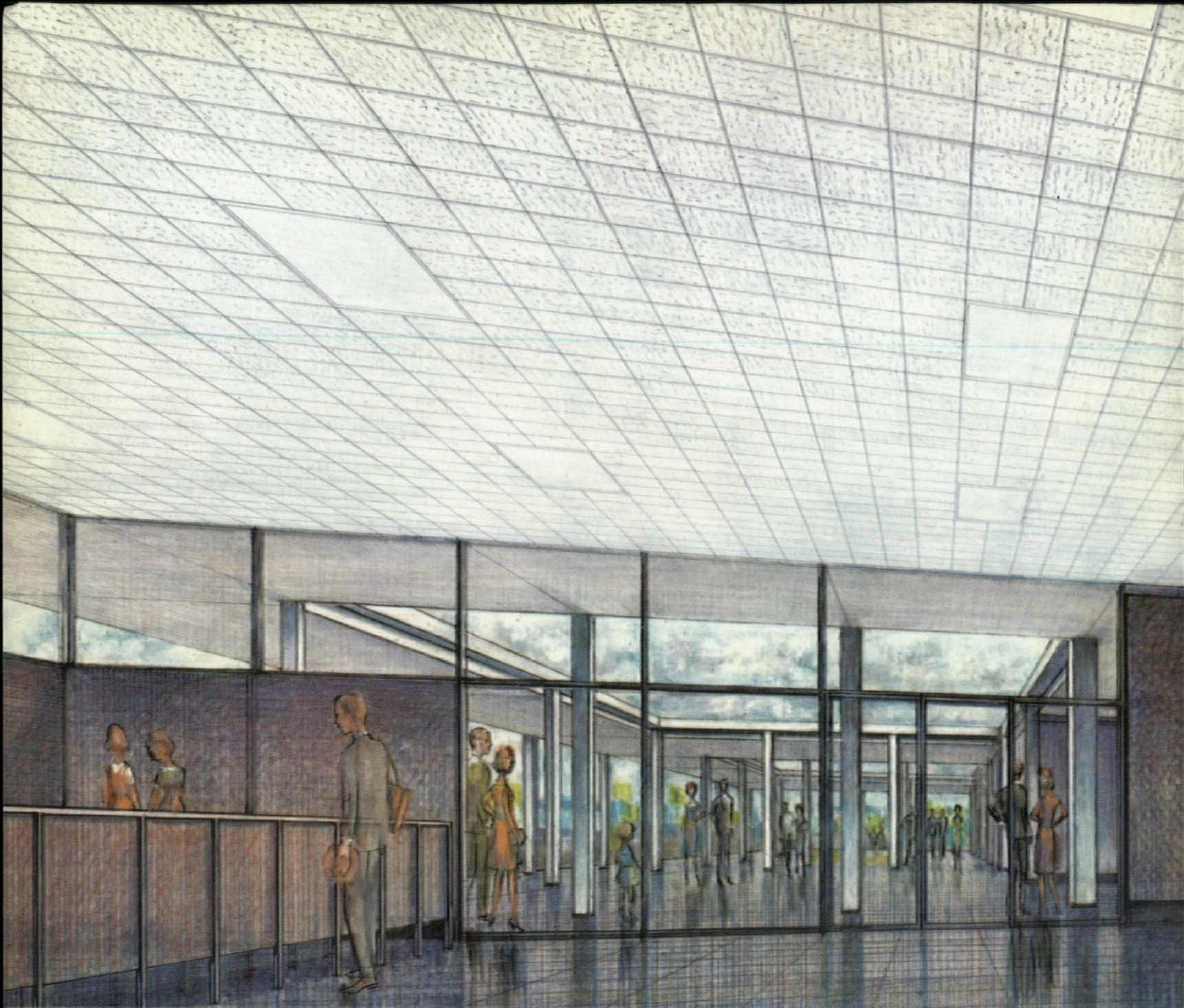
For more information, turn to Reader Service card, circle No. 330

## **TUCSON, ARIZONA**

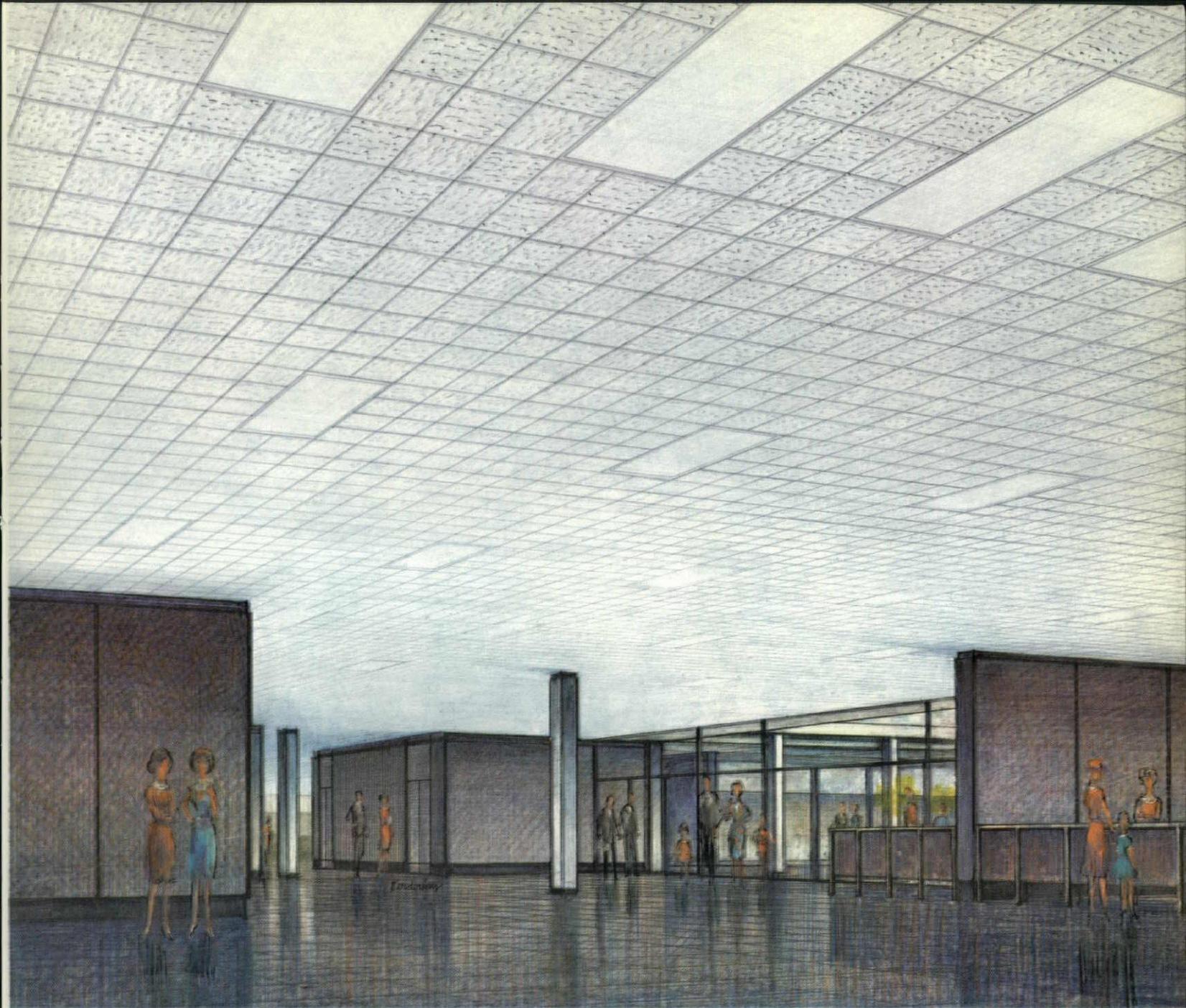


**PERFECT PLACE TO DEMONSTRATE  
AIR-CONDITIONING WITH A  
REMARKABLE CEILING THAT  
DIFFUSES AIR...**

Library of the  
Minneapolis School of Art



**THESE NEW ARMSTRONG VENTILATING  
CEILINGS BRING TUCSON CITY HALL  
UNIFORM AIR DIFFUSION AND  
RATED FIRE PROTECTION**



**From May to September, the temperature in Tucson beats 95° almost every day. Yet the new City Hall will stay cool and comfortable with the help of a remarkable new air-diffusion system: Armstrong Ventilating Ceilings. Conditioned air fills the plenum, and is forced down through thousands of perforations blended into the ceiling pattern. Quietly, thoroughly and evenly, it ventilates the room below. Because these Ventilating Ceilings are also Armstrong Fire Guard, they meet the local code requirement of 3-hour fire protection for structural components. And, by eliminating the need for intermediate fire protection, Ventilating Fire Guard Ceilings have saved Tucson \$10,700.**

**DATA:** Armstrong Ventilating Ceilings have been thoroughly lab- and job-tested to assure proper performance; are available in five materials (both tile and lay-in units), including Fire Guard, with three different patterns; are compatible with all conventional supply-air systems; save money by cutting supply ductwork, eliminating conventional diffusers; often operate at much lower pressure than duct and diffuser systems. For special plenum-engineering data, with all factors and formulae to design and engineer this ventilating system, contact your Armstrong Acoustical Contractor or Armstrong District Office. For further information, write Armstrong Cork Co., 4205 Watson Street, Lancaster, Pa.

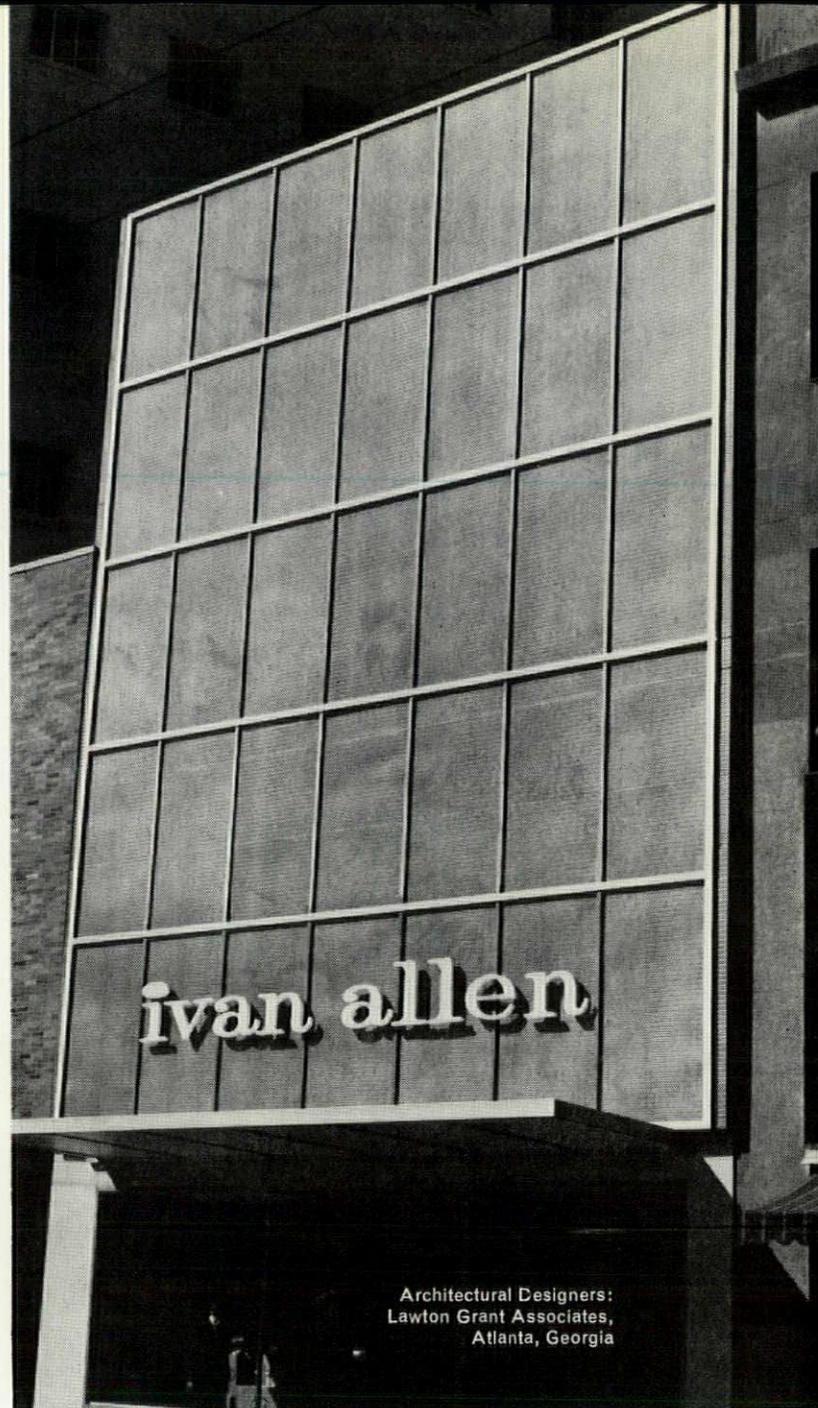
Tucson City Hall, Ariz. • Architects: Friedman & Jobusch, Tucson • Mechanical Engineer: John Paul Jones, Tucson • Gen. Contractor: The Ashton Co., Inc., Tucson • Acoustical Contractor: Babby Building Specialties, Inc., Tucson.



**Armstrong ACOUSTICAL CEILINGS**

*First in fire-retardant acoustical ceilings*

**ANOTHER AMCOA SUCCESS STORY**



Architectural Designers:  
Lawton Grant Associates,  
Atlanta, Georgia

## **HOW A DOWNTOWN "EYESORE" BECAME A MODERN ASSET WITH THE NEW AMCOA SYSTEM!**

Old, impossible to air-condition economically, the Ivan Allen Building was little more than an eyesore in the development of downtown Atlanta.

Now with an easily installed AMCOA system, the old look has been replaced with the new, modern, highly desired look of a progressive community.

For complete details on how AMCOA systems can economically, efficiently work magic with your plans to remodel or build, contact the AMCOA Division of Shower Door Company of America, Box 20202, Atlanta, Georgia.



**ARCHITECTURAL MANUFACTURING COMPANY  
OF AMERICA**

Box 20202 Station N, Atlanta 25, Georgia

Manufacturers of Herculume Sliding Glass Doors, Permalume Shower and Tub Enclosures, AMCOA Solar Screen Systems

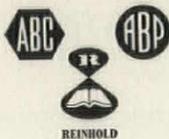
For more information, turn to Reader Service card, circle No. 425

# THIS MONTH IN P/A

## *The World's Largest Architectural Circulation*

- 65 NEWS REPORT (*For Full Contents, See Page 65*)  
Columbia plan for Dallas redevelopment . . . PERSONALITY: President Wright . . .  
French win Reynolds award . . . Village plan for psychiatric prison . . . PRODUCTS:  
New lamp, partitioning system . . . MANUFACTURERS' DATA.
- 128 EDITORIAL FEATURES (*For Full Contents, See Page 127*)  
P/A presents a detailed study of ten houses, remarkably divergent in their design  
philosophies, whose solutions range from the geometric architecture of Mies to the  
organic architecture of Wright. Each design, however, is unmistakably the individual  
solution of the architects represented: Jay Fleishman; Arthur Witthoefft; Herb  
Greene; Norval White; Nicholas Sakellar & Associates; I. W. Colburn & Associates;  
Benjamin Gingold; Davis, Brody & Wisniewski; and John M. Johansen.
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# Sun Self-Serv Drug Stores specify

# TERRAZZO

## for new Supers

**Study by Chicago-area chain proves that asphalt tile costs 6.8% more, vinyl 19.8% more, over 10-year period.**

Terrazzo floors will be used in the chain of super drug stores planned by Sun Self-Serv Drug Stores, a division of General Stores Corporation. Five of these stores with a total floor area of 40,000 square feet have already been opened in the Chicago area.

The decision to use Terrazzo was the result of a study comparing total cost, including installation and maintenance, of Terrazzo, asphalt tile and vinyl tile floors in drug stores. Savings of 20c per square foot with Terrazzo were revealed. Later years will show an even greater saving, the Sun Self-Serv Drug Stores' study indicates, because asphalt tile must be replaced every five years, while Terrazzo will last the life of the building.

Results of the study are summarized below:

### Comparison of Total Cost of Terrazzo and Asphalt Tile Floors Over 10-Year Period

ASPHALT TILE FLOOR*		TERRAZZO FLOOR	
Total installation cost per sq. ft. for 10 years (average original installation cost of \$.31 per sq. ft.; must be replaced every 5 years)	.62	Total installation cost per sq. ft. for 10 years (average original installation cost of \$1.40. Replacement not required)	1.40
Total cleaning cost per sq. ft. for 10 years (total daily cleaning cost per sq. ft. of \$.000466 x 365 days x 10 years. Includes daily cost per sq. ft. of \$.000366 for labor, \$.000100 for supplies)	1.70	Total cleaning cost per sq. ft. for 10 years (total daily cleaning cost per sq. ft. of \$.000399 x 365 days x 10 years. Includes daily cost of \$.000366 for labor, \$.000033 for supplies)	1.46
Cost per sq. ft. of stripping, waxing, buffing of floor every 90 days for 10 years (cost per sq. ft. of \$.02 x 4 times yearly x 10 years)	.80	Cost per sq. ft. of stripping floor 3 times in 10 years	.06
<b>Total cost per sq. ft. including installation and maintenance over 10 year period.</b>	<b>3.12</b>	<b>Total cost per sq. ft. including installation and maintenance over 10 year period.</b>	<b>2.92</b>

\*Vinyl tile used in some Sun Self-Serv Drug Stores has a total cost over a 10-year period of 38c per square foot more than asphalt tile and 58c per square foot more than Terrazzo.

Free AIA kit upon request. Field representatives available for consultation. Catalogued in Sweet's.

Member Producers' Council

## THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

N.A.D.A. Building, 2000 K St., N.W., Washington, D.C.

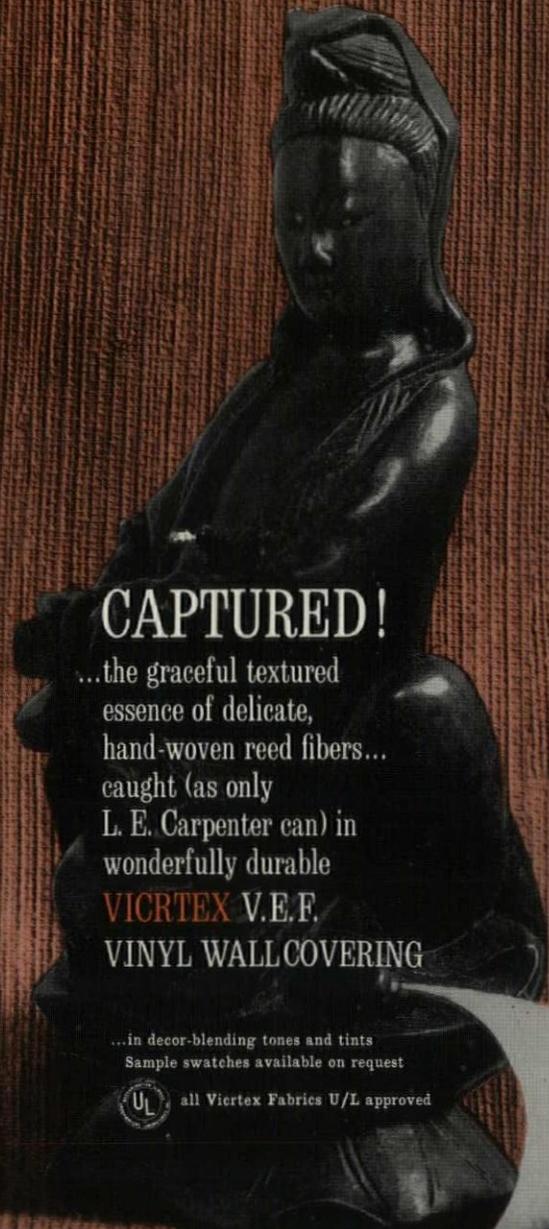
ANOTHER

L. E. CARPENTER  
ORIGINAL

VICRTEX  
DESIGN

**VICRTEX V.E.F.**

**Taiwan** vinyl wallcovering



**CAPTURED!**

...the graceful textured  
essence of delicate,  
hand-woven reed fibers...  
caught (as only  
L. E. Carpenter can) in  
wonderfully durable  
**VICRTEX V.E.F.**  
VINYL WALLCOVERING

...in decor-blending tones and tints  
Sample swatches available on request



all Vicrtex Fabrics U/L approved

# In "a Preview of the Future"—SLOAN is

At the SEATTLE WORLD'S FAIR EXPOSITION all of the flush valves installed are SLOAN.

This statement is especially significant since when flush valves were selected, SLOAN was the unanimous choice of each team of architects, mechanical engineers and owners responsible for the design and construction of *their* individual building at the Fair. Scores of decisions, therefore, combine as one to make the Seattle World's Fair an outstanding testimonial to the superiority of SLOAN Flush Valves. Why settle for less in *your* building?



# the flush valve of unanimous choice

## THE SEATTLE WORLD'S FAIR

*"a Preview of the Future"*

The Seattle World's Fair seeks not to recount accomplishments of the past but rather to search out what lies ahead for the 21st Century. Conceived to the theme "Man in the Space Age," your introduction to this extravaganza of enthralling interest is a ride by swift, silent Monorail from downtown Seattle to the Fairgrounds. There you can stroll the Boulevards of the World viewing the best scientific and technical productions of forty nations, see the World of Science, a \$10,000,000 project of the U.S. Government in a unique five-building pavilion, view one of the most remarkable collections of art ever exhibited, dine at the top of the 600-foot Space Needle with its breath-taking view, frolic on the fun-for-all-ages Gayway. Many, many more attractions await visitors to the Fair now in progress and running through October 21, 1962. See you in Seattle!

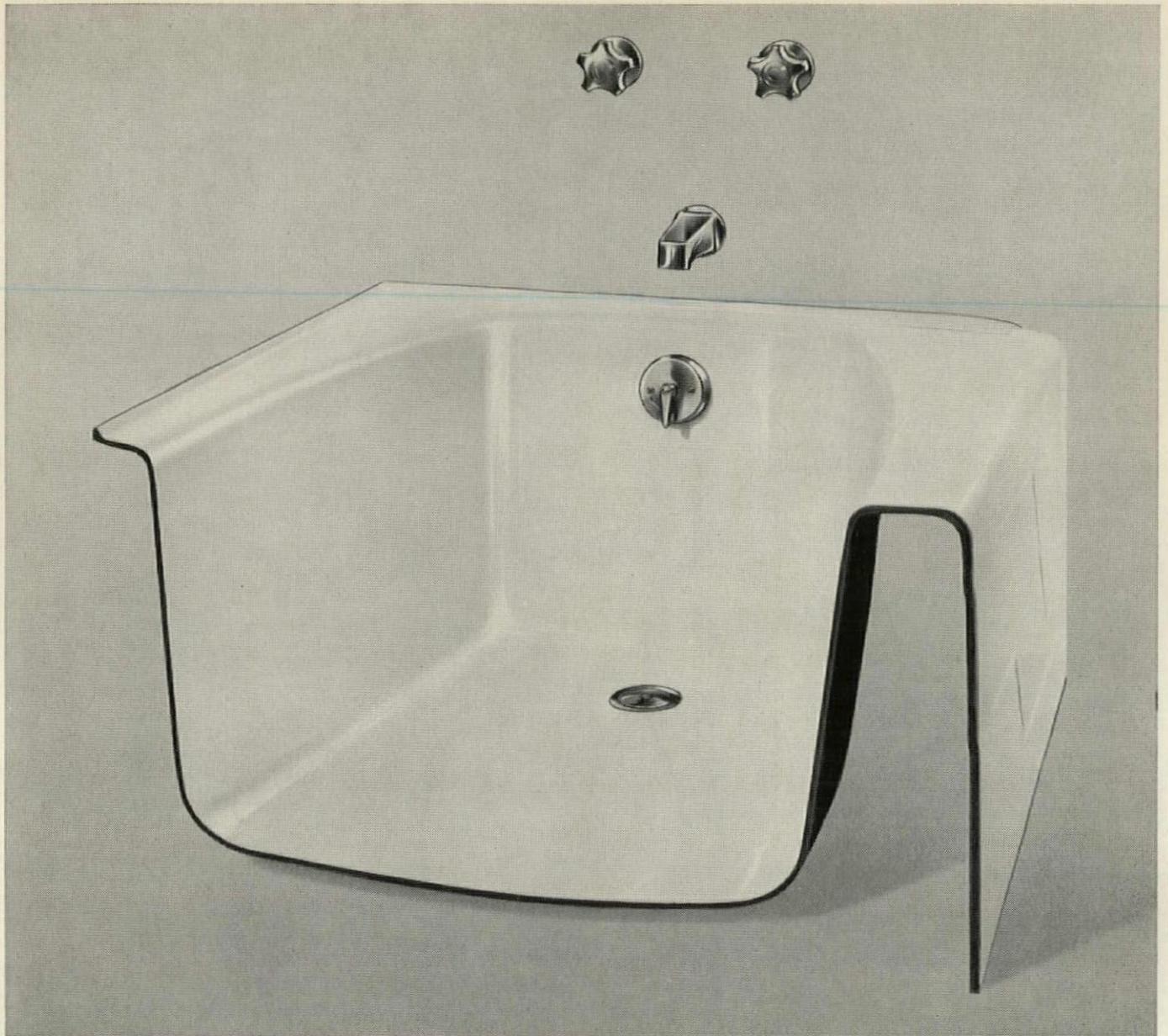
For more information, turn to Reader Service card, circle No. 391

SLOAN VALVE COMPANY • 4300 WEST LAKE STREET • CHICAGO 24, ILLINOIS

# SLOAN



## FLUSH VALVES



## Now, why would we saw a bath tub in half?

Why? To point out a few things about Kohler quality. Things that add sales appeal to buildings and homes.

For instance, under that fine, gleaming enamel is cast iron. Strong. Rigid. You'll never step into a Kohler tub and feel the bottom buckle. And it's this same rigidity that resists chipping, cracking and crazing.

Cast iron is porous. Under intense heat the enamel extends little fingers into the pores of the metal. Thus, the enamel becomes fused to the iron to form a lifetime bond.

These few facts about Kohler tubs reflect our habit of putting the right materials together in the right way in all Kohler fixtures and fittings. We've had the habit for more than seventy-five years. That's why leading builders and architects with an eye for quality specify Kohler. You can get the whole story from your plumbing contractor or Kohler distributor.

(So that's why we sawed our tub in half. Incidentally—know anybody who wants to buy half a tub?)

## KOHLER OF KOHLER

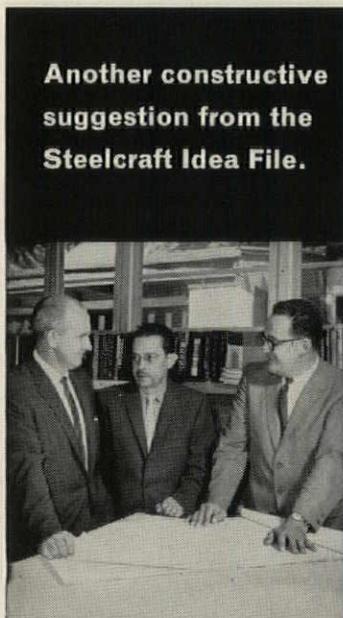
Kohler Co., Established 1873 • Kohler, Wisconsin

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

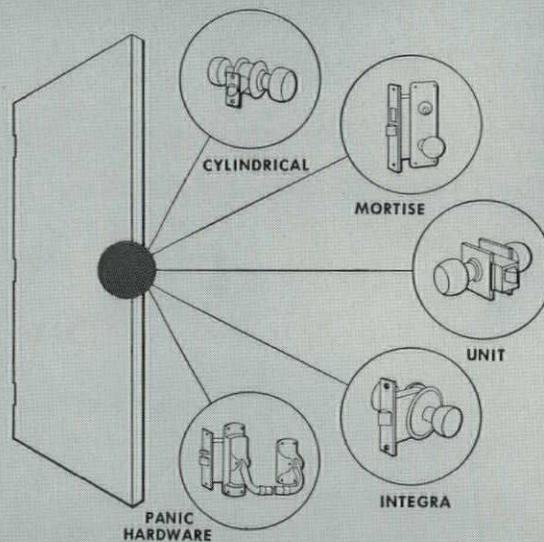
# STEELCRAFT

*The finest name in...*

# METAL DOORS and FRAMES



## COMPLETE FREEDOM OF HARDWARE SELECTION



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

*Ease of coordinating hardware on Steelcraft products is pointed out to Robert D. Hodgson, architect, and Hal R. Scott, hardware supplier, by John Lynch, salesman for Steelcraft's Salt Lake City distributor, Buehner Block Company.*

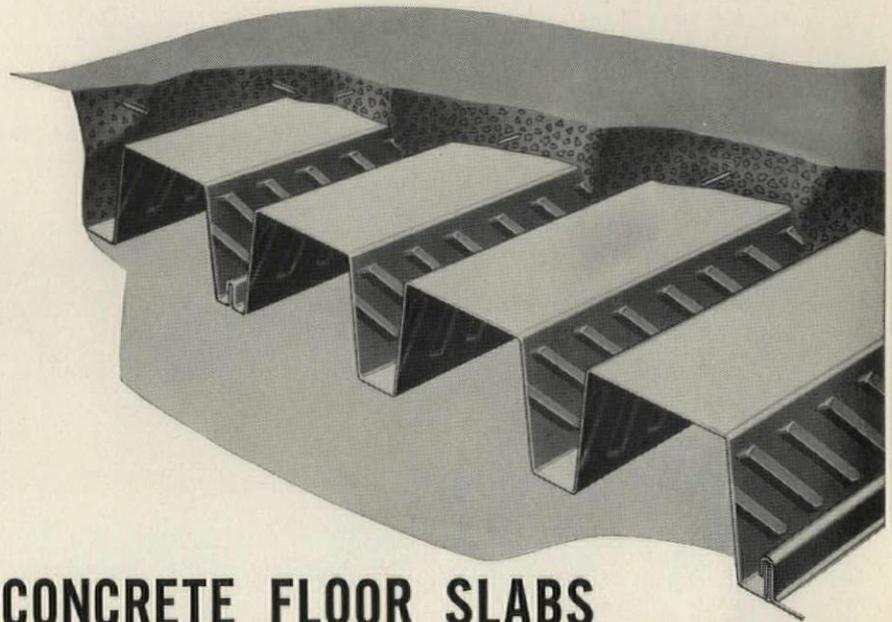
Steelcraft doors and frames offer the architect and hardware consultant complete freedom of hardware selection. Standard preparations are available on Steelcraft doors for every major type of lock. All Steelcraft doors can be used interchangeably on any Steelcraft frame. Call your Steelcraft distributor for special assistance in coordinating hardware and approval drawings... save delivery time... cut construction costs.

**THE STEELCRAFT MANUFACTURING COMPANY**

9017 Blue Ash Road, Cincinnati 42, Ohio







## NOW: REINFORCED CONCRETE FLOOR SLABS WITHOUT REBARS, TEMPORARY FORMS, OR SHORING

*Inland Hi-Bond Floor Deck cuts slab cost 10%-20%*

Today, a new system has eclipsed the low cost of traditional reinforcing materials and methods for concrete floor slabs. On a recent typical job, a complete Inland Hi-Bond Floor, including deck and poured slab, cost \$90.00 per square; a comparable traditional concrete slab would have cost \$101.00.

Here's how you save, using Hi-Bond deck: You don't need steel reinforcing bars (except temperature mesh). You don't need temporary forms or shoring; Hi-Bond deck is a permanent form for wet concrete.

Raised lugs in the webs of Hi-Bond panels provide a positive lateral and vertical mechanical bond between steel and concrete, causing them to act as a composite unit.

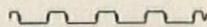
Hi-Bond floor deck is available in a number of profiles. Where electrification is desirable, Hi-Bond can be furnished as a cellular floor.

For further information on Hi-Bond — or other Inland floor systems — ask an Inland sales engineer. Write for catalog 270, or see Sweet's, section 2j/In.

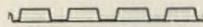
*There's an Inland floor system to meet every span requirement economically.*



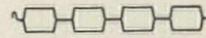
**Type B Hi-Bond Floor Deck**  
24" wide, 1½" deep.



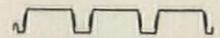
**Type BR Hi-Bond Floor Deck**  
24" wide, 1½" deep.



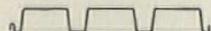
**Type BF Cellufloor**  
24" wide, 1½" deep.



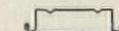
**Type BB Cellufloor®**  
24" wide, 3" deep.



**Type N Hi-Bond Floor Deck**  
24" wide, 3" deep.



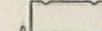
**Type NF Cellufloor**  
24" wide, 3" deep.



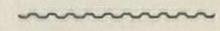
**Type 3HF Cellufloor**  
12" wide, 4½" deep.



**Type 4.5H Floor Deck**  
12" wide, 4½" deep.



**Type 4.5H Cellufloor**  
12" wide, 4½" deep.



**Ribform®**  
Permanent steel centering,  
28" coverage.

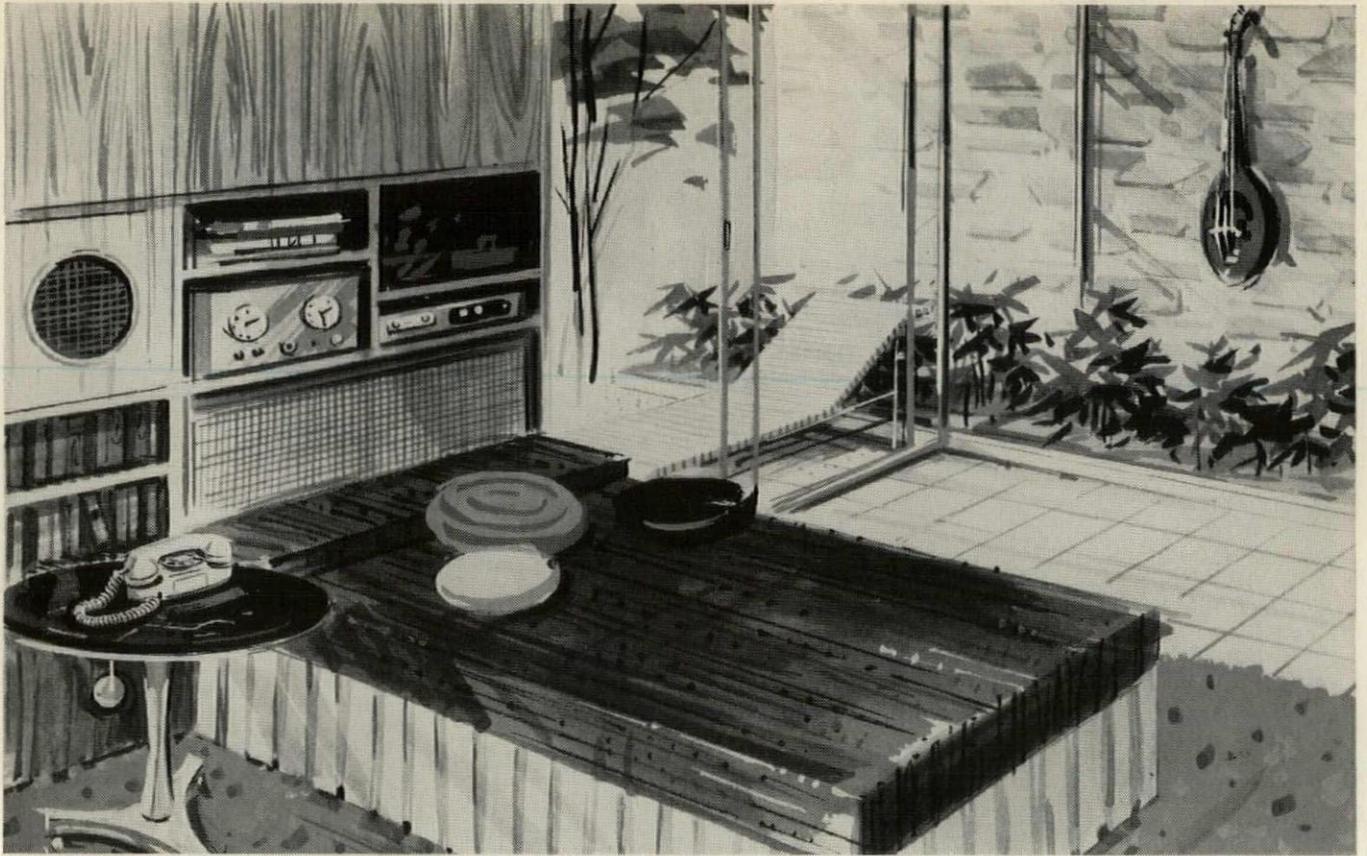


**Inland Steel Products Company** *Engineered Products Division*  
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ALBANY, ATLANTA, BALTIMORE, BOSTON, BUFFALO, CHICAGO, CINCINNATI, CLEVELAND, COLUMBUS, DALLAS, DENVER, DETROIT, FREMONT, CALIF., HOUSTON, INDIANAPOLIS, KANSAS CITY, MO., LOS ANGELES, NEW ORLEANS, NEW YORK, OMAHA, PHILADELPHIA, PITTSBURGH, SALT LAKE CITY, SAN FRANCISCO, SEATTLE, ST. LOUIS, ST. PAUL, TULSA

EP-18

For more information, turn to Reader Service card, circle No. 357

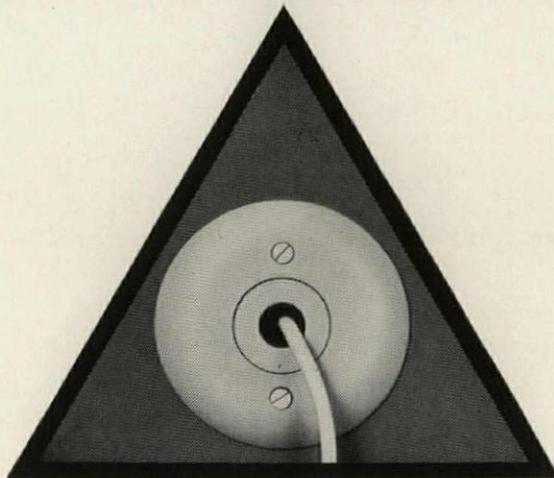


▲ The Princess phone adds to the appeal of this indoor-outdoor bedroom. For help in telephone-planning your homes, call your local Bell Telephone Business Office. See Sweet's Light Construction File, 11c/Be, for other residential telephone installation ideas.

**PLAN** for enough telephones and you  
make homes more livable, more salable. Built-in  
outlets with wiring concealed keep telephone  
service flexible and protect the beauty  
of home interiors.



**Bell Telephone System**



For more information, turn to Reader Service card, circle No. 325

The Anemostat® CLD can combine high capacity and high temperature differentials. That's why one CLD will sometimes do the job of two ordinary outlets — in less space!  You can use a CLD on one or both sides of a troffer — use both units for supply, or combine supply and return. And you always get true horizontal air distribution.  That means no down-drafts at all. That means comfortable people.

# CLD

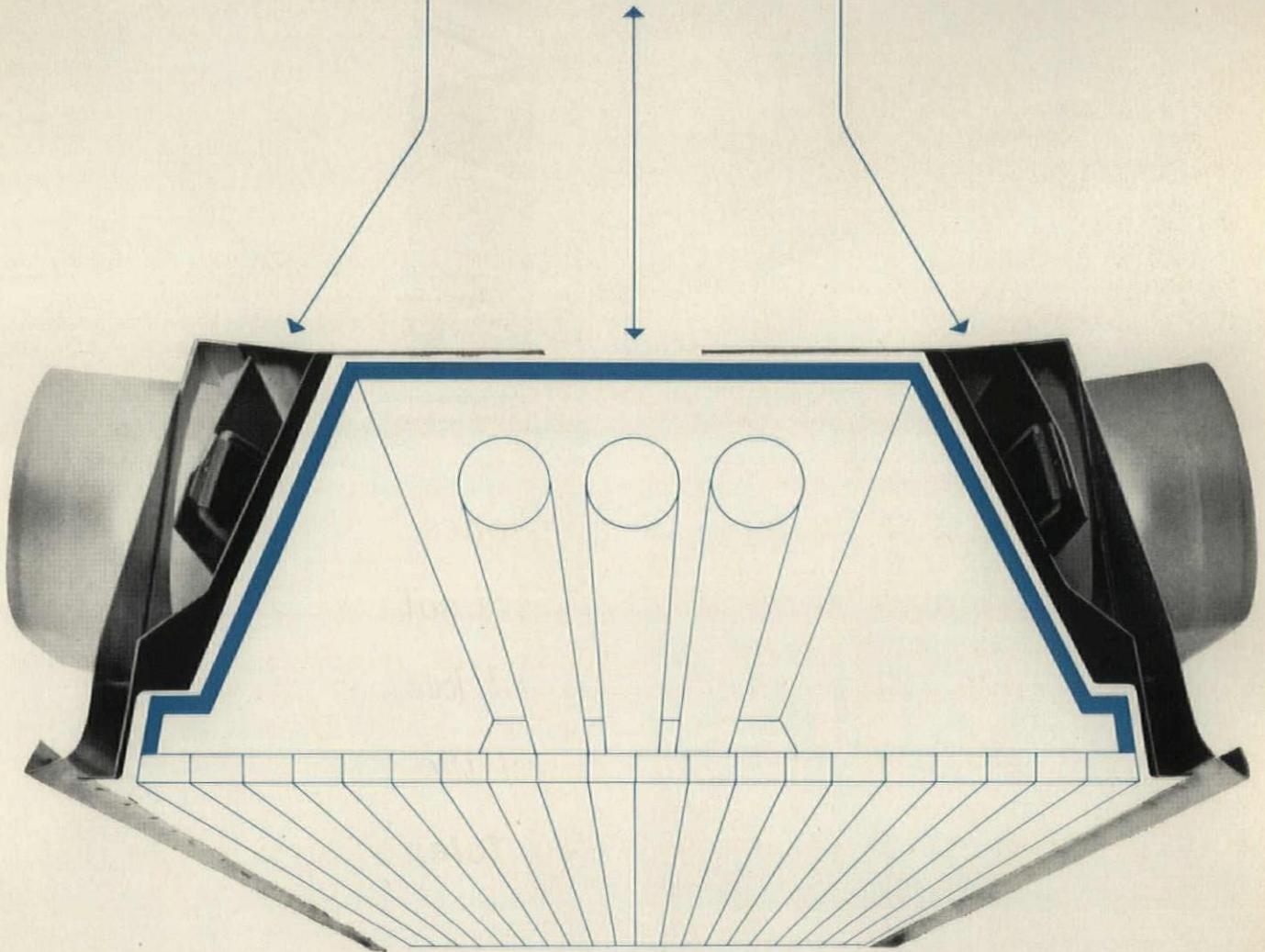
*Diffuser/Troffer Combination*

**MAXIMUM FLEXIBILITY**

**OPTIMUM LIGHT OUTPUT**

**MINIMUM CEILING SPACE**

The Anemostat® CLD Diffuser is concealed on the side of a light troffer — with an insulating air space between. Supply air can't get into the troffer. Lamp temperature remains constant.  Results: stable light output with clean, bright illumination, no color shift.  Anemostat makes the diffusers, other leading manufacturers make the troffers.  See your Anemostat Representative for details.



**ANEMOSTAT CORPORATION OF AMERICA**  
 SCRANTON, PENNSYLVANIA  
 A SUBSIDIARY OF  
**DYNAMICS CORPORATION OF AMERICA**



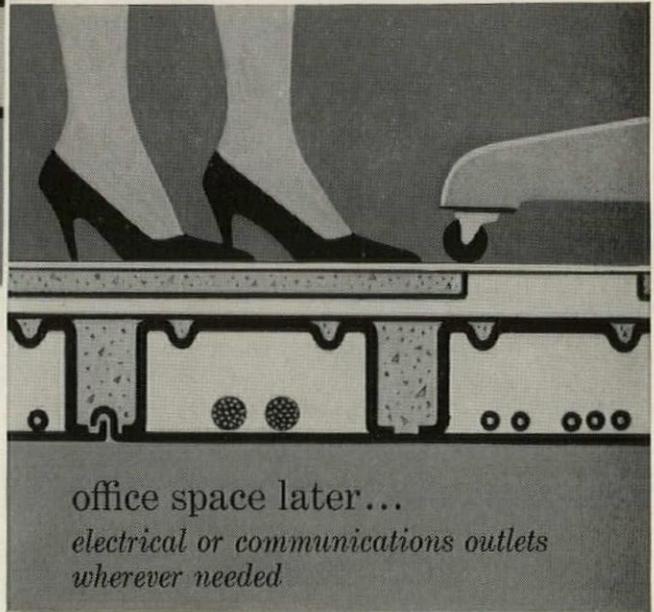
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# M-floors provide maximum useability

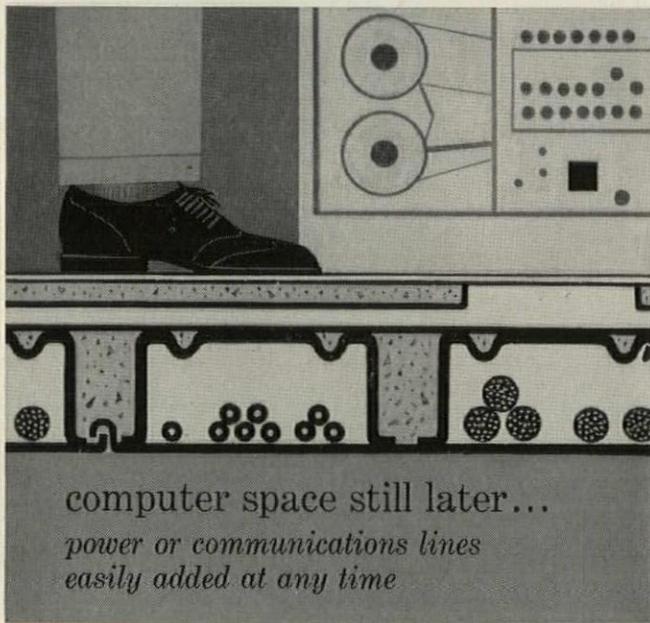


a working platform immediately...  
*for other trades—plumbing, electrical, etc.*

... now  
and  
later!



office space later...  
*electrical or communications outlets  
wherever needed*



computer space still later...  
*power or communications lines  
easily added at any time*

Mahon steel cellular sub-floors are versatile structural sections available in a wide variety of sizes and gages. They can be installed in either a flat plate up or flat plate down position. Rapidly and easily set in place as the primary structural frame is erected, M-Floor provides an early on-the-job working platform for allied trades. When concrete fill is poured, the plate and cell construction of M-Floor provides deep-void rigidity and consistent full-depth fill efficiency unmatched by other floor systems.

The super-width cells provide 70 to 160% more raceway space than similar products, depth for depth. This means that ever-growing power and communications needs are easily met when the need arises. *Write for Catalog M-62 or see Sweet's Files.*



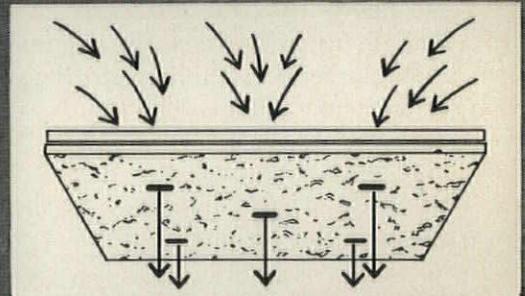
## MAHON

**THE R. C. MAHON COMPANY**

6565 E. EIGHT MILE ROAD, DETROIT 34, MICHIGAN

Manufacturing Plants—Detroit, Michigan and Torrance, California.

Sales-Engineering Offices—Detroit, New York, E. Orange, N. J., Cleveland Hts., Ohio, Chicago, Torrance, San Francisco and Seattle.



Heated or cooled air from the plenum passes through suspended ACOUSTONE Tile, via openings designed to assure proper penetration of air and optimum comfort level.

THE AIR SUPPLY OPENINGS in an AIRSON Ceiling System are not merely holes in the tile—but *adjustable* openings.

In effect, they are little “dampers” that let you control the volume and velocity of air that enters the room through *any part* of the ceiling.

They give you tile-by-tile control to *balance* air distribution across the entire ceiling for proper comfort throughout the room.

There are many other AIRSON advantages. Penetration of air to occupant breathing level. Cleanliness. The quiet and beauty of ACOUSTONE\* Acoustical Tile. Millions of square feet already in use—hundreds of satisfied users planning new applications.

Before you plan any system, get the facts on AIRSON. Consult your U.S.G. Architect Service Representative, or write Dept. PA-23, 300 W. Adams St., Chicago 6, Ill. \*T.M. Reg. U.S. Pat. Off. †T.M. Reg. U.S. Pat. Off. by Airson Co., Inc.

## AIRSON† Air Distribution System



**UNITED  
STATES  
GYPSUM**

the greatest name in building

when there's a hardware selection to be made...

# this man relies on past experience

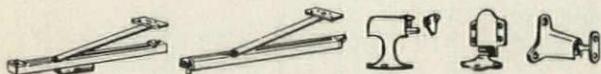
"Look-alikes" may puzzle the novice; but the man of experience doesn't just look at hardware. He looks beyond and sees — the *tangibles* and *intangibles* of his specification.

He knows the practical value of having his order analyzed as a double-check against errors, and the reassurance of custom-engineering assistance when it's needed.

He knows that the guarantee of durability and smooth function is in the original design, basic metal, precise machining and the expert finishing of an item.

He knows the time and money that are saved when the correct hardware reaches the building site on time.

Because this man knows GJ... he specifies GJ... for the *quality that he demands*, the *service-extras he has a right to expect*, and the *scheduled delivery that he needs*.



GJ hardware is built to endure...and LOOKS it.



**GLYNN • JOHNSON CORPORATION**  
4422 n. ravenwood ave. • chicago 40, illinois



# CHALLENGER<sup>®</sup> introduces...

## the first major improvement in modern mortise locks

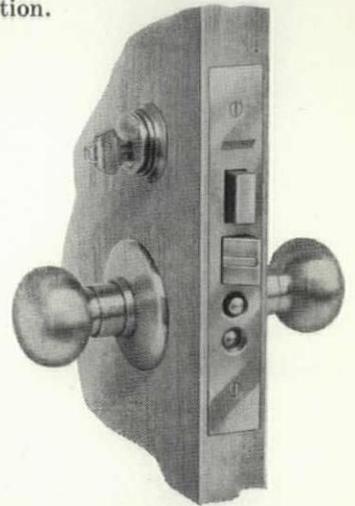
AGAIN Challenger sets the pace in modern lock design. The progressive, all new trim construction on the Challenger heavy duty mortise lock now permits far faster installation in fewer, easier steps. Exclusive self-aligning; self-adjusting features take the error out of installation. Pre-assembled bearings assure smooth maintenance-free operation. Smart knob and trim design add rich, distinctive style.

The new Challenger heavy duty mortise is *another* quality product in Challenger's complete line of mortise and cylindrical locksets, door closers, and accessories that permit you to specify Challenger *throughout* for locking, latching and closing requirements on virtually any door, in any type of structure.

Ask your local Challenger representative, or  
**CALL COLLECT** PRospect 4-1044.

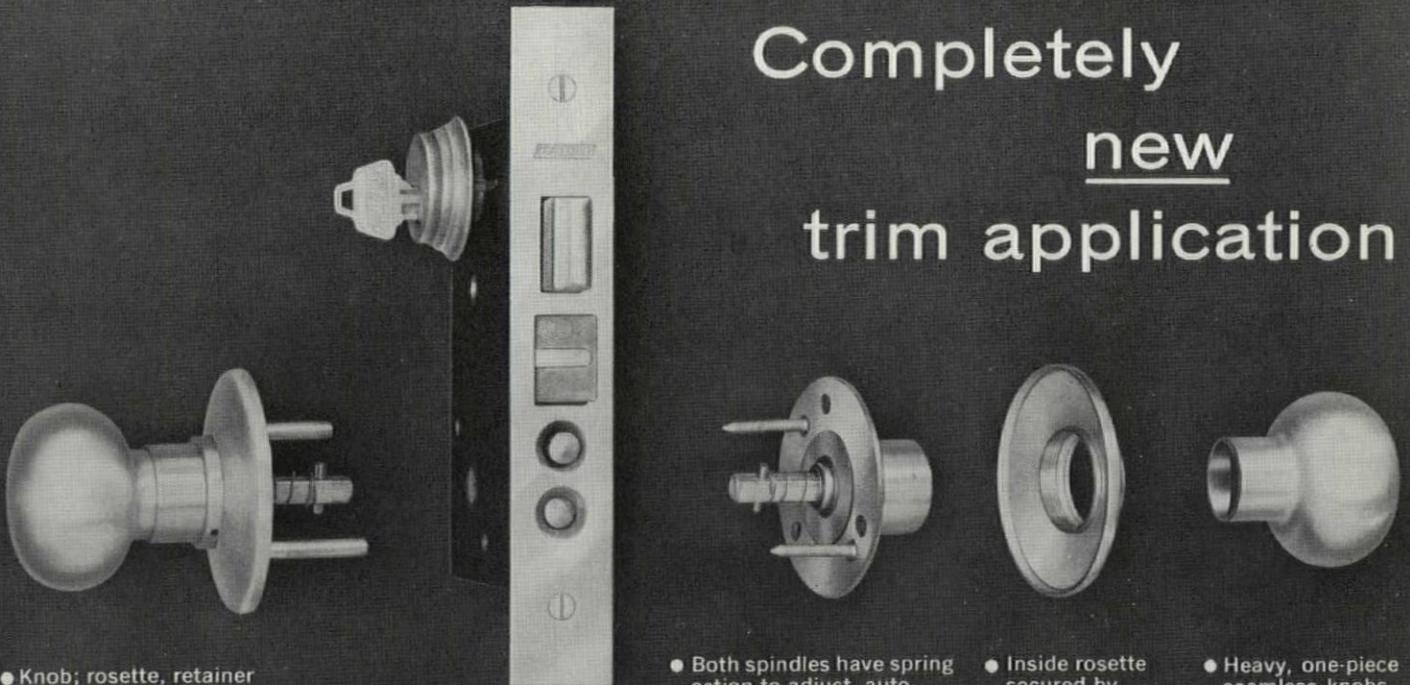
**CHALLENGER LOCK CO.**, 2349 W. La Palma Avenue  
Anaheim, California.

For more information, turn to Reader Service card, circle No. 337



**CHALLENGER IS ON THE MOVE • WATCH FOR ANOTHER NEW PRODUCT ANNOUNCEMENT—SOON!**

## Completely new trim application



● Knob; rosette, retainer with self-aligning posts; and spindle all single unit. Slips quickly, easily into guide holes.

● Nylon insert, anti-friction latch bolt. Reversible.

● Exclusive hard finish, pre-assembled bearings provide exceptionally smooth turning action of both knobs.

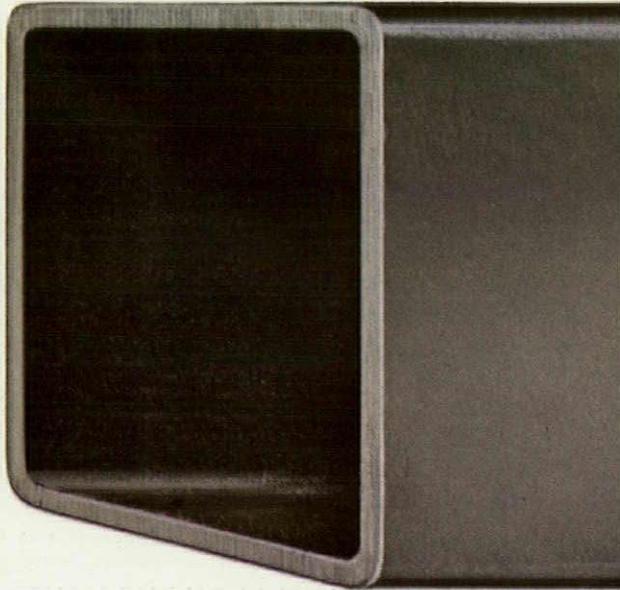
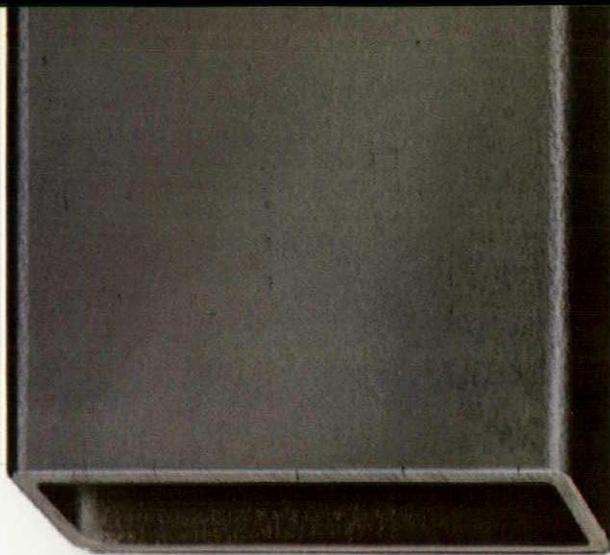
● Adjustable bevel front to meet particular door requirements.

● Both spindles have spring action to adjust, automatically, to any door thickness. Screws go into posts on the inside retainer and contain "Nyloc" inserts to prevent loosening.

● Inside rosette secured by threaded ferrule with spanner wrench for screwless application.

● Heavy, one-piece seamless knobs. All cast, screwless shank.

Meets requirements of Federal Specifications FF-H-106a. Series 86.  
Also available Series 85, 87.



## New Hot-Rolled Hollow Structural Tubing meets ASTM specifications **A7 and A36**

Square and rectangular Hollow Structural Tubing by National Tube—"the shape for things to come"—offers unique new design freedom for architects and engineers. These new structurals are *hot rolled* in carbon steels to the familiar ASTM A7 and A36 specifications. Only National Tube offers hot-rolled square and rectangular structural tubing produced by the butt-welded and seamless processes in a complete range of sizes and wall thicknesses which meet these two structural specifications.

USS National Hollow Structural Tubing has an excellent strength to weight ratio, with possible weight savings of 30 to 40 per cent over conventional structural members. It is easily worked: ductility is good, it welds, punches, flares and flanges easily. Torsion resistance is good. Hollow structural tubing can be left exposed or painted to fit the decor. There are fewer exposed areas to maintain, and dirt doesn't collect. Hollow structural tubing can carry loads plus plumbing, wiring and air conditioning, and save more money in construction costs.

Our hollow structural square tubing is available in one inch by one inch through ten by ten inches. Rectangles are available in perimeters through 32 inches. The tubing is stocked in lengths of 36 to 42 feet, and is available in cut lengths or multiples.

For further information, write National Tube Division, United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

*USS and National are registered trademarks.*

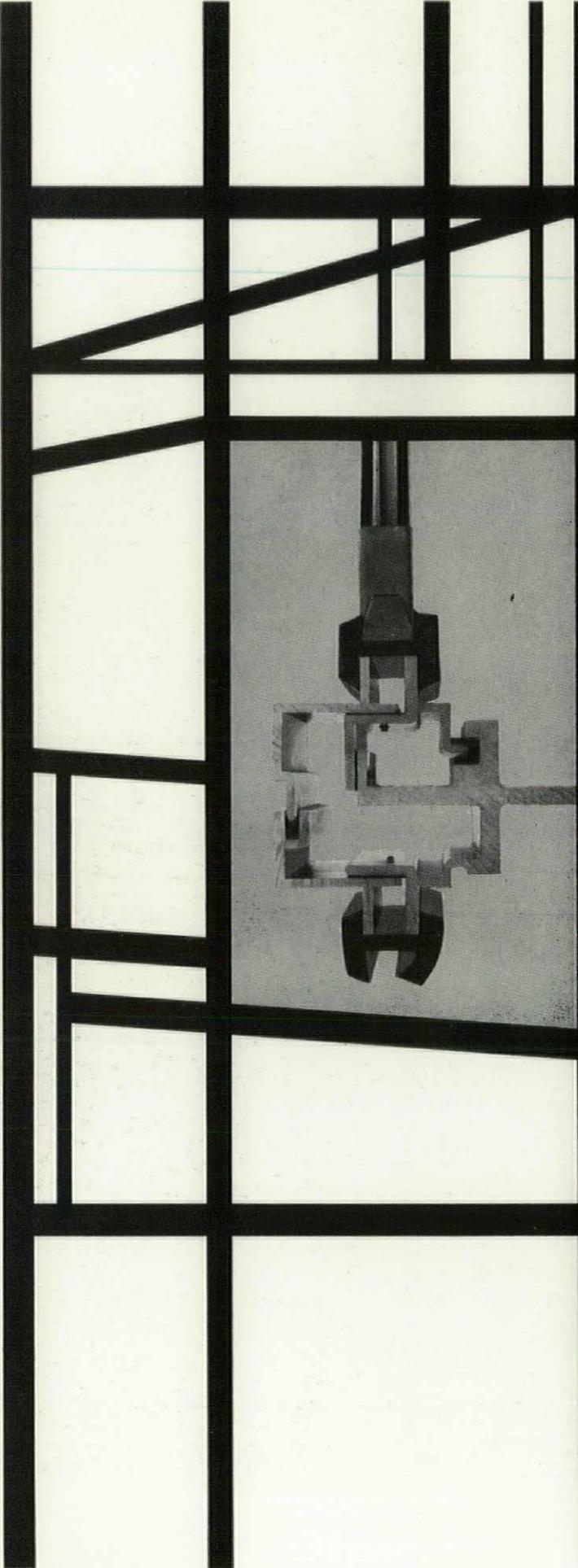


This mark tells you a product is  
made of modern, dependable Steel.



**National Tube  
Division of  
United States Steel**

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



## RELIABLE NEOPRENE GASKETS STAY WEATHERTIGHT IN ANY WEATHER

However new your curtain wall design, Du Pont Neoprene gasketing will add an element of dependability you can get with no other material. A generation of use under the most violent weather conditions has been carefully observed and recorded by Du Pont technical men.

These records prove Neoprene's permanence. A case in point: the six trouble-free winters sealing doors, windows and exterior joints on the world's most windswept permanent weather station atop Mt. Washington in New Hampshire.

Du Pont records over 25 years build an even stronger case for Neoprene. Some outdoor applications of Neoprene have been performing so well so long that we're not even sure what their durability limit is.

What about cost? Preformed Neoprene gasketing is quite competitive in terms of installed costs. Job-site labor is reduced to a minimum. Requires no special skills. For additional information and a list of reliable manufacturers of Neoprene gaskets, write E. I. du Pont de Nemours & Co. (Inc.), Elastomer Chemicals Department PA-5-NB, Wilmington 98, Delaware.

**NEOPRENE**  
ANOTHER RELIABLE



**ELASTOMER**

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*6051, one of the Goodform 600 Chairs selected by The Chase Manhattan Bank for their new offices.*

**chair with the architectural flair...** IT'S THE GOODFORM 600 BY GF, styled to complement today's smart business interiors. Here's proof that office chairs needn't sacrifice comfort for beauty. The complete line, including side chairs, is available in a variety of fabrics and finishes to carry out any decorative theme. See Goodform 600 at your nearby GF branch or dealer. Or write Dept. PA-18 for descriptive literature. The General Fireproofing Company, Youngstown 1, Ohio.

**GF**  
BUSINESS FURNITURE

For more information, turn to Reader Service card, circle No. 347



Philadelphia Hospitality Center, owned and operated by the Philadelphia Convention and Visitors Bureau. Architect: Harbeson-

Hough-Livingston & Larson. General Contractor: John McShain, Inc. Curtain Wall Contractor: J. G. Leise Metal Works, Inc.

## The spirit of Philadelphia's urban renewal ...framed in Nickel Stainless Steel

A bright showplace not far from Independence Hall, Philadelphia's new Hospitality Center helps express this city's dynamic and tasteful approach to urban renewal.

**A refreshing, round design,** the building beckons to visitors through tall glass curtain walls in slender frames of Type 302 Nickel Stainless Steel. These frames will clean readily, need less maintenance than any other architectural metal, and look good as

new for the life of the building.

**Competitive in cost** with less durable metals, Nickel Stainless Steel window frames are being produced by new roll-forming techniques. Initial costs are down, so the economy is immediate—and the value long-lasting.

If you're trying to reconcile costs with esthetics—in urban renewal or other construction—perhaps you'll find the solution in Nickel Stainless Steel. There's helpful information on

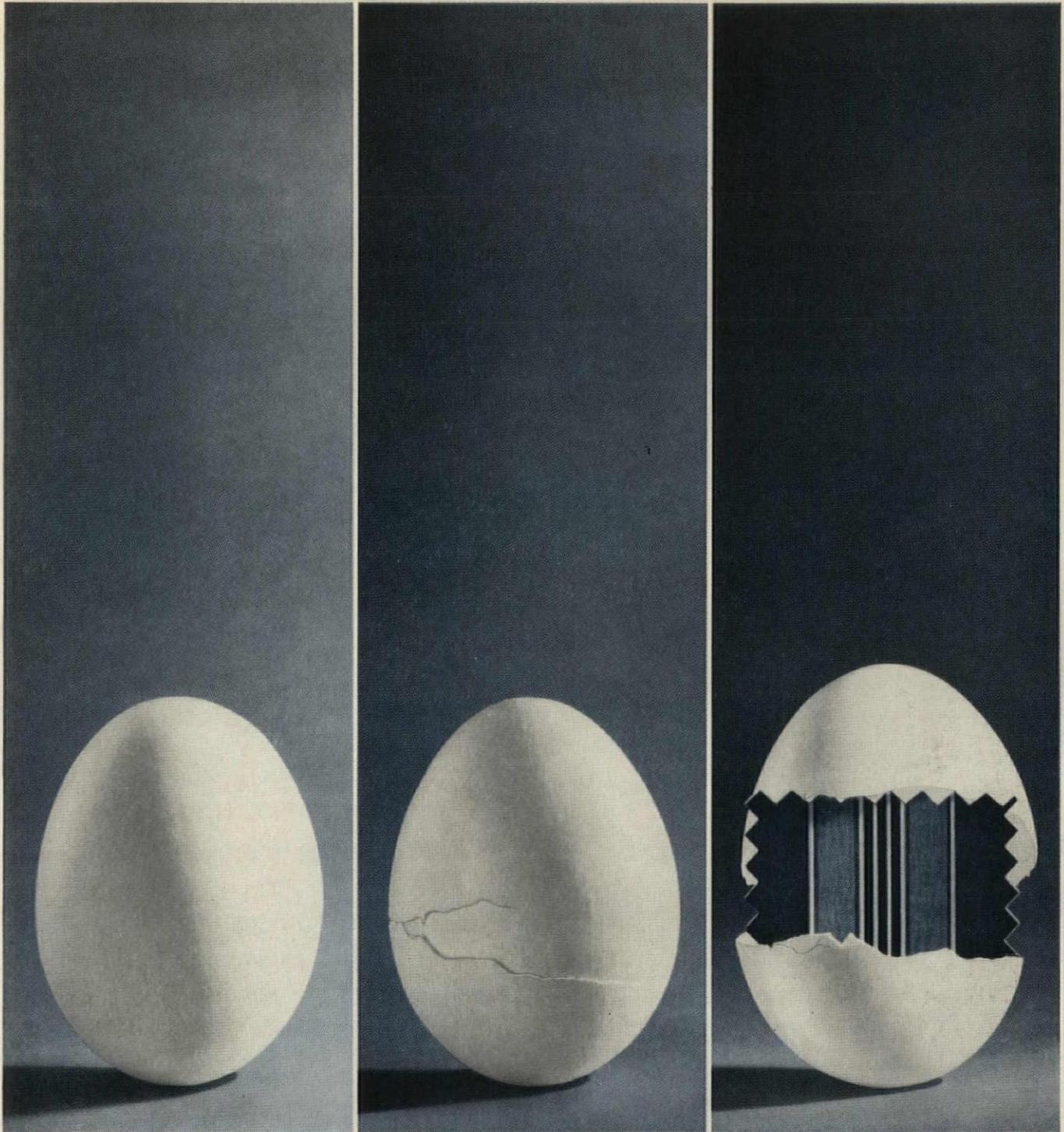
this handsome, durable material in the new 24-page booklet *Architect's Guide to Nickel Stainless Steel Flashings*. A copy is yours for the asking.

**THE INTERNATIONAL NICKEL COMPANY, INC.**

67 Wall Street  New York 5, N. Y.

**INCO NICKEL**

**MAKES STAINLESS STEEL  
PERFORM BETTER LONGER**



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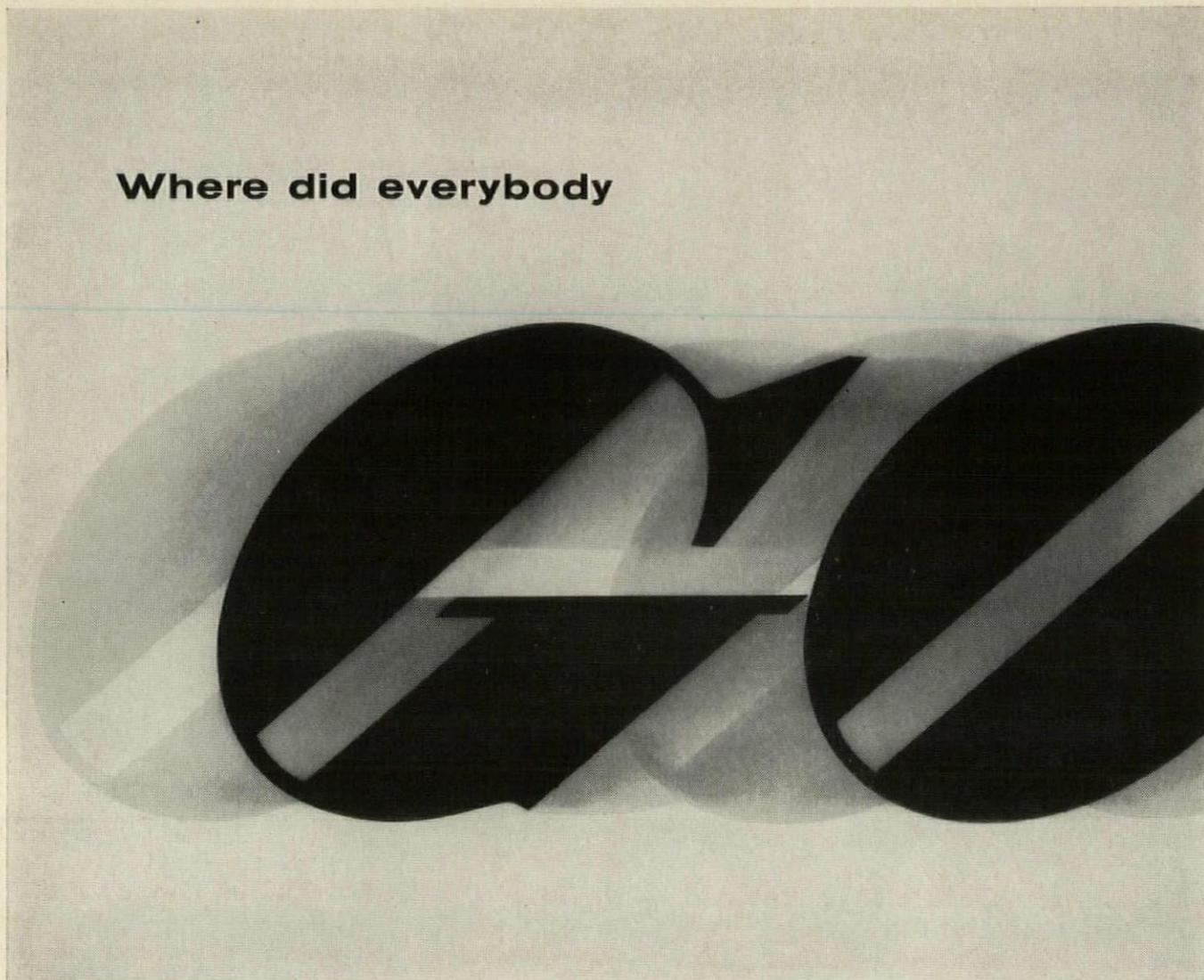
**Amazing Technological Advance in Woven Awning Fabrics**

Glen Raven's new awning fabrics are the nation's all-around finest all-around the year. More than 20,000 rugged laboratory and field tests have been made to prove their superiority. • What makes these awning fabrics the most outstanding of the century? What is the brand name? Please see other Glen Raven advertisement, this issue.



GLEN RAVEN COTTON MILLS, INC.  
Glen Raven, North Carolina

## Where did everybody



The owners can get awfully lonely with an air conditioning system that has been put together with a variety of major components from different manufacturers.

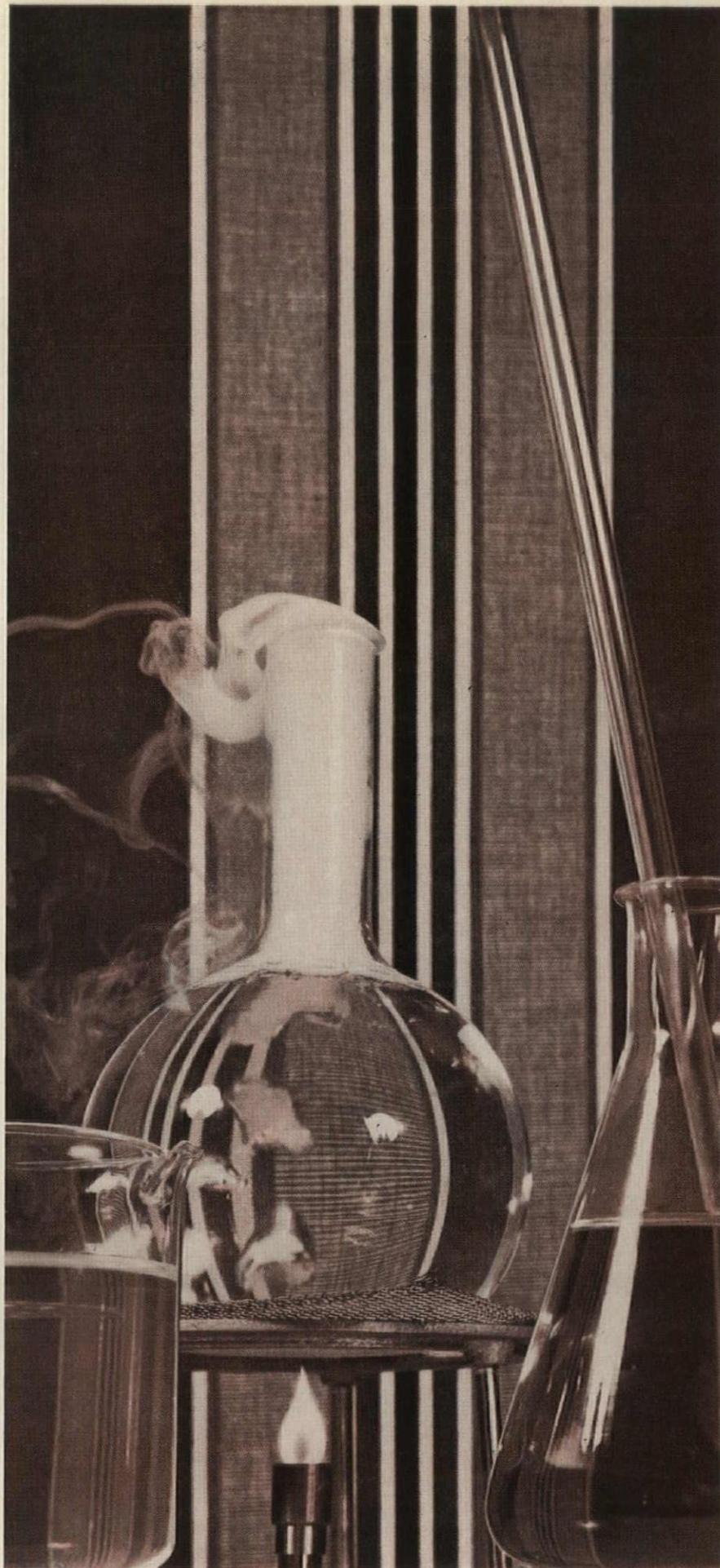
They may even have saved a few dollars—with refrigeration equipment from one source, cooling and heating coils from another and fans from somewhere else. But then when they try to fix responsibility for performance, where did everybody go?

Whom will the owners 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. For our company and our dealers maintain the largest, best-trained service organization in the business—over 11,000 men strong.

**Carrier** Air Conditioning Company



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**100%**  
**ACRILAN\***

## **GUARANTEED FIVE YEARS**

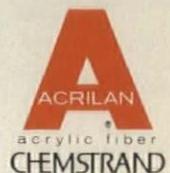
Acrilan acrylic solution-dyed fiber which locks in color adds new dimension to Glen Raven Sunbrella woven awning fabrics . . . makes them the most lasting under the sun.

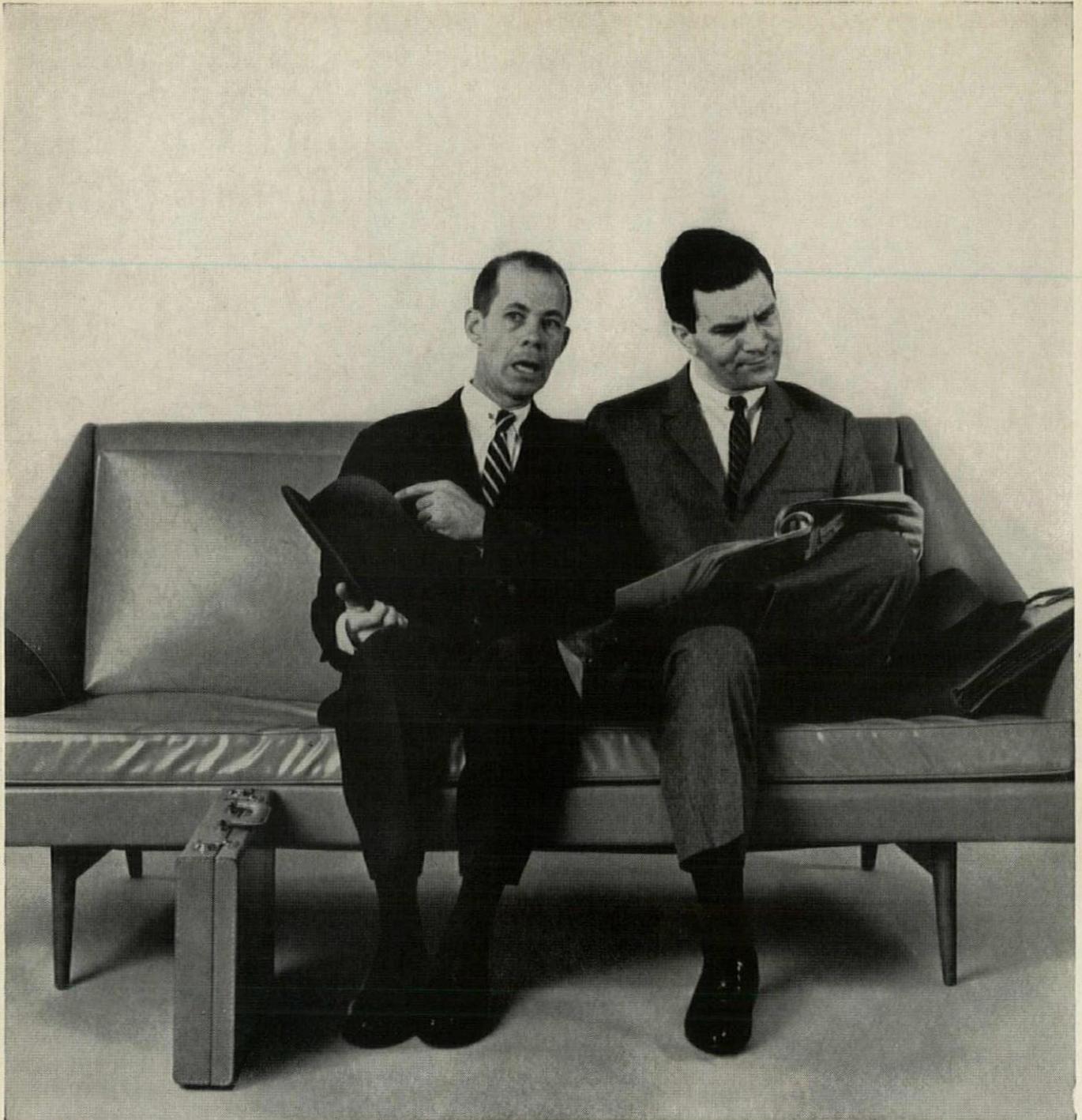
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*Write today for more information.*

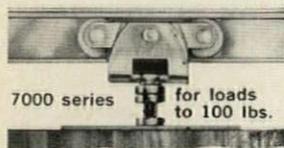
GLEN RAVEN COTTON MILLS, INC.  
Glen Raven, North Carolina





**“DON'T LOOK NOW, BUT THE WALL IS MOVING.”**

Grant Heavy Duty Sliding Door Hardware moves walls as easily as everyday hardware moves doors. Such action yields new design flexibility as well as dramatic visual effects. If you've been tempted to transport a wall or a partition from one locale to another, Grant provides first class accommodations. Grant's Sliding Hardware Catalog is available on request.



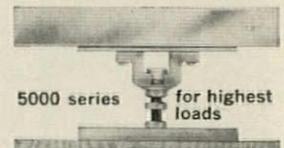
7000 series for loads to 100 lbs.



1200 series for loads to 175 lbs.



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Here is office furniture that delivers more than good looks! It makes the most effective use of available floor space. It achieves peak employee efficiency with functional design—in a price range that meets the budget. It includes service that follows through long after the purchase. By satisfying all these requirements (and more), Royalmetal has achieved a unique position in the office furniture field. Our newest designs are the "100" and "300" series shown above—for executive, general office, and reception areas. They provide many time and space-saving ideas that can answer your personal needs. Find out more. Ask your Royal dealer.

HE'S EASY TO FIND IN THE YELLOW PAGES. Or write: ROYALMETAL CORPORATION, Dept. 11E, One Park Avenue, New York 16, New York. SHOWROOMS: New York, Chicago, Los Angeles, San Francisco, Seattle, Atlanta; Galt, Ontario.

*Royal*

**ROYALMETAL**

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# Sculptured Beauty

with MARZAIC<sup>®</sup>  
CURTAIN WALL PANELS



The exciting new design of the Leader Federal Savings and Loan Association Building has made it a center of attraction in Memphis. This new structure has gained recognition from all parts of the country as a pioneer in the trend toward frame type wall panel construction. Martin Marietta's frame type, Marzaic curtain wall panels have significantly contributed to the beauty of this building. The exterior surfaces of

the panels expose a brilliant, white quartz aggregate. Too, the precast frames serve to modulate the sun's rays. The modern concept of architectural design, expressed by the deeply recessed windows, form modular interior alcoves. The total flexibility of design possibilities, the economy, ease of handling and fast erection all combine to create the physical expression of architectural design.

Architect:  
Walk C. Jones, Jr.;  
Contractors:  
Dougherty-Liddell  
Construction Company;  
Consulting Engineer:  
Clarke Mann of Merrill  
and Mann Associates;  
all of Memphis, Tenn.



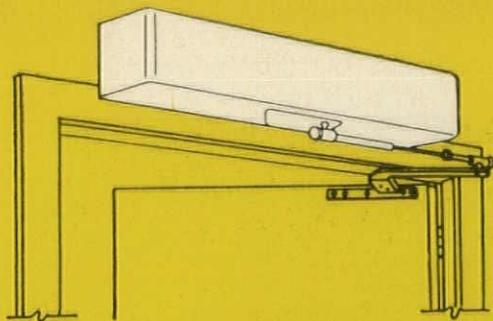
## CONCRETE PRODUCTS

A CONSTRUCTION MATERIALS DIVISION OF

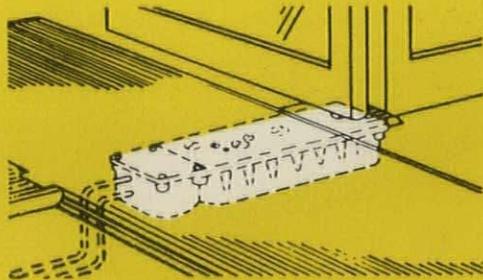


# MARTIN MARIETTA

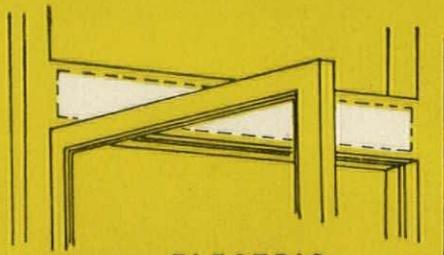
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# 3 STANLEY MAGIC-DOOR OPERATORS

In selecting the right automatic door operator for your needs, it's important to remember that all doors and all operating conditions are not the same; each installation requires proper selection and application of power and control. That's why Stanley manufactures not just one but three distinct types of operators: MAGIC-DOOR Hydraulic and Pneumatic Operators with the power and control features needed to handle the heaviest doors under the most severe operating conditions . . . and now the new MAGIC-DOOR Electric Operator that teams Stanley quality with exceptional economy. When you choose from the complete Stanley line, you can always be sure of the finest for any application!

SEND FOR YOUR FREE COPY OF FOLDER M67B giving specifications on all Stanley MAGIC-DOOR Operators and details on a variety of commercial, industrial, retail and institutional applications.

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**A M E R I C A B U I L D S B E T T E R A N D L I V E S B E T T E R W I T H S T A N L E Y**

This famous trademark distinguishes over 20,000 quality products of The Stanley Works, New Britain, Conn.—hand tools • power tools • builders hardware • industrial hardware • drapery hardware • automatic door controls • aluminum windows • stampings • springs • coatings • strip steel • steel strapping — made in 24 plants in the United States, Canada, England, Germany and Italy

CANADIAN PLANTS: HAMILTON, ONTARIO, AND ROXTON POND, P.Q.



## BOY-PROOF!... STANLEY Pivot Reinforced Hinges REDUCE MAINTENANCE!

Youngsters often strain hinge tempers, too! But Stanley Pivot Reinforced Hinges are boy-proof and shockproof — even when overhead holders bring doors to a jolting halt. When ordinary hinges or pivots are used, this kind of rock 'em, sock 'em treatment can mean door damage that can be prevented by specifying Stanley Pivot Reinforced Hinges.

**Write for free HINGE GUIDE:**

STANLEY HARDWARE, Division of The Stanley Works, Dept. E, 78 Lake Street, New Britain, Connecticut.

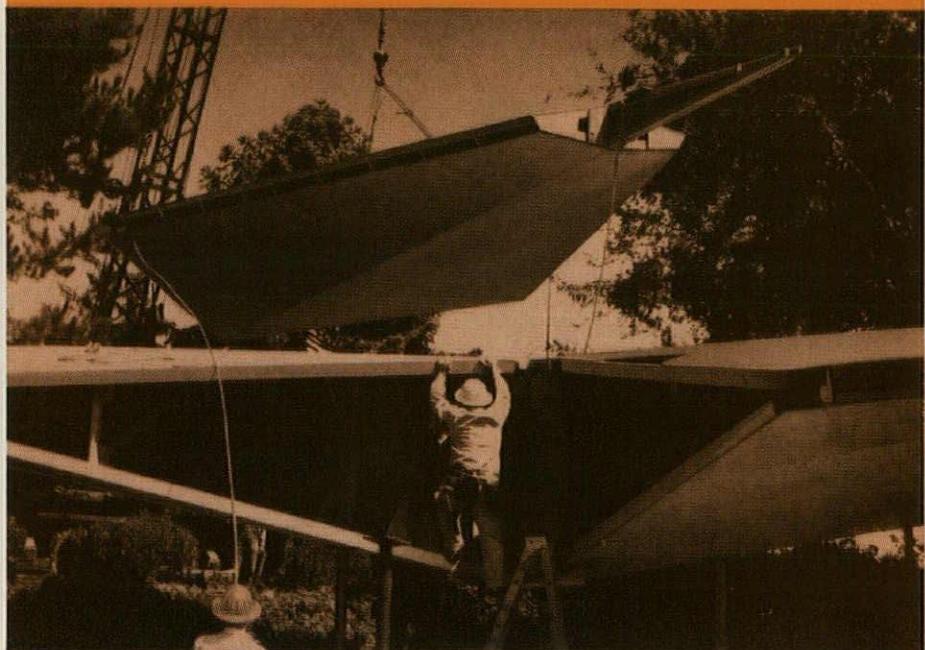
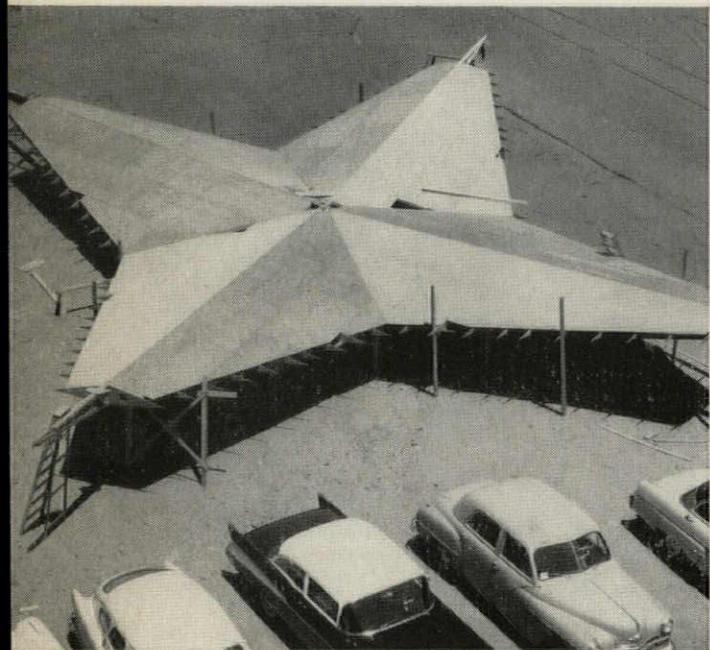
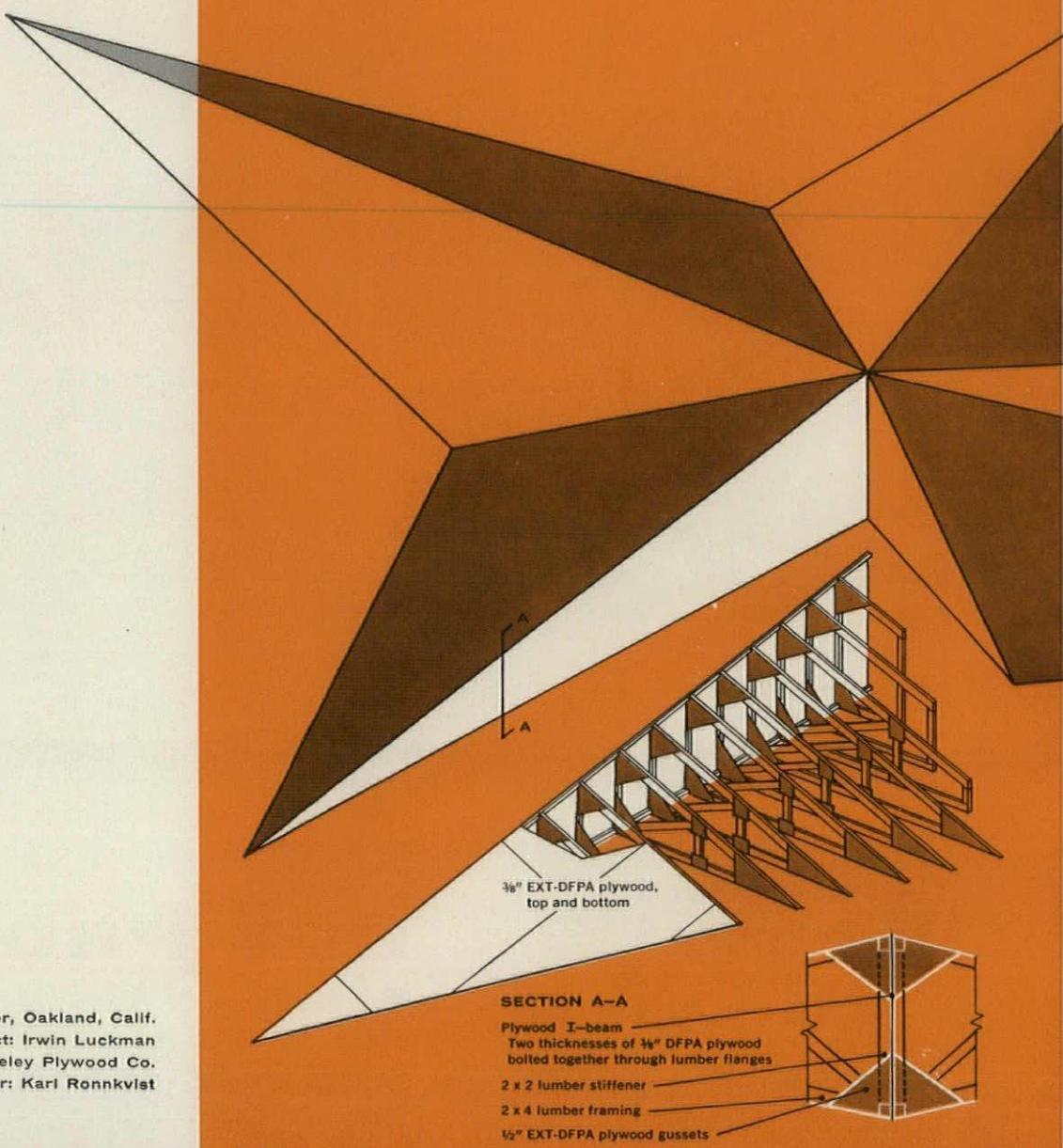
See the very latest in hinge design at Booth No. 139, A.I.A. Convention, Dallas, Texas, May 7-11.

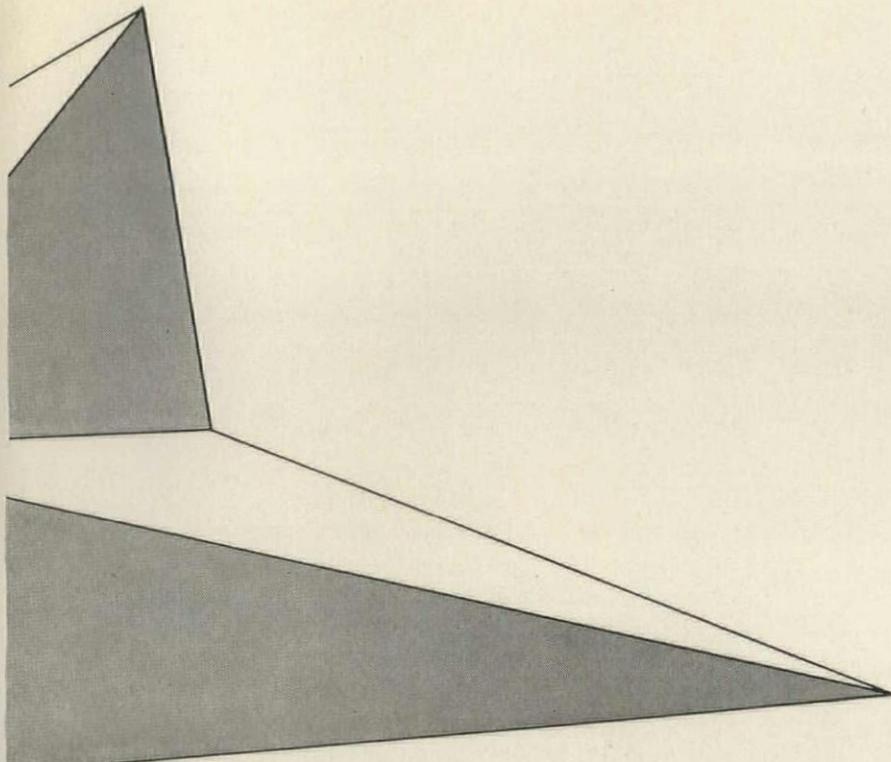


Available in stainless steel, bronze and steel in all standard finishes.

For more information, turn to Reader Service card, circle No. 392

Arroyo Viejo Children's Theater, Oakland, Calif.  
 Architect: Irwin Luckman  
 Fabricator: Berkeley Plywood Co.  
 Builder: Karl Ronnkvist





## the most exciting ideas take shape in fir plywood



THIS INGENUOUS STAR-SHAPED ROOF demonstrates the remarkable structural forms that can be achieved with plywood. Deceptively simple, the design bears more resemblance to airplane wings than a conventional roof, with interacting plywood and lightweight lumber members forming skeleton and structural skin.

Four plywood I-beams radiate from the center to form the spines of the 22 x 38-foot wings. Trusses cantilever off both sides of the beams and plywood skins form a rigid diaphragm that provides structural integrity for the entire assembly. The roof is supported by only eight steel columns. Components were temporarily bolted together by the fabricator to check tolerances, then trucked to the site for installation.

For further information on plywood and other new plywood structural systems, including folded plates, space planes, Delta structures, components, etc., write (USA only) Douglas Fir Plywood Association, Tacoma 2, Washington.



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to fungus growth, insects, rodents, rot and decay, the  
beauty lasts. Pearl white with varied fissures, Styltone  
is manufactured with squared or beveled edges in  
precision cut sizes  $\frac{3}{4}$ " thick, 12"x12",  
12"x23 $\frac{3}{4}$ ", 12"x24". At your service... B-E-H  
acoustical contractors are in your area, no further  
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For the name and number of the Man  
Most Eager To Serve You, write  
Baldwin-Ehret-Hill, Inc., Room 407  
500 Breunig Avenue, Trenton, New Jersey

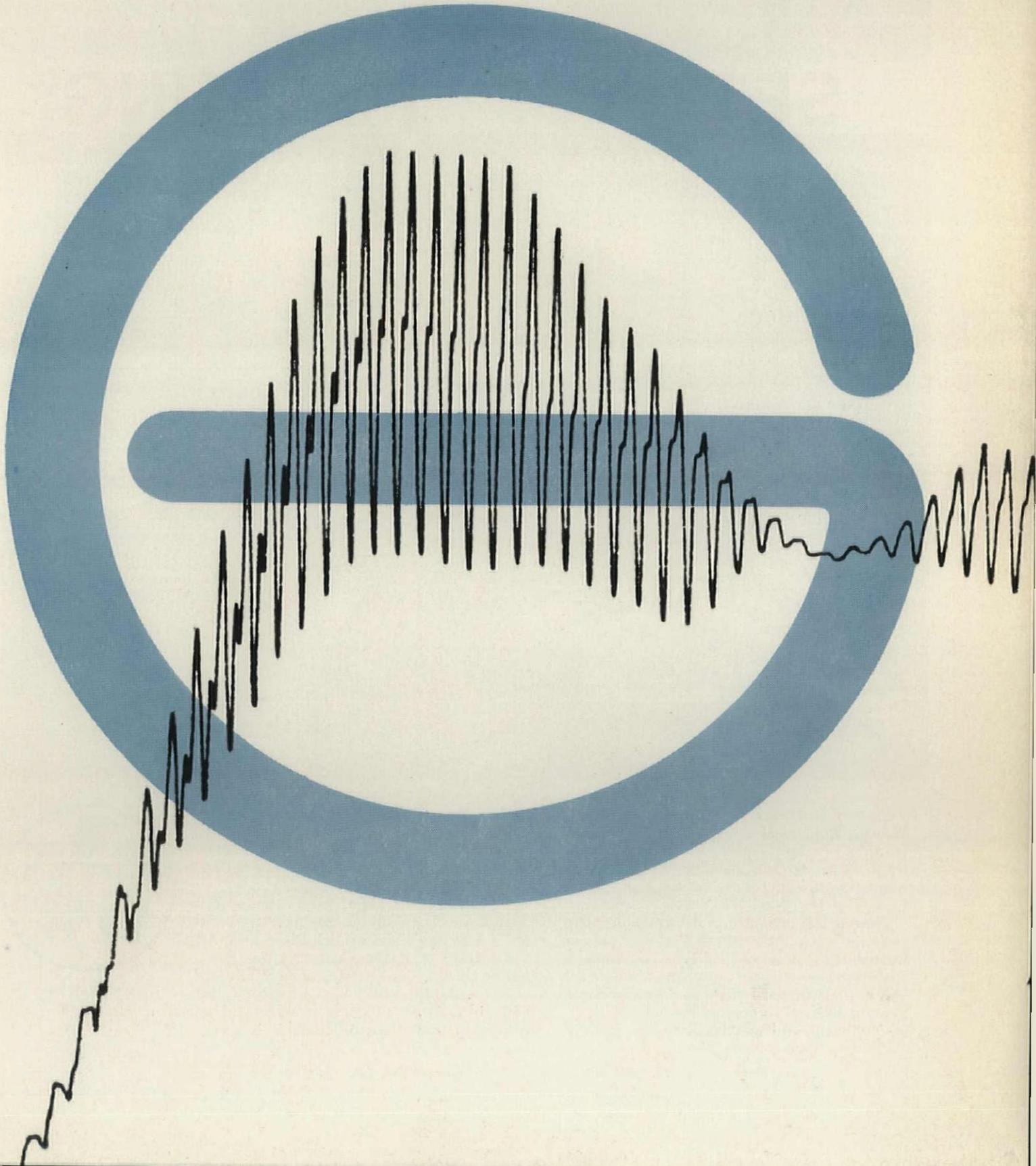
**BALDWIN-EHRET-HILL, INC.**



For more information, circle No. 331

*This is the shape of good light as a photometer records it. At Gotham Lighting, photometry linked with mathematics forms the fundamental approach to luminaire design and development. For some units, a dozen or more exacting tests of the optical elements are required. These photometric explorations, at times, lead to modifications of just a few thousandths of an inch. And it is interesting to see how much difference even a few thousandths can make when you compare the performance figures of other units with those of **Gotham Lighting Corporation.***

*37-01 Thirty-first Street, Long Island City, N. Y.*



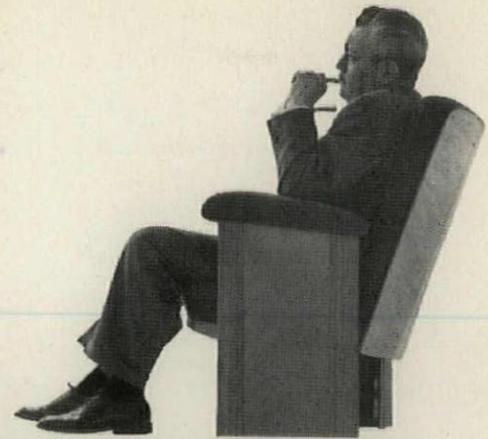
William D. Coffey Associates, Inc.  
— Consulting Engineers  
Mallard Sheets  
— Design Consultants

Installation by B. F. Shearer Company,  
Los Angeles, San Francisco,  
Portland,  
Seattle.



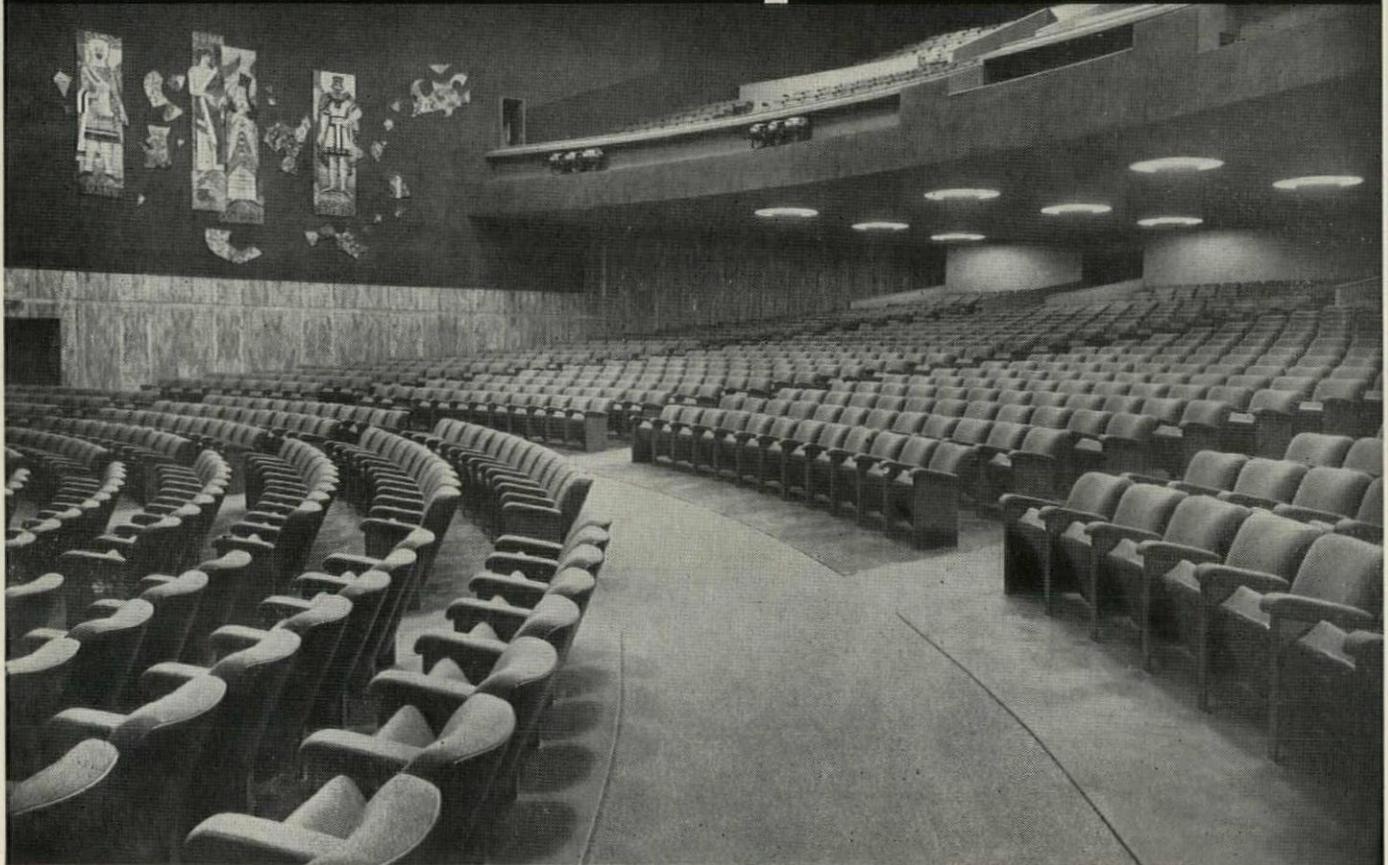
## SETTING:

SCOTTISH RITE MASONIC TEMPLE



## SEATING:

HEYWOOD-WAKEFIELD



This new Scottish Rite Masonic Temple, on Wilshire Boulevard in Los Angeles, maintains its aura of dignity and usefulness to man right down to the seating—1140 AIRFLO Loge Chairs and 1112 ENCORE Auditorium Chairs by Heywood-Wakefield.

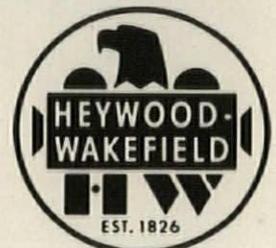
Here is the ultimate in comfortable mass seating with individual privacy. Most luxurious in the Heywood line, these chairs feature deep-cushion multiple individual coil springs in both seats and backs. Arms are upholstered in sponge rubber.

Obviously, the Scottish Rite Masons and

their architects wanted the most comfortable chairs on the market. They found what they sought in Heywood-Wakefield chairs—the chairs that grace so many of America's most impressive new buildings.

If you should visit the Scottish Rite Temple in Los Angeles—or next time you are in Chicago's McCormick Place, Detroit's Cobo Hall, or Kaiser Center in Oakland—notice the seating. It's Heywood-Wakefield.

For complete information, see Section 36d/He in Sweet's catalog, or write and ask for our complete portfolio. Do it today.



Menominee, Michigan



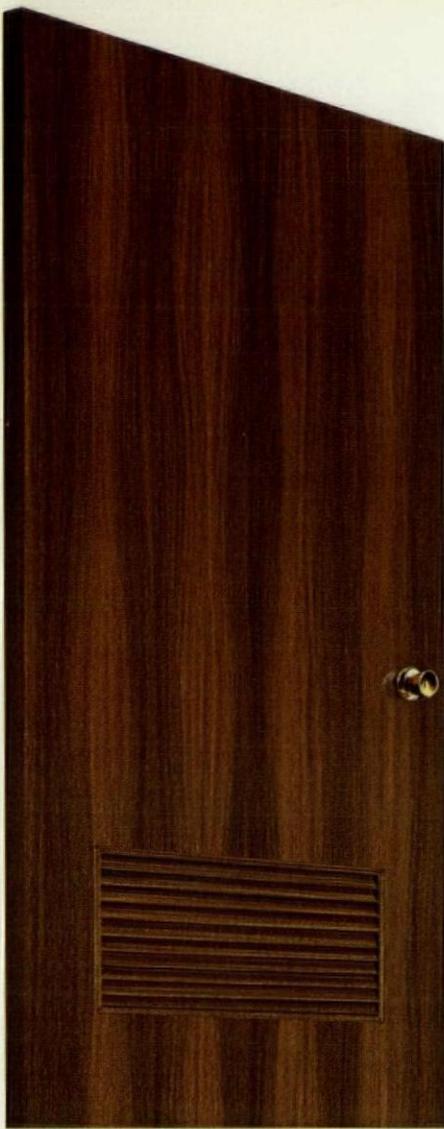
**for  
every type  
door opening**



**RODDIS  
DOORS**

**by  
Weyerhaeuser**

## THE MOST COMPLETE LINE OF FLUSH WOOD DOORS IN AMERICA



**SOLID CORE**



**HOLLOW CORE**



**FIRE RETARDANT**



**SOUND RETARDANT**

### **SOLID CORE**

A unique TIME CONDITIONING process employed in the manufacture of Roddis *Golden Dowel* staved wood core doors results in the most stable of all constructions... guaranteed for the lifetime of the installation. The Roddis *Standard* staved wood core door with a two-year guarantee has an outstanding record of dependable performance. Both are suitable for interior or exterior use.

### **HOLLOW CORE**

Ideal for limited budget applications, the Roddis *Housemart* Door combines strength, service and beauty with low cost. Time-proven 7-ply wood spiral construction gives strength without weight. Standard sizes and thicknesses as well as specified sizes are manufactured in all available woods. Satisfaction is assured by the Roddis 2-year guarantee.

### **FIRE RETARDANT**

B-label 1 hour rated and C-label  $\frac{3}{4}$  hour fire doors with the exclusive features of patented, all-wood particle core

construction — exceptional screw-holding power, great sound resistance and added strength. Also available—a choice of warp-free mineral core constructions. Roddis fire doors carry a written lifetime-of-the-installation guarantee.

### **SOUND RETARDANT**

High density wood particle core sound retardant doors are available in three thicknesses:  $1\frac{3}{4}$ ",  $2\frac{1}{4}$ " and 3" with average sound transmission loss ratings of 38, 42 and 44 decibels. Available in sizes from 1/0 x 4/0 to 4/0 x 8/0. Furnished complete with gasketed stops and threshold sealing components to insure maximum sound deadening when installed.

### **PAINT GRADE**

When painted doors are called for on exterior openings, reduce on-the-job costs while assuring a smooth, long-lasting finish by specifying Roddis D-S fire retardant mineral core or solid staved wood core constructions with Kimpreg high density overlay faces. Checking is eliminated and one

prime coat with two finish coats will last an average of four to five years.

### **PLASTIC FACED**

For areas subject to hard wear specify Roddis solid core faced with clear *Tigaclad* plastic overlay... a tough resin sheet that provides outstanding protection against scratches and stains while enhancing the natural beauty of genuine wood veneers. Durable faces and edges of high pressure plastic laminates in choice of brands and patterns are also available.

### **X-RAY**

RODDIS X-RAY DOORS are also available with a full sheet of lead midway between a divided wood core. Door thicknesses from  $1\frac{3}{4}$ " to  $2\frac{1}{4}$ "; lead thicknesses from  $1/32$ " to  $1/2$ ".

### **INSTITUTIONAL**

The  $1\frac{3}{4}$ " Roddis Institutional hollow core door is completely reversible, easily fitted with hardware and built to take rugged abuse. It features seven-ply construction, spiral core, laminated hardwood stiles and a Two-Year Guarantee.

# RODDIS DOORS

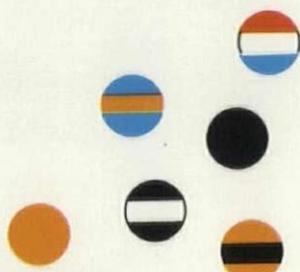
with the famous **GOLDEN DOWEL** lifetime guarantee

A color-coded dowel in one edge of every Roddis Door (except where special constructions will not permit) is visible proof of the quality called for in your specifications. The famous Roddis Golden Dowel marks the highest achievement in wood door craftsmanship . . . a door guaranteed in writing to stay straight, true and beautiful for the lifetime of the installation or it will be replaced, rehung and refinished.

The Golden Dowel also symbolizes more than half a century of leadership in door design and construction . . . a tradition of quality recognized by architects who, in a recent independent survey, indicated a preference for Roddis Doors by 2 to 1 over the next leading brand.

## DESIGN COORDINATED FACES

Obtain a unified appearance throughout with matching faces on every door plus harmonizing Weyerhaeuser hardwood panelings and moldings. Choose from all available species of domestic and imported hardwoods. Order them from stock or custom-made with pre-selected flitches. For perfect design control have all veneers factory-finished to identical specifications . . . or order doors primed and sealed for protection in handling and easier on-the-job finishing.

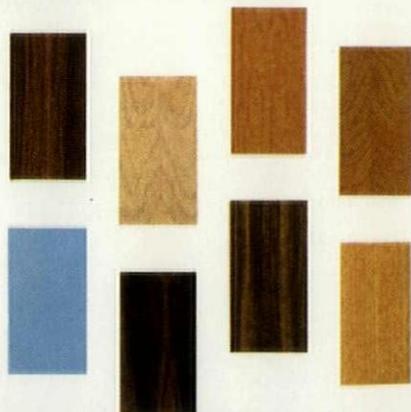


PAINT GRADE

PLASTIC FACED

X-RAY

INSTITUTIONAL



*For complete details on all Roddis Doors, see Sweet's Architectural File, contact one of the Weyerhaeuser offices listed on the next page, or send this coupon for comprehensive 1962 catalog.*



**Weyerhaeuser Company**  
Wood Products Division  
Tacoma 1, Washington

### Weyerhaeuser Company

Box 900, Tacoma 1, Washington

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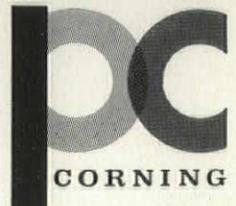
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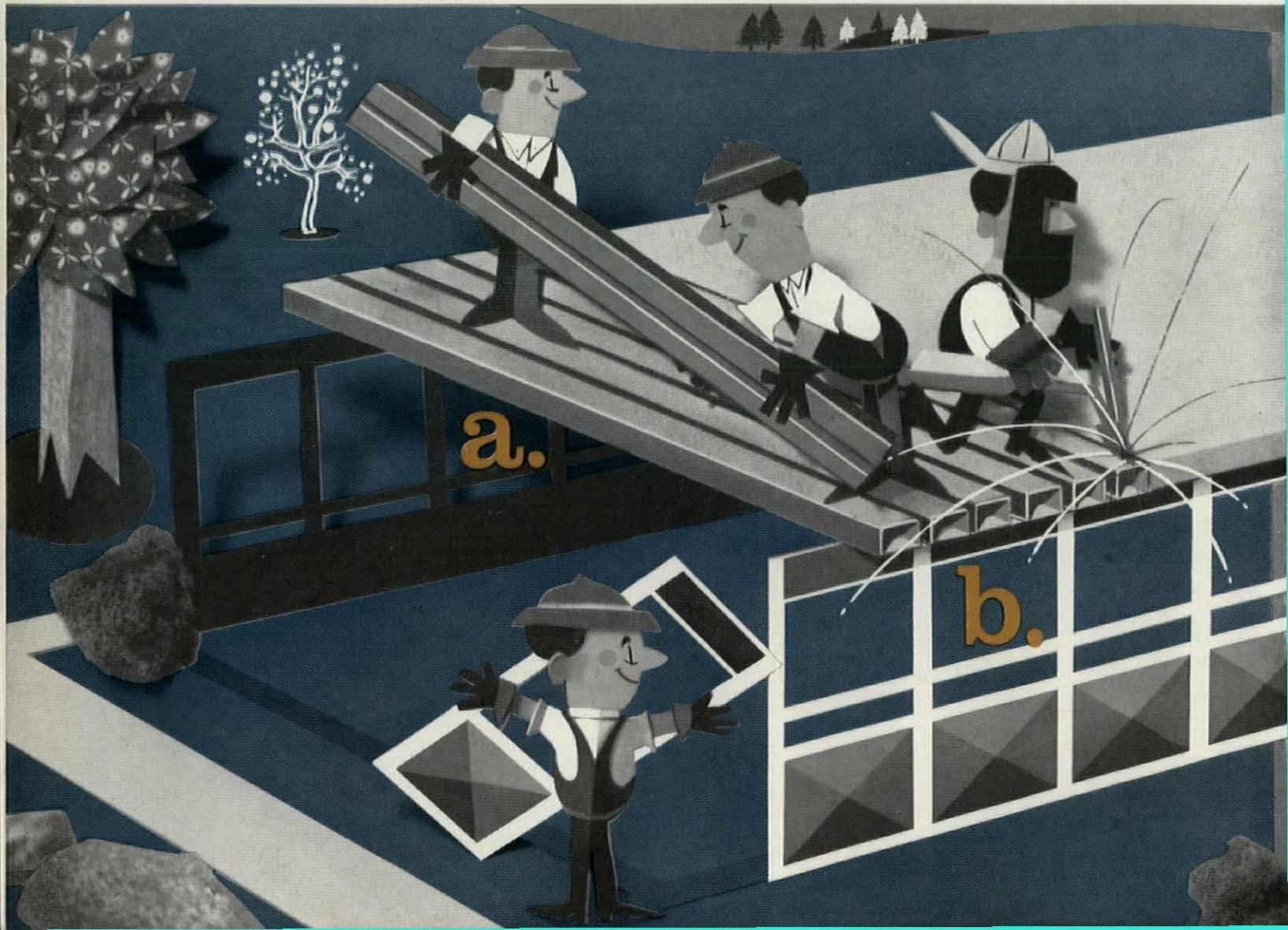
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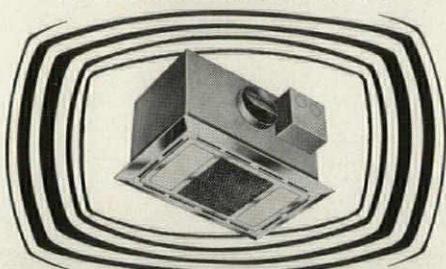
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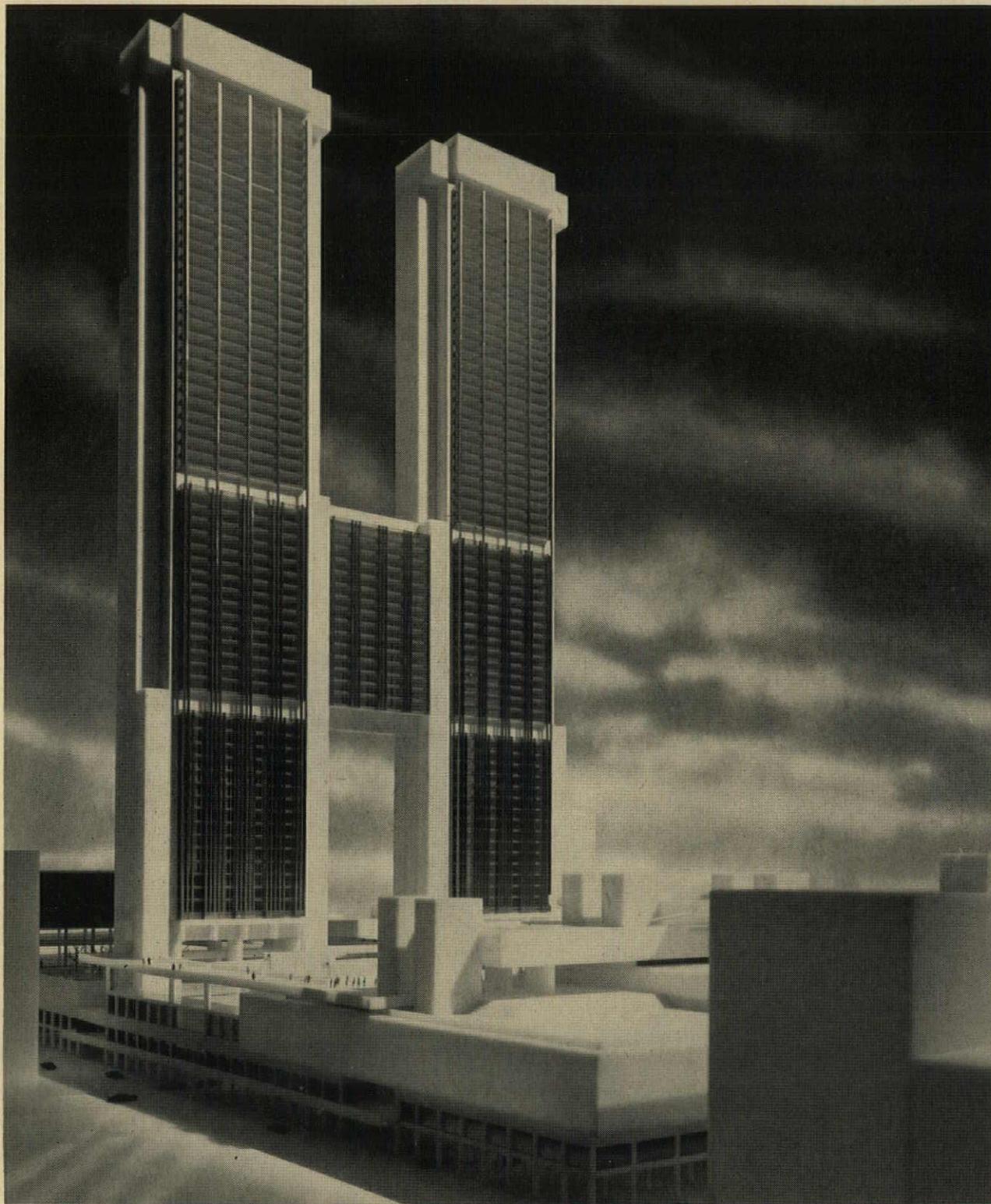
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# NEWS REPORT

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



*"Main Place," the multilevel center proposed as catalyst for the redevelopment of Dallas by Columbia study.*

67 COLUMBIA'S PROGRAM FOR DALLAS  
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73 FRENCH WIN REYNOLDS PRIZE

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86 WASHINGTON/FINANCIAL NEWS  
93 PRODUCTS: LAMPS AND PARTITIONS



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**indispensable?**

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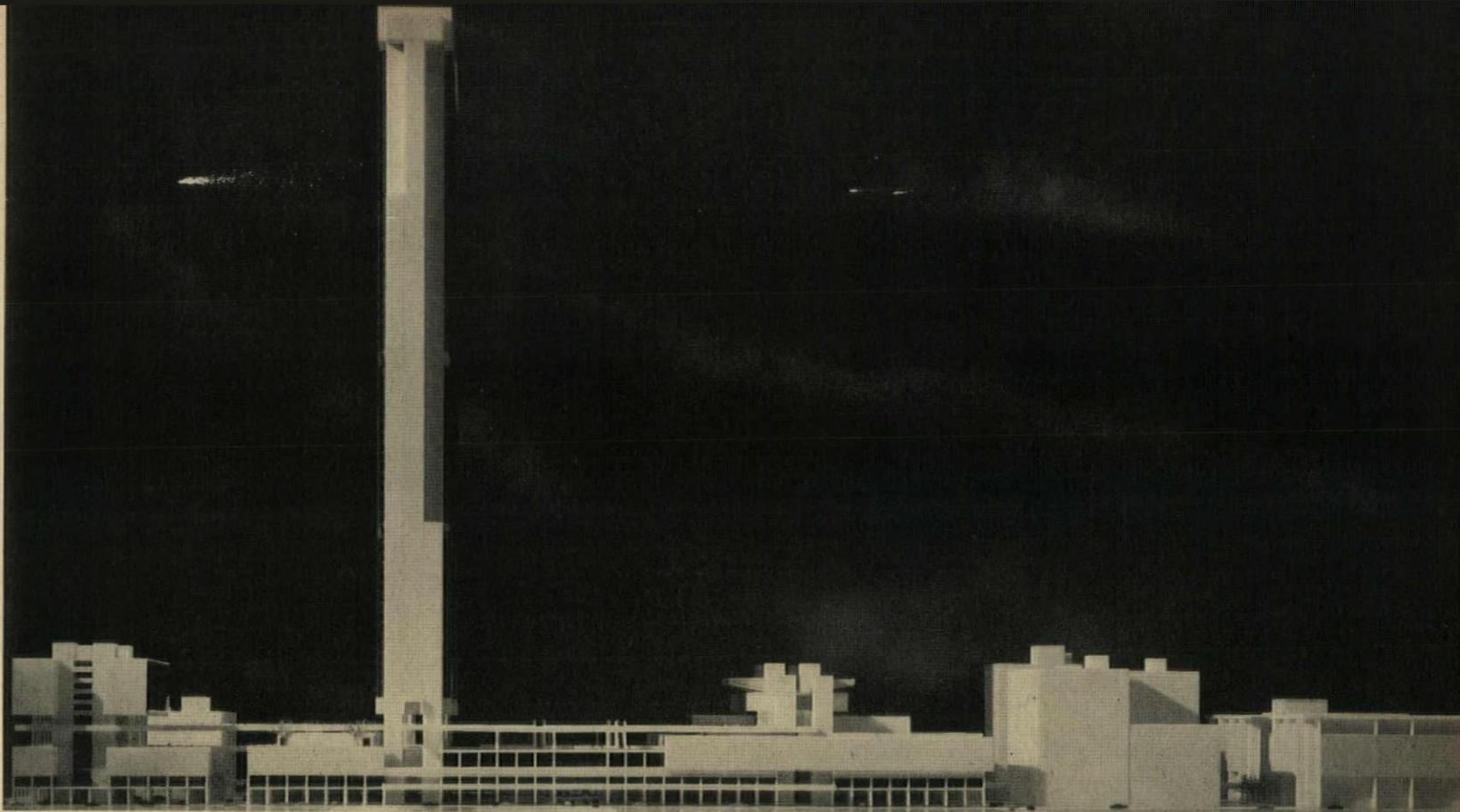
tion to insist on superior flooring installed by a quality contractor. And when you specify a Robbins hardwood floor system, you're assured of both!

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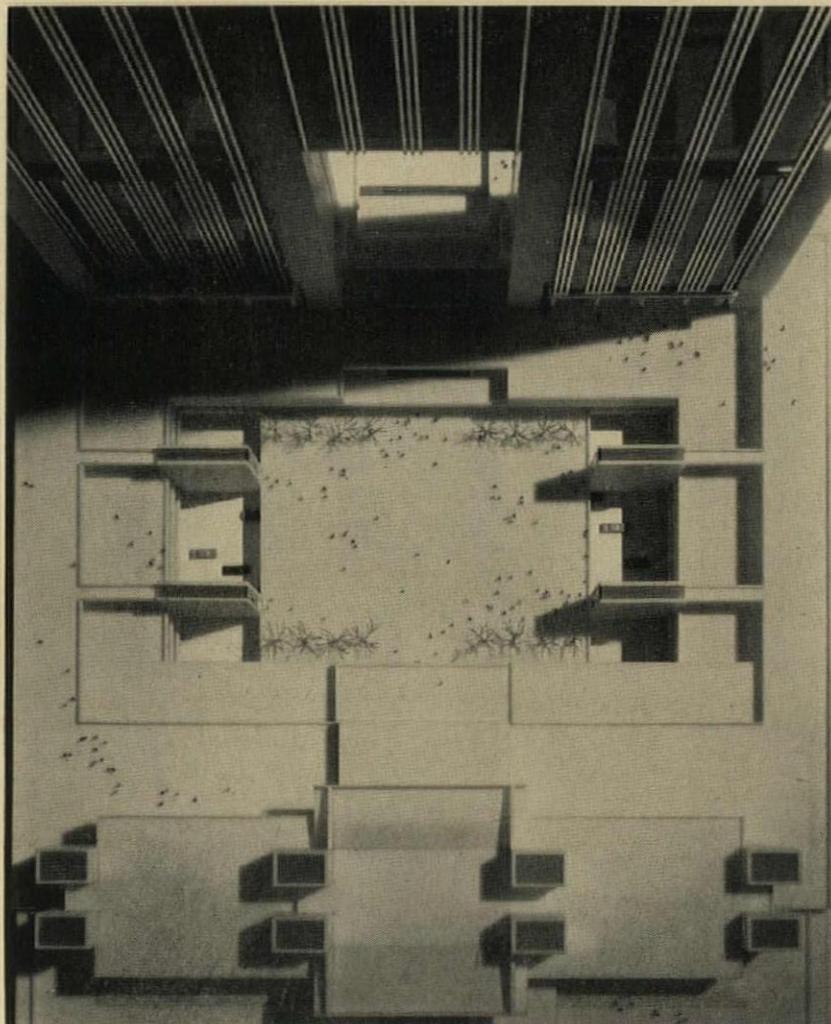
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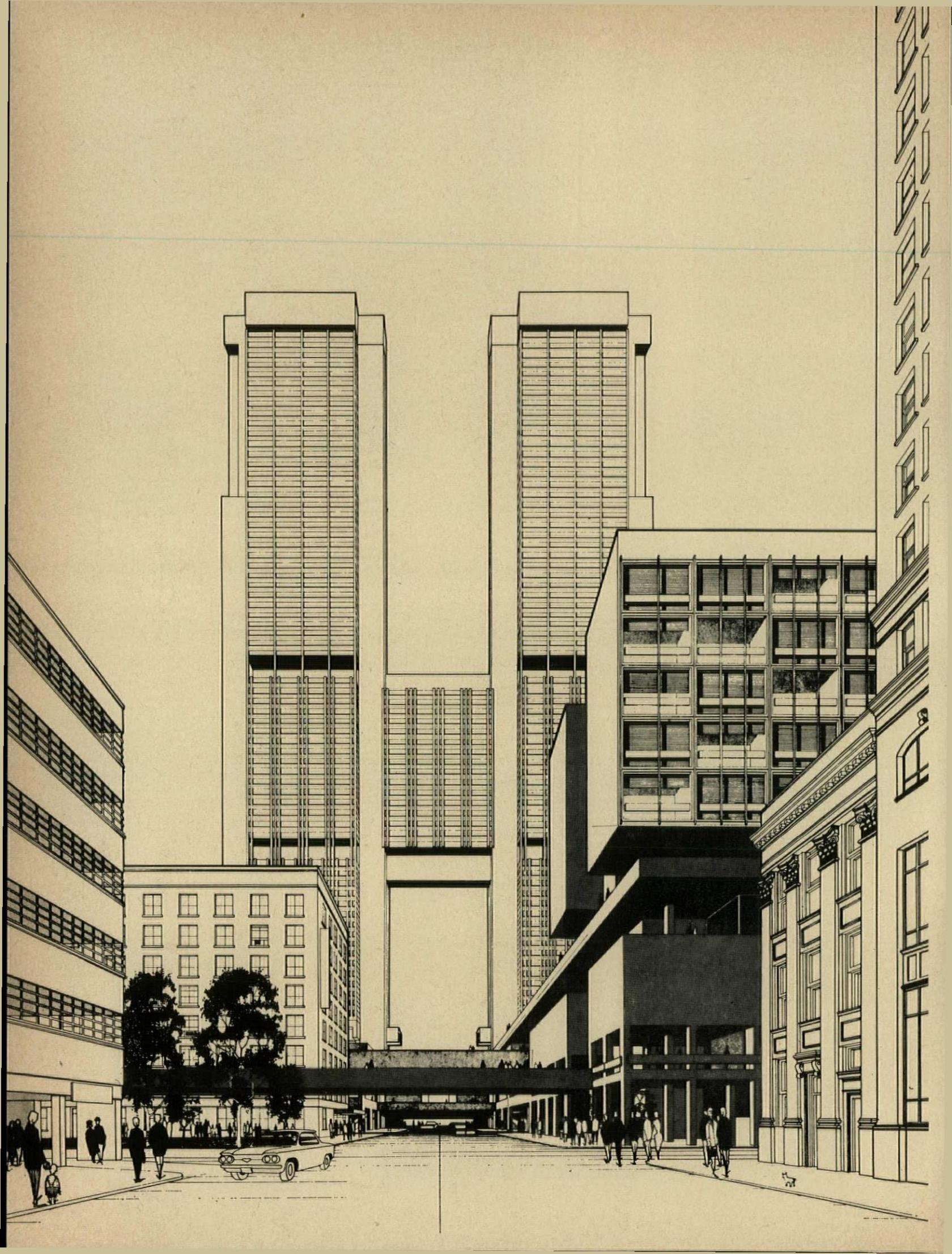
## COLUMBIA TEAM STUDIES DOWNTOWN DALLAS



*Dallas Square.*

DALLAS, TEXAS In a move to revive the deteriorating western section of the Dallas central business district through private enterprise, W. W. Overton, Jr., Chairman of the Board of the Texas Bank and Trust Company of Dallas and Chairman of the Research Committee of the Central Business District Association, has financed a study by a faculty/student team at Columbia University's School of Architecture for an immediate and long-range future plan for the city.

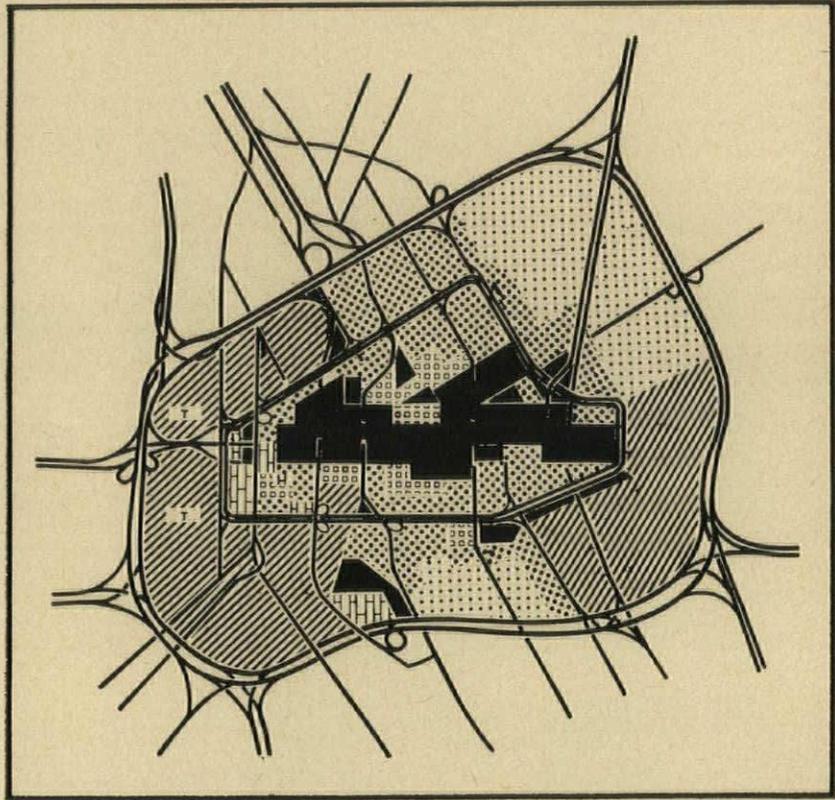
The initial redevelopment section, or "catalyst," for the larger downtown redevelopment is a four-block, 9.75-acre area owned by the Overton and Murchison families are nine other holders, who are now being asked to join in promoting the enterprise. The Columbia plan thus expresses itself in three elements: "Main Place," the four-block catalyst (p. 65), to be completed in one to 10 years; the "reaction" section of 36 blocks, to take shape in five to 20 years; and the eventual renewal of 60 downtown blocks, ranging from 15 years on. The provision of facilities is arranged around corporate management, finance, retailing, and government. Conceiving of real estate as volumetric rather than planar, the Columbia group developed a plan that vertically "stacks" different activities and services, and separates not only pedestrian and vehicular traffic, but also different kinds of motor traffic.



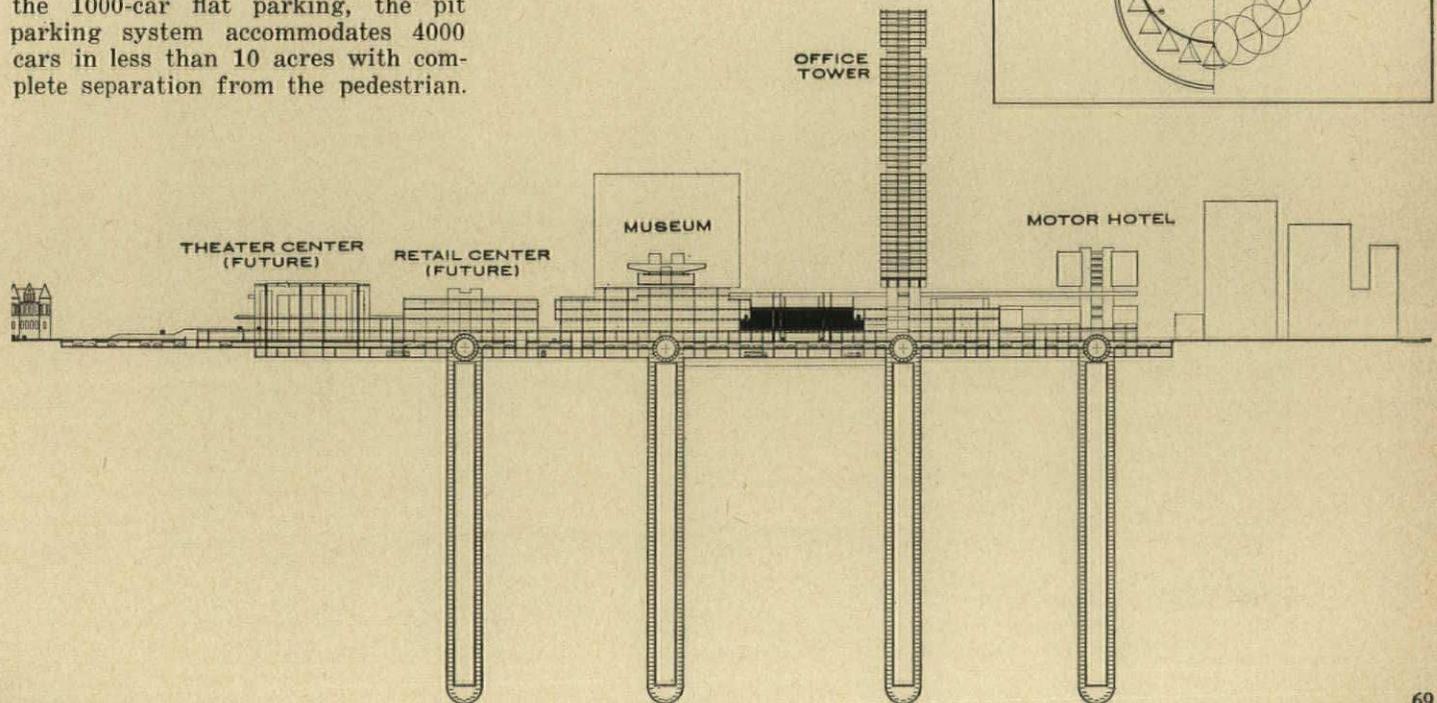
Site of the eventual 60-block area is within a soon-to-be-completed expressway loop. To this existing facility, the Columbia plan adds an inner ring distributor road and a system of interchanges and feeder streets to service the CBD.

The multilevel spine system, which is the heart of the plan, consists of a linear plan with activities segregated vertically. Main Place contains six levels. The lowest, two levels below ground, is for storage and movement of trucks and long-distance buses. The second is for long-term flat parking. At existing street level, movement of passenger cars, taxis, and shuttle buses takes place. Here also is ingress and egress to the pit parking system. The next two levels are for pedestrians, arranged around a great central square, "Dallas Square" (p. 67). The sixth level has recreational facilities. Above this rise two office towers, a motor hotel, and a museum. From this nucleus in the 36-block "reaction" phase would extend another motor hotel, two more office buildings, four apartment buildings, a large retail development, and a performing arts center. The central spine would be carried to the county buildings.

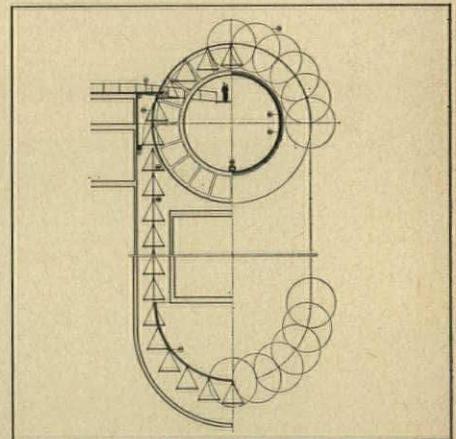
A significant element in the separation of the "travel container" and the human being, and in the conservation of precious space, is the unique pit parking system. The system is automatic and requires only 47 sq ft per car as compared to 400 sq ft for flat parking. There is a pit for 680 cars in the middle of each block of Main Place, approached at street level. The conveyor cycle of the system is 30 minutes, so the driver can retrieve his car every half hour from the time he puts it in. In combination with the 1000-car flat parking, the pit parking system accommodates 4000 cars in less than 10 acres with complete separation from the pedestrian.

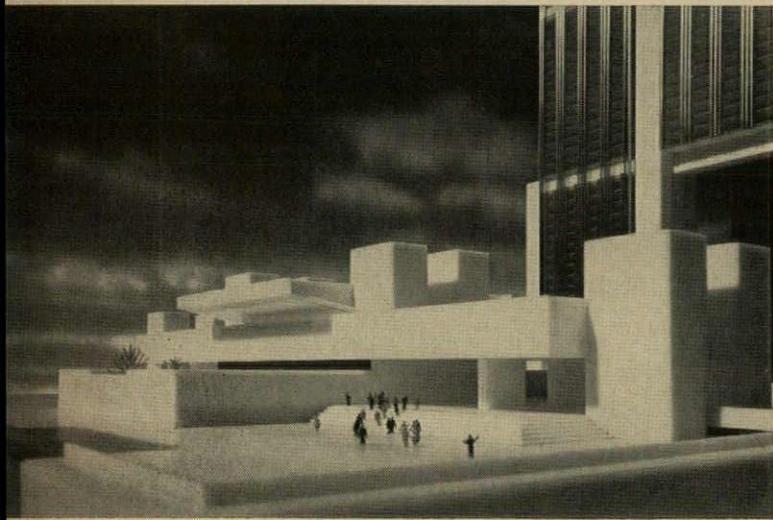


Plan for core shows freeway loop, distributor ring, inner spine.

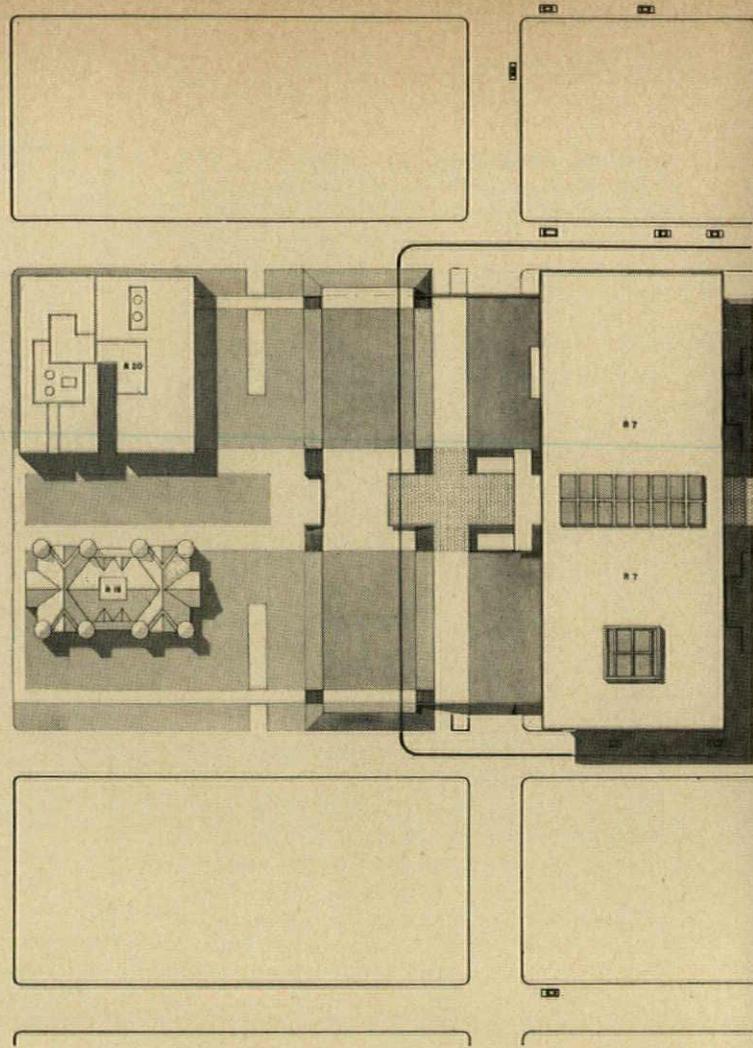


Detail of pit parking system.



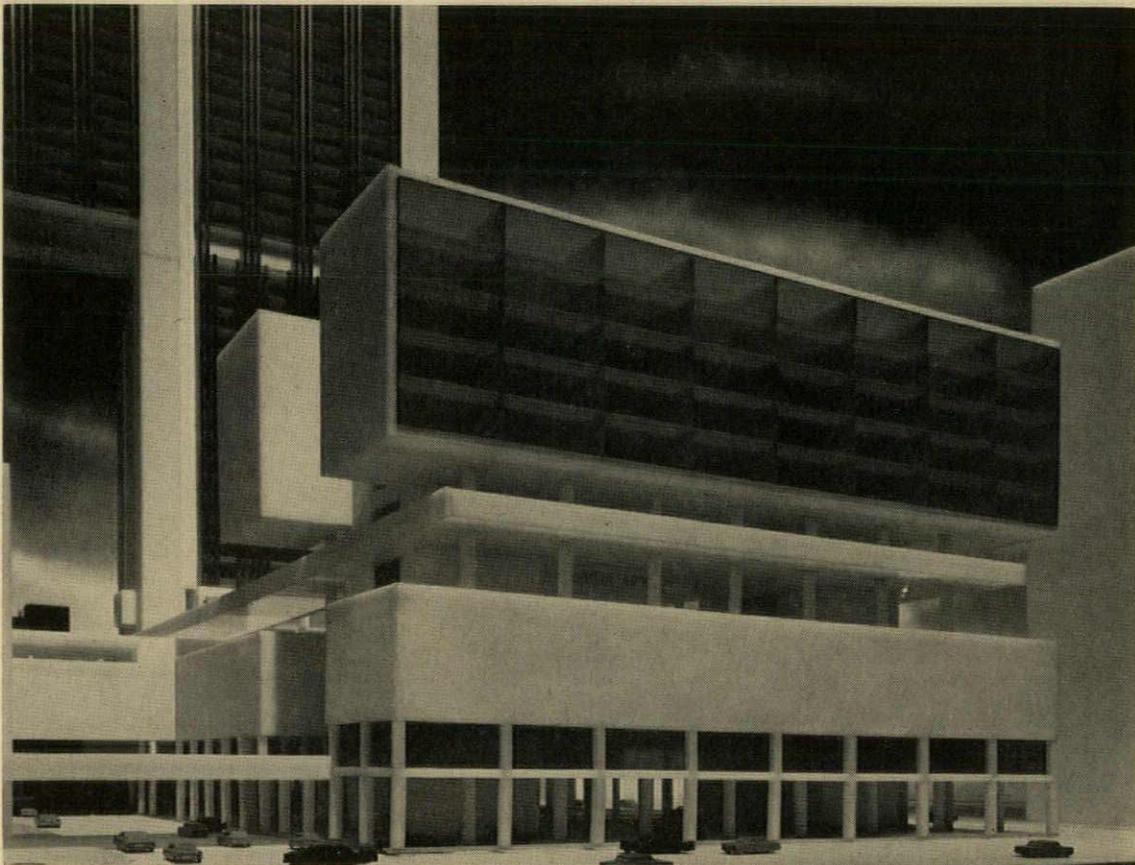


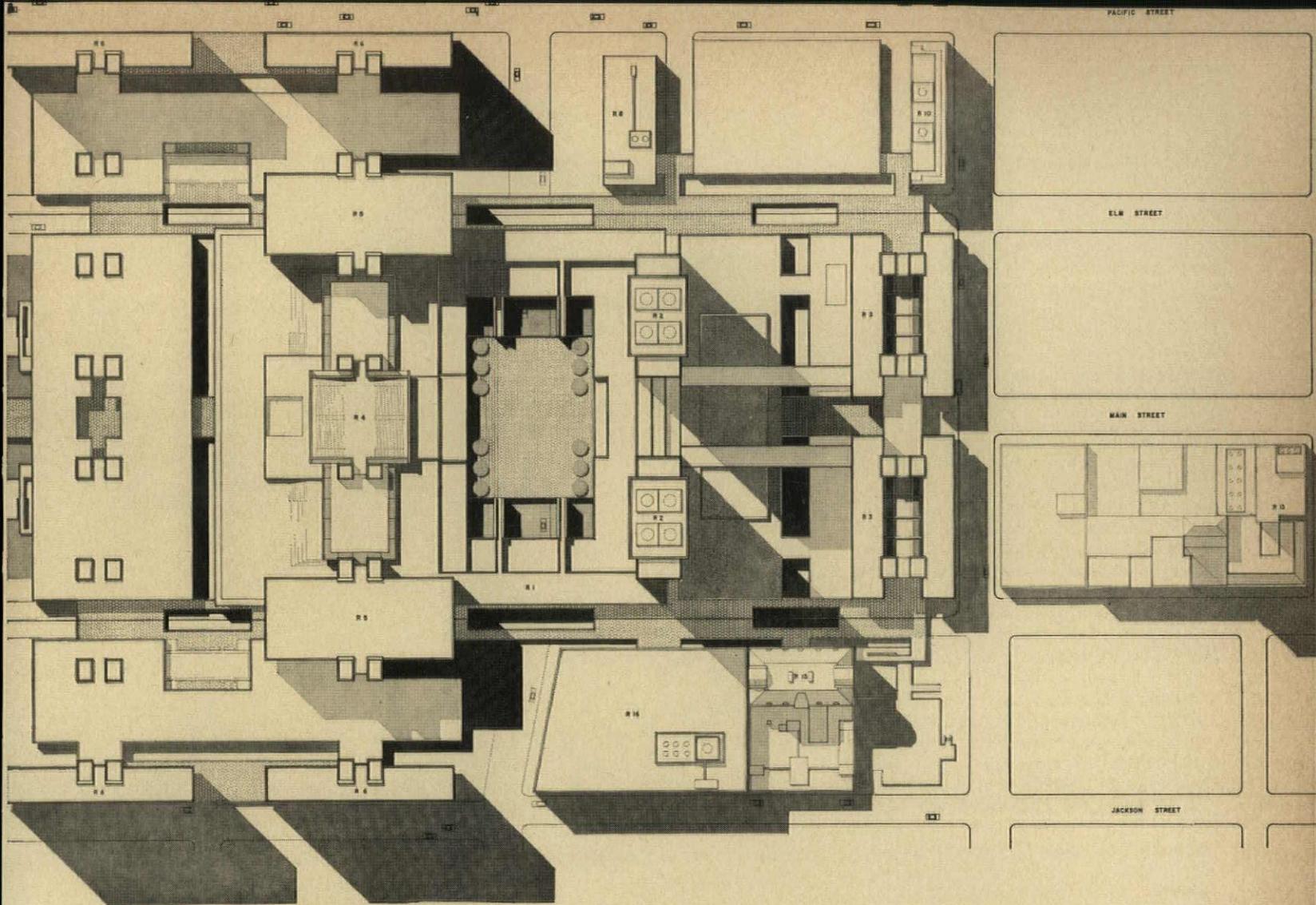
*Museum.*



*Motor Hotel.*

Photos: Ezra Stoller Associates





Surrounding Dallas Square in the initial development area are, on the main pedestrian level, specialty shops and stores, the lobby of the department store, and service offices such as ticket offices, banks, and savings and loan firms. The motor hotel is reached via pedestrian walkways. On the upper pedestrian level are additional shops of the type that people will seek out, and the first floor of the department store. The recreation level contains bowling alleys, the motor hotel's swimming pool, generous pedestrian areas, and the second floor of the department store. Above the department store is the two-story museum, providing 22,500 sq ft of enclosed space. In addition to the exhibition space, the museum has a lecture room and a restaurant (there is a larger restaurant in the department store). Atop the museum is an open-air theater seating 750.

The 60-story office towers rise across from the museum, and are divided into four "zones" of 15 floors each. Each zone is served by its own elevator and mechanical core, a relationship expressed on the exterior (pp. 65, 68). Structure of the building also is expressed by corner columns, which

diminish as the building rises. The second 15-story zone forms a bridge between the two towers, and creates larger single-floor rental area for clients who are in need of some additional space.

The ultimate, 60-block redevelopment area would contain expanded and updated facilities for two of the section's present industries: the garment trade and printing. There would be a transportation center, and middle-income housing and housing for the elderly is planned over underground warehouses. Throughout the entire scheme would run the central spine.

The Columbia team that worked on the Dallas plan included, from the faculty, Dean Charles R. Colbert, Economist Ernest M. Fisher, Urban Planner Stephen Carroll, and Designer-Critic Key Kolb. Students of architecture participating were Aaron Daniel, John D. Davison, Onhan Erdil, Gerald Exline, Friedrich St. Florian, James Patterson, Howard C. Pederson, Robert G. Price, Robert J. Reilly, Jack Solka, William Todd Springer, and Carlisle Towery. Students of planning were Noor Ahmed, Neil Robert Berzak, Stanley Ronald Friedman, and Peter Garrison.

**Legend for 36-block stage (above):**

- R 1 Walkway
- R 2 Office Tower
- R 3 Motor Hotel
- R 4 Museum-Amphitheater
- R 5 Office Building
- R 6 Apartment Tower
- R 7 Performing Arts Center
- R 8 United Fidelity
- R10 Rio Grande
- R13 Adolphus Hotel
- R15 Santa Fe
- R16 G. S. A.
- R19 Museum
- R20 County Buildings

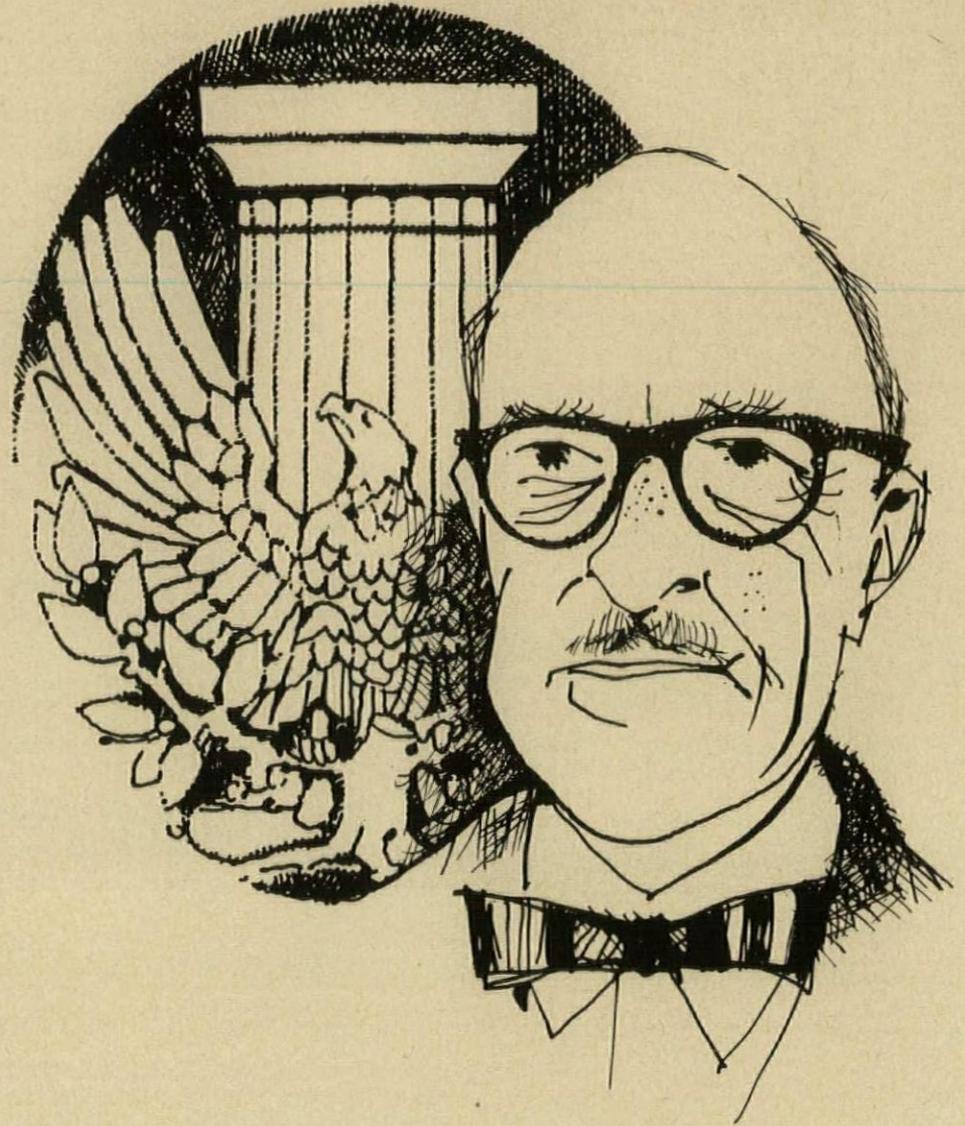
## PERSONALITIES

If the professional activities of its new president are any indication of what the compelling interests of the Institute will be in the coming year, the AIA can expect a strong emphasis on design and planning for education under the leadership of **Henry Lyman Wright**. For the past 30 years, his firm, Kistner, Wright & Wright of Los Angeles, has been responsible for the design and construction of more than 2000 schools. Wright himself has served on school building committees for both national AIA and the California Council of AIA; has spoken on the subject before many professional and school groups; has served as consultant to the school districts of New Orleans and Tucson; and even has had a school named after him—the Henry L. Wright Intermediate School, in Norwalk, California.

Born in San Diego in 1904, Wright attended San Diego State College, the Southern Branch of the University of California, and the University of Southern California, plus taking a study tour of Europe under the direction of the USC College of Architecture. In 1922, while still in college, he worked as an office boy in the firm of T. C. Kistner, becoming a partner of Kistner, Wright & Wright in 1941. (This year, he can celebrate his fortieth anniversary in the same office.)

For a dozen years, Wright has been officiating in local, regional, or national AIA. He has been president of both the southern California chapter and the California Council. He served as second vice-president of the national organization in 1958-1959, and has been first vice-president since 1960.

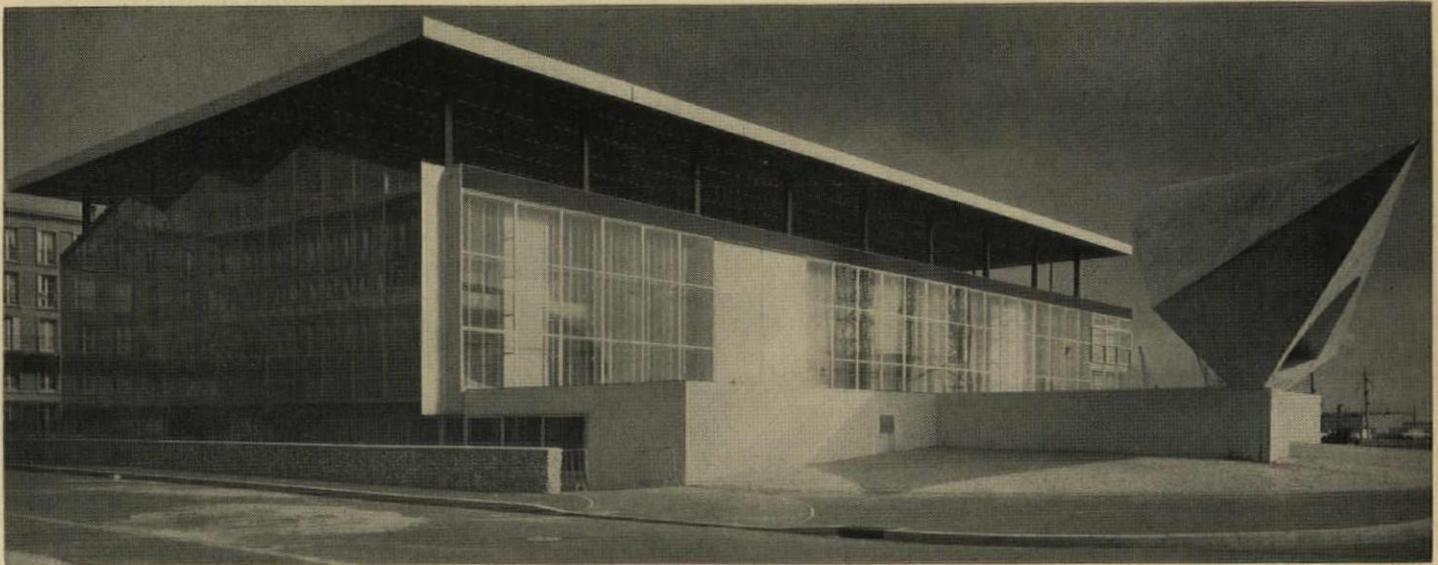
At this month's convention, AIA will bestow Honorary Fellowships on men from eight countries: J. H. VAN DEN BROEK, Netherlands; AMANCIO WILLIAMS, Argentina; HECTOR MESTRE, Mexico; STEEN EILER RASMUSSEN and ARNE JACOBSEN, Denmark; HERNAN LARRAIN-ERRAZURIZ and EMILIO DUHART H., Chile; JERZY HRYNIEWIECKI, Poland; NGO-VIET-THU, Vietnam; and JOHN B. PARKIN, Canada. . . . City planning head JAMES FELT received the Public Service Award from the Citizen's Housing and Planning Council of New York. . . . Annual Collaborative Medal of Honor of New York's Architectural League went to EERO SAARINEN & ASSOCIATES for its Thomas J. Watson Research Center; League also presented three gold medals nine silver medals, and twelve honorable mentions. . . . MORRIS KETCHUM, JR., has replaced HARMON GOLDSTONE as head of the Municipal



Art Society; Goldstone resigned to join the New York City Planning Commission. . . . Although the one he staged last year was announced as his swan song, EDWIN BATEMAN MORRIS is doing yet another "Scrapple Breakfast" for the Tile Council of America at the Dallas AIA Convention. . . . New York chapter AIA presented its 1962 Award of Merit to author Lewis MUMFORD. . . . HAROLD G. LEWIS, president of Flint Steel Corp., Tulsa, Okla., was re-elected president of the American Institute of Steel Construction. . . . Painter EDWIN DICKINSON was elected to fill the membership in the American Institute of Arts and Letters made vacant by the death of EERO SAARINEN. . . . RICHARD J. CANAVAN, former director of NAHB, is now Assistant Commissioner of the Office of Technical Standards of FHA. . . . In an interview he gave after he had accepted the \$20,000 Kaufmann International Design Award recently, Dr. WALTER GROPIUS praised groups like Britain's "Anti-Uglies" who try to combat thoughtless devastation of

cities through bad planning and design. Gropius cited the British group's victory in having a grotesque proposal for Piccadilly Circus defeated. As part of a team doing New York's Pan Am Building for Erwin S. Wolfson and Jack Cotton (the latter the perpetrator of the Piccadilly bomb), Gropius let it be known that he will prepare a new design for the Circus site—for guess whom? . . . MAYHEW D. SEAVEY has been appointed Assistant to the Dean of the School of Architecture of Boston Architectural Center. . . . BARBARA GRAY, director of research for William L. Pereira & Associates, was one of nine California women to be honored as "Women of the Year" by the *Los Angeles Times* recently. . . . Two appointments at Harvard Graduate School of Design are WILLIAM A. DOEBELE as Associate Professor of City and Regional Planning and CHARLES W. HARRIS as Associate Professor of Landscape Architecture.

Sketch by *Romero Corbelli*



## Glass Walls + Glass Roof = Aluminum Award

DALLAS, TEX. An AIA jury has chosen a "daring and unusual" French museum to receive the sixth annual R.S. Reynolds Memorial Award (which carries with it a \$25,000 honorarium plus an original aluminum sculpture by Harry Bertioia). The award-winning Museum Cultural Center, owned by the city of le Havre, is used for exhibitions, concerts, and lectures: it includes library, art school, club, and 800-seat auditorium. Nearly all wall and roof areas are sheathed in glass; because problems of glare and solar heat were largely eliminated, artificial lighting is not normally used.

The jury particularly applauded the "ingenious and sensitive" solution to one of the controls of natural light—a great sunscreen that floats over the building. Aluminum framework of the sunscreen is supported on extensions of the building's main columns. Fixed-angle blades in the shape of airplane wings are of striated aluminum.

Major criteria for judging were: (1) architectural concept and solution; (2) success in controlling natural light; and (3) use of aluminum in contributing to the design. It was felt that aluminum enhanced the design not only in the unique sunscreen but also in the skylight structural system and in the window walls. Altogether, 37 tons of aluminum were used, an important consideration being its corrosion-resistance in the seaside atmosphere of Le Havre.

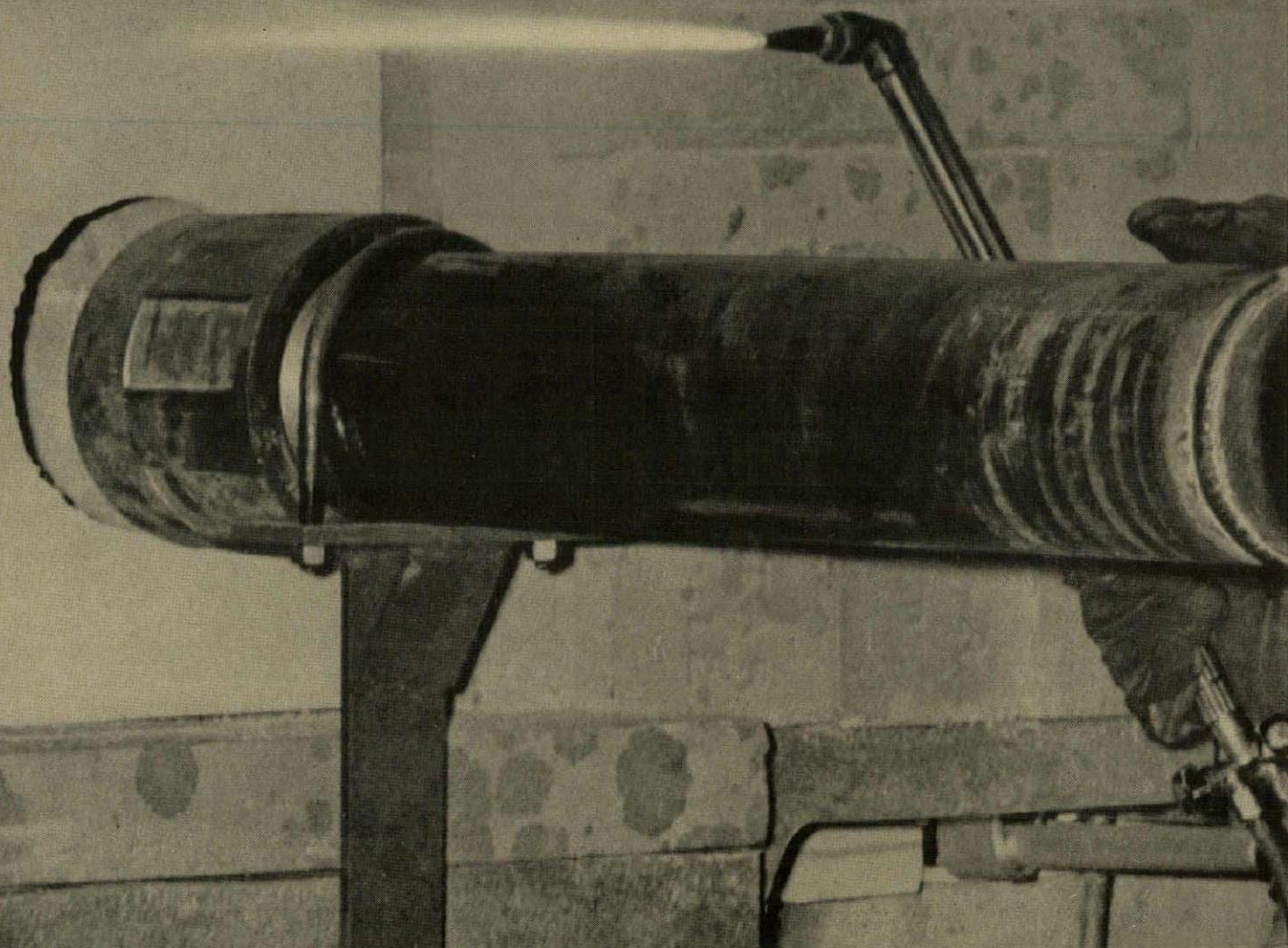
Sharing the honors are Guy Lagneau, Michel Weill, and Jean Dimitrijevic, principals in a Paris architectural firm, and collaborating architect Raymond Audigier, of Le Havre. Jury consisted of John Carl Warnecke, Gyo Obata, Pietro Belluschi, Lawrence Perkins, and Santiago Agurto Calvo.



*Museum roof is fully skylighted. A ceiling of white plastic is suspended below the roof trusses, and artificial lighting is placed within the truss area.*

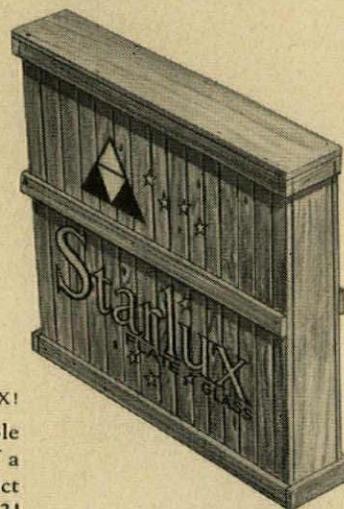


*Each elevation is different, having been designed for its orientation and special problems. Critical west wall has two sheets of glass separated by a 3' ventilated air space.*



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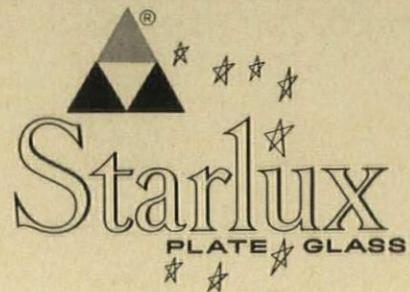


# came at 12<sup>02</sup> PM...

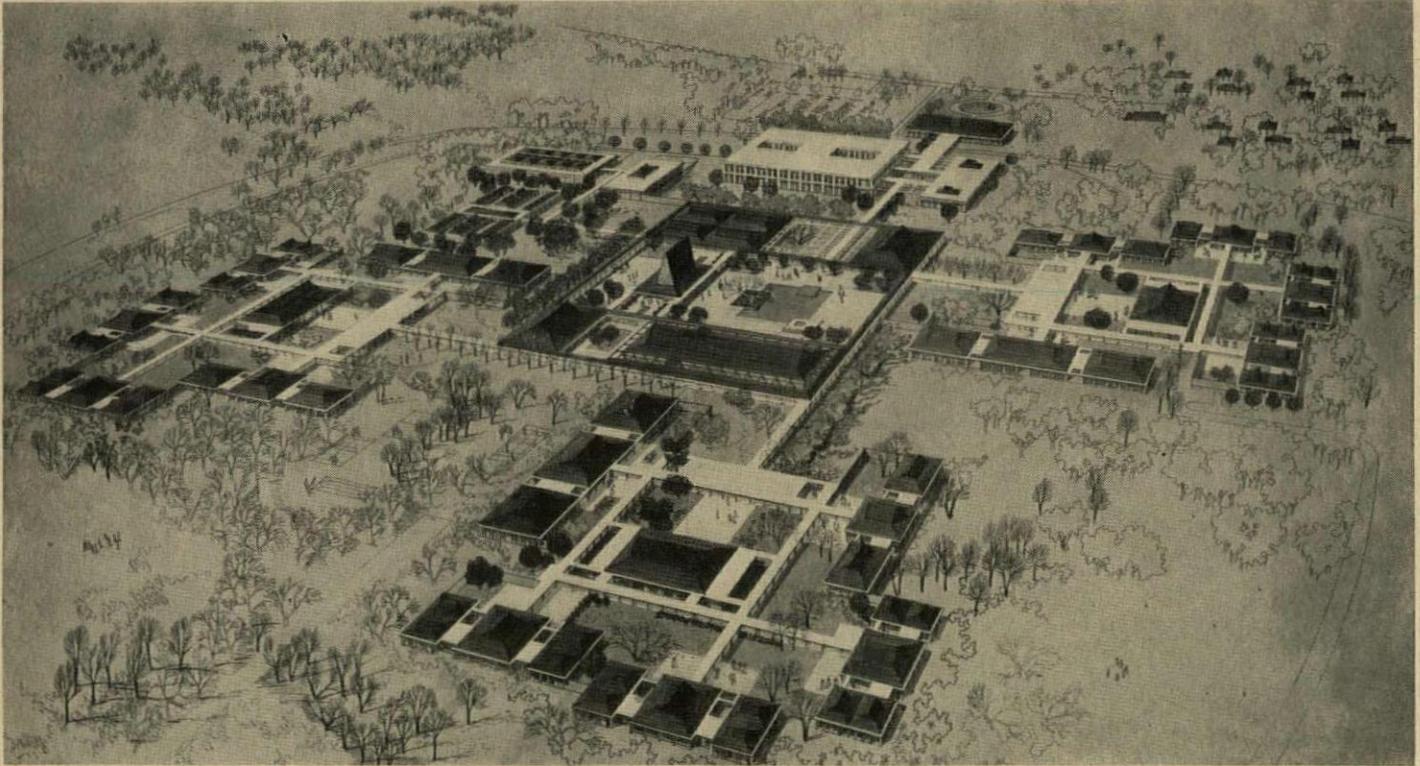
The country's newest plate glass plant, built by American-Saint Gobain at Greenland, Tenn., has started its first campaign. Soon it will be producing A-SG's "STARLUX" Plate Glass.

Here at Greenland—near Kingsport, Tenn.—the first step towards actually producing the highest quality plate glass available in the U. S. took place on April 3. It was then that a technician lighted off the 300-ton tank from which will soon flow an endless ribbon of glass. This modern, multi-million dollar glass plant will give American-Saint Gobain the distinction of being the only domestic manufacturer of all major types of flat glass—plate glass, window and sheet glass, and patterned glass.

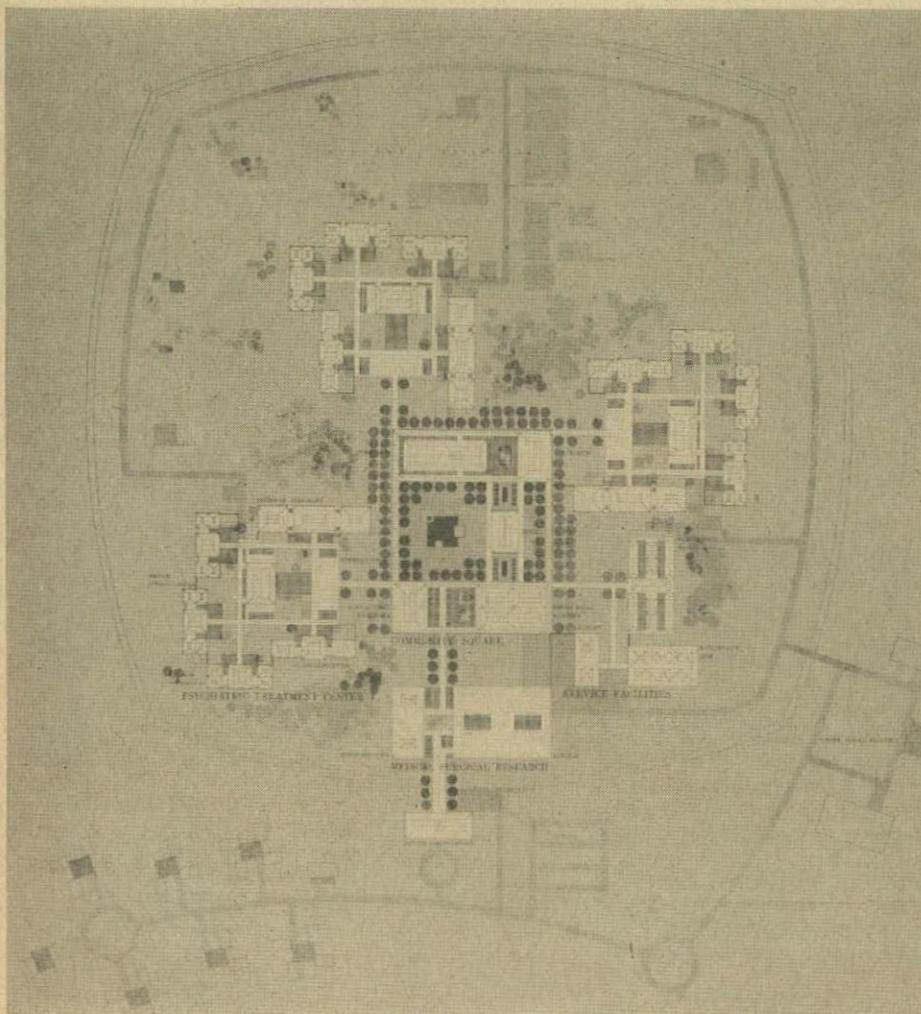
Whether you're an architect, a manufacturer or a jobber, Greenland U.S.A. is news, good news! For the latest information on sizes, delivery and prices, call your nearest A-SG office. You'll find the telephone number in your classified telephone directory. American-Saint Gobain Corporation, Kingsport, Tenn.



**AMERICAN-SAINT GOBAIN**... wherever people live and work!



## *Aydelott Design Wins Federal Competition*



WASHINGTON, D.C. Recently, the Department of Justice's Bureau of Prisons and the General Service's Administration Public Buildings Service conducted an invited architectural competition for the design of a new type of building: a psychiatric hospital for Federal prisoners. Eight firms with backgrounds in the design of health and/or penal buildings were invited; the winner was A.L. Aydelott & Associates of Memphis.

The winning design creates the feeling of a small village by breaking up housing into three "neighborhood units" surrounding a "civic center." The residential atmosphere is enhanced by the use of pitched roofs and living yards adjacent to the housing. Earth in front of the fence line is mounded so that the barrier is not visible from within the treatment compound. Medical and surgical research buildings complete the complex; they are well integrated into the plan, but are slightly aloof from the other facilities in attitude. The "civic center" contains chapel, gym, auditorium, educational facilities, and dining halls and kitchen. One of the housing clusters is the psychiatric treatment center for medium to intensive supervision and treatment. Use of prefabricated units would make construction economical.

Associate Architect on the project was Caudill, Rowlett & Scott; Hugh Stubbins was the Design Consultant.



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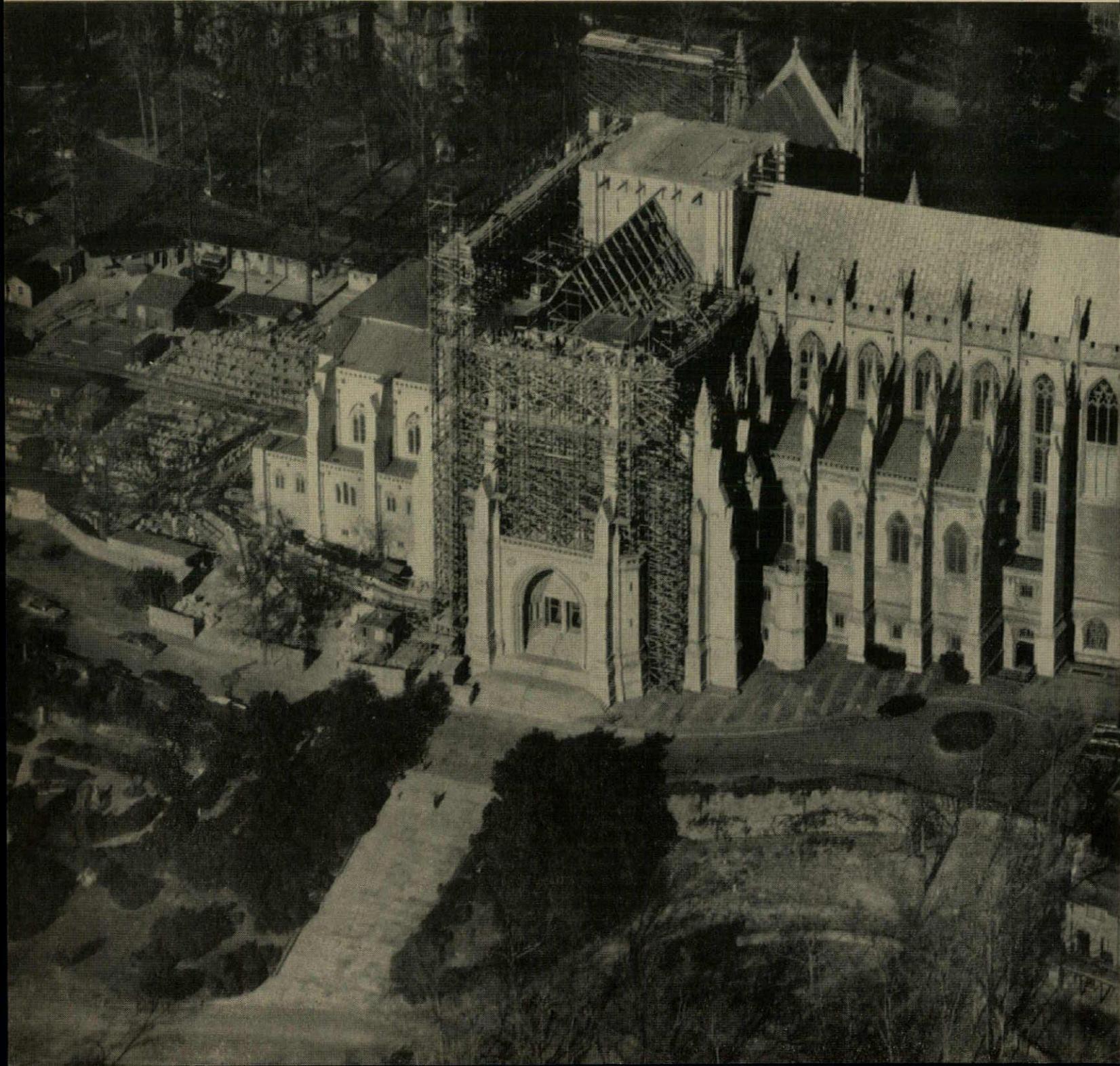
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New sections of Washington  
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All stone in Washington Cathedral is set on lead pressure-relieving buttons in the joints.

# the sky... LEAD ROOFING'S AS GOOD AS NEW



Except for its attractive, uniform patina, the hard lead roofing atop the completed sections of Washington Cathedral is unchanged since its installation a quarter century ago. And some sections of the lead batten roof have passed their fortieth maintenance-free year.

This magnificent structure in 14th Century English Gothic style is now 65 percent complete, and new sections are currently being roofed with hard lead sheet. Why lead? Because it will not stain adjacent stone. Its inherent flexibility allows it to conform obligingly to intricate and irregular surfaces, thus installation is easier and cheaper. And lead *lasts!* Had this Cathedral actually been built in the 14th Century, its lead roofing could well be intact today.

Elsewhere throughout the Cathedral, lead is also at work. Lead pressure-relieving buttons bear the weight in thousands of stone-to-stone joints. And representing the course and continuity of Christian history are dozens of leaded stained-glass windows.

At Saratoga Spa in upstate New York, Federal Courthouse in New York City's Foley Square, and in Rahway Reformatory in New Jersey, lead roofs have also passed their first of many quarter centuries of maintenance-free service.

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## AESTHETICS CONFERENCE ADDRESSED BY HECKSCHER

August Heckscher, Special White House Consultant on the Arts and Director of the Twentieth Century Fund, gave the feature address at last month's "Conference on Aesthetic Responsibility" sponsored by the New York chapter AIA.

"Judging by the apparent attitude



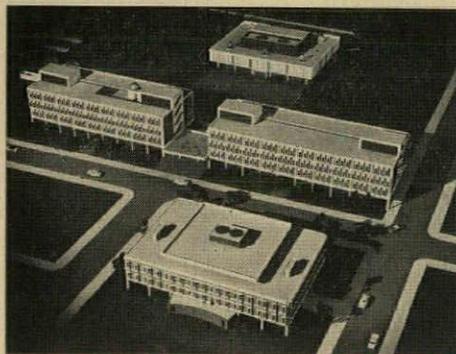
of too many present-day Americans," Heckscher said, "there is doubt whether we shall ever be able to extricate ourselves from a descending spiral of ugliness and irrationality. What is required is readiness to un-

dertake on a large scale the kind of public works which are truly *public*—in the sense that they serve the highest interests of the citizenry; and truly *works*—in the sense that they are made to endure and to be judged by future generations . . . .

"We have been prepared to call on the best architects in the country when it has been a matter of building abroad . . . . At home, however, the story is quite different . . . . We might well feel impelled to ask, in regard to our own public buildings, whether we consider ourselves to be so backward or uncivilized that we cannot enjoy the kind of beauty which we prepare for others.

" . . . [But] there is certainly an influence taking shape which promises for the America of tomorrow a more sane appreciation of the true values which make a civilization . . . .

"Let us make sure, as we build for ourselves, that men and their cities prove of equal worth. It is not, after all, only beauty itself, but also the striving for beauty that lifts up men and make a civilization. We shall strive in our own way, as this second half of the century moves toward its meridian. Who shall say that the striving will not bring its own rewards? Who shall know where the greatest achievement will ultimately lie—within ourselves, or upon the enduring face of the things we have created?"



### RUTGERS EXPANDS

Construction will begin in the fall on the first four elements of an eventual 19-building master plan designed by Kelly & Gruzen for Rutgers College in Newark, N.J. The four buildings will be the library (*top center*), the law center (*foreground*), and the science and humanities buildings (*left and right center*). The plaza, which the library will face, has been designed as the focal point of the campus. Structures will be reinforced

concrete frame featuring exteriors of concrete wall panels, glass, and brick.

### Why Not?

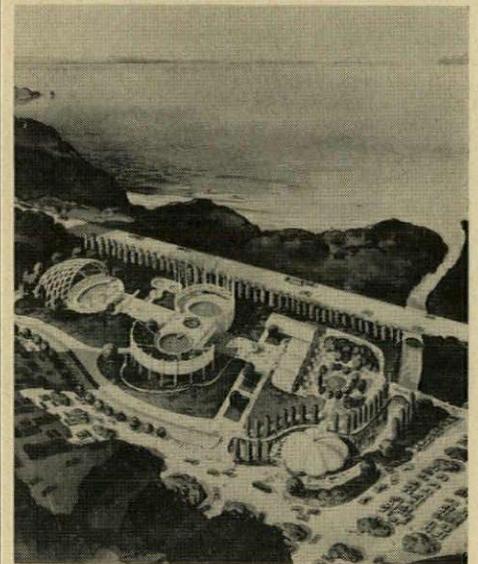
Former President Harry S. Truman, giving the word to Washington reporters during one of his famous morning walks recently, pronounced what seems to this department a pretty good idea of what to do with statues of generals and assorted militia which seem to infest many cities. "Franklin D. Roosevelt and I used to talk of putting them all in one park, lined up in military formation," he said.

### TALLEST FOR LOOP

A projected 35-story office building for Chicago's "Loop" will be the largest and tallest built there since the early 1930's. Designed by Skidmore, Owings & Merrill, the building will feature a weight-bearing, stressed-skin exterior structure, with 37-ft



concrete bays. It has been named after the Brunswick Corporation, largest tenant signed up thus far.

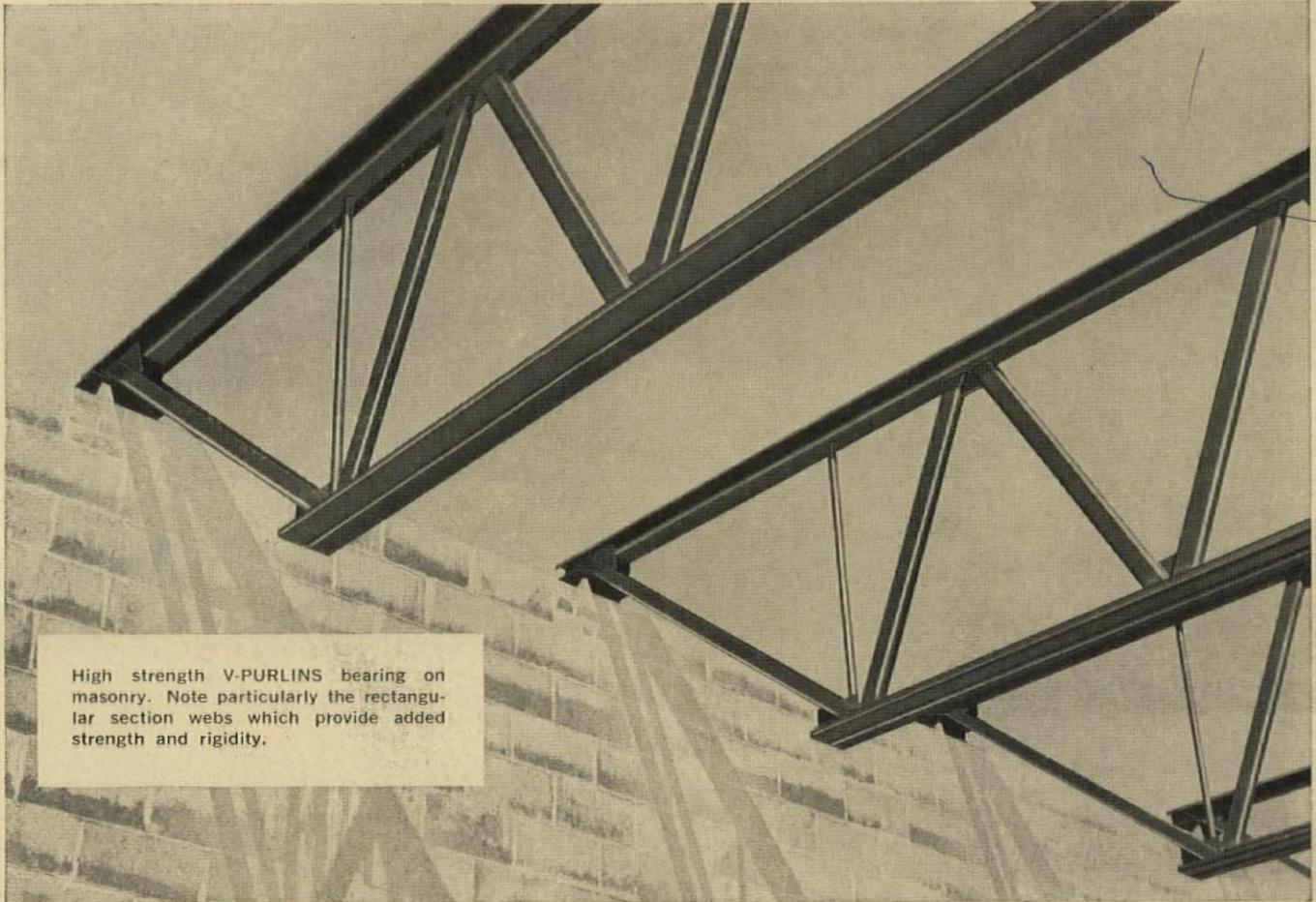


### Provision for Piscine Performers

Across the Golden Gate from San Francisco in Mill Valley, a "Marine-world" exhibition complex will rise by fall of next year. Designed by Mario Gaidano, the project will consist of (from left to right in the rendering): a 3000-seat Aqua Theater; the main exhibit building with two large performing pools and smaller exhibition tanks; and a three-acre section containing picnic area, concessions, and restaurants. A channel in from the

*Continued on page 84*

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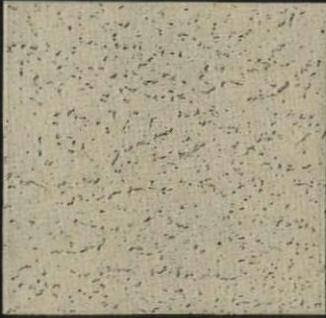
**MATADOR.** Grace, dignity, elegance and poise are captured in metal and preserved for the ages in this sculpture "The Matador", by the French master Jacques Lipchitz. The enduring beauty of Lipchitz' work has been safeguarded by his recent bequest of 300 original sculpture plasters to Israel's new Jerusalem Museum of Art. (The Collections of The Minneapolis Institute of Arts. Purchase, 1952. John Cowles Foundation Fund.)



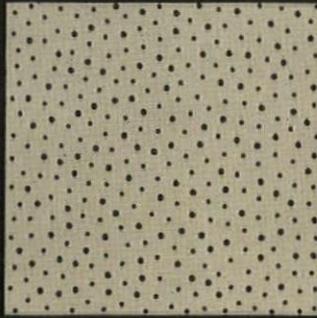
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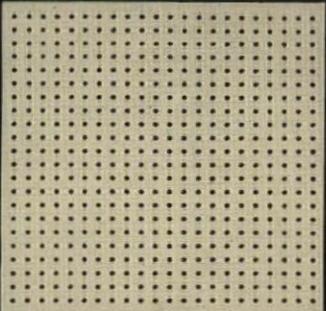
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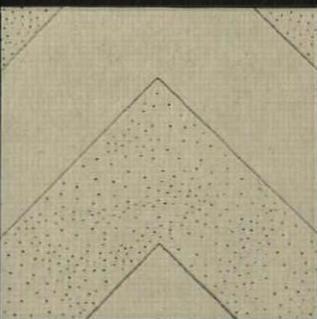
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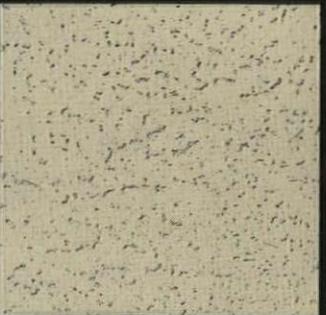


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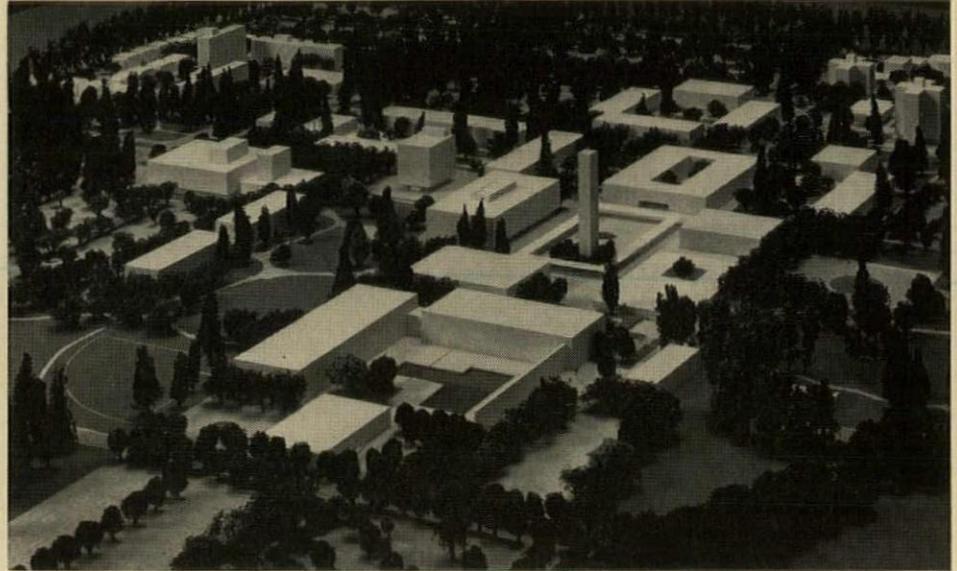
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*Continued from page 80*

bay will be diverted to separate the complex from the parking lot. The public will enter the main building at a lower level and observe marine life through viewing windows before emerging at the top, where there will be a 1500-seat arena. One of the 80-ft-diameter pools will be for sharks, one for whales. The architect and client are working with planning commissions and other municipal bodies to make certain that "the project is an ideal example of co-operative effort."

### Architecture in Decline

Louis Kahn was the speaker at the last of a recent series of symposia, *The Building Boom: Architecture in Decline*, sponsored by the Architectural League and the Museum of Modern Art. Unfortunately, his unprepared statement did not contribute anything to the discussion. More significant was the summary of the series by the moderator: as long as the ownership of land is in private hands, there is no hope for architecture; as Abraham Lincoln has said—land, like air and water, should be in the public domain.



### NEW COLLEGE FOR CALIFORNIA

Master plan by John Carl Warnecke & Associates for new campus of Sonoma State College near Cotati, California, groups major activities around a campanile court. Three main elements are: academic and science center, above campanile; administration center, to right of campanile; and

physical education center, surrounding swimming pool below campanile. Completion of these units, which will result in a 2000-student facility, is expected in 1967. Present plan comprises the nucleus of what will eventually be a 12,000-student campus, which is forecast for 1985.

## DISCUSSANTS ANNOUNCED FOR WORKSHOP CRITIQUE ON STEEL IN ARCHITECTURE

All architects and their consulting structural engineers are urged to circle June 14 and 15 on their calendars and to plan to be in New York on those days.

PROGRESSIVE ARCHITECTURE's plans for a Workshop Critique at that time, to discuss critically the winning entries in the Architectural Awards of Excellence Program of the American Institute of Steel Construction, are now at the point where the "critics" can be announced. They are the five members of the jury for the AISC judgment, which is being held at about the time this issue goes to press. Those jurors are:

Robert W. Cutler, FAIA, partner in the firm of Skidmore, Owings & Merrill.

George Edson Danforth, AIA, Director, Department of Architecture and City Planning, Illinois Institute of Technology.

John T. Grisdale, FAIA, Partner, Carroll, Grisdale & Van Alen.

William J. Le Messurier, William J. Le Messurier & Associates.

Julian Whittlesey, FAIA, Partner, Whittlesey & Conklin.

The Workshop Critique will be conducted in the manner of the P/A Design Awards Seminars—that is, the architect and the engineer of each building to be analyzed will present their work by means of slides and description. A discussant (one of the jury members listed above will then analyze the architectural and structural result, as critically as he wishes. The designers will have an opportunity to respond if they wish, and, after that, discussion will be thrown open from the floor. This technique has proved to result in lively, critical, intra-professional analysis, of benefit to all who are at the sessions. It is hoped that at this Workshop Critique useful evaluations and conclusions can be drawn as to the future of steel in architecture: the directions that structural design in steel should take, its relation to present building technology, and its ability to solve the new planning needs that architects are facing today in individual buildings and in the broader

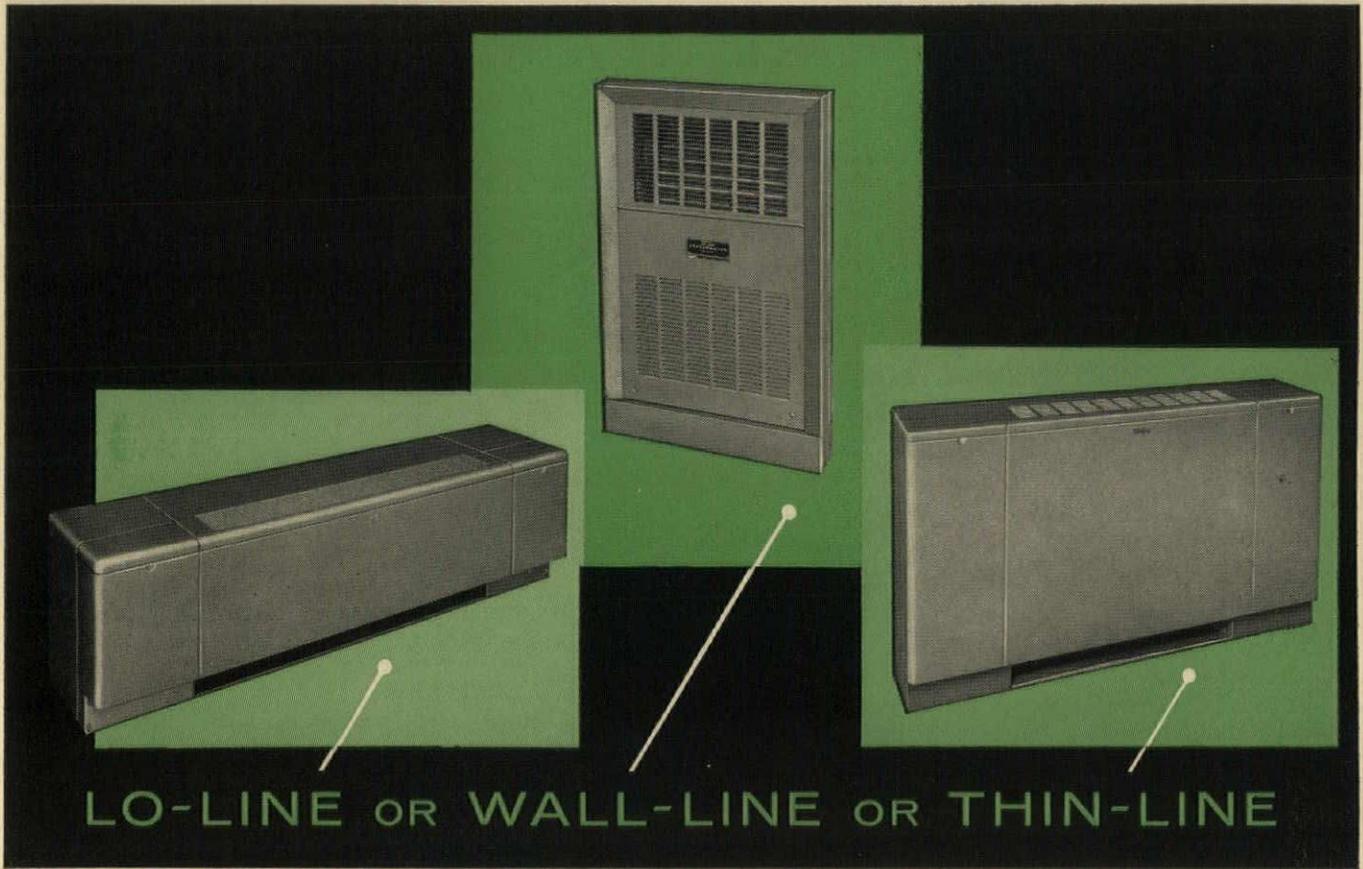
aspects of planning and redevelopment.

The Workshop Critique will be held in the Terrace Room of the Plaza Hotel in New York. Sessions will start promptly at 9:00 o'clock in the morning, and will continue through the afternoon until 5:00 o'clock. There will be a luncheon in the Persian Room at the Plaza, at which a leading figure in the steel industry will speak about current developments.

On the following day, June 15, there will be tours arranged to outstanding buildings in the area for those who want to remain for that purpose.

Thomas H. Creighton, P/A's Editor, will open the Workshop Critique sessions, and Burton H. Holmes, Technical Editor, will moderate the discussions.

Those who would like to attend should notify either Mr. Creighton or Mr. Holmes as soon as possible, so that adequate provisions can be made.

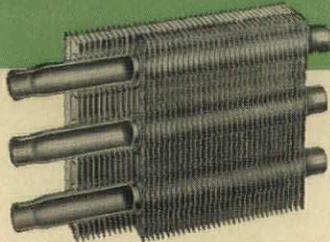


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## EFFECTS OF TAX REFORM



By E. E. Halmos, Jr.

The provisions of the Administration's tax reform bill have much more far-reaching implication for architects than a superficial look would indicate.

The effect of the bill would be to limit sharply U.S. investments overseas. In fact, that

seems to be one of its principal aims—a counter to the attractions of setting up shop in one of the countries of the European Common Market.

And that could bring a revival of some business expansion plans for the U.S. itself. Couple this effect with the increased tax-credit allowances proposed to encourage industry to replace outworn machinery (but not buildings) and you can see some of the strategy.

All of this is keyed to the emergence of the Common Market—its official title is the European Economic Community, or EEC—as a powerful economic force. EEC was formed in 1958 as a trade union of Belgium, France, Italy, the Netherlands, Luxembourg, and West Germany. But it is more than a trade union: quite frankly, it is also a forerunner of an international governmental union, a "United States of Europe."

The rapid reduction of trading barriers between these six highly industrialized nations (population—over 170 million; gross national product—now approaching \$300 billion) has resulted in a phenomenal annual increase in business activity. And it has made the Market area very attractive for more than 500 U.S. companies that have invested nearly \$5 billion over the past three years to establish branches or subsidiaries, and build new plants to do business as "local" organizations.

Much of the investment has gone into brick and mortar for new plants and other structures. With the impending grant of further powers to the President to carry on tariff-reduction negotiations, there has been real fear in Washington that U.S. capital investment may grow even more rapidly—to be followed by curtailment in expansion plans at home.

The blow to foreign investment would be a tax on earnings of foreign subsidiaries, regardless of whether the

actual money is brought back to the United States in the form of dividends or other payments. (Under existing tax laws, such earnings are not taxed until they return to the U.S.)

The close tie-in between the new tax legislation and the whole subject of the Common Market is a highlight of one of the truly "great debates" in Washington: how to meet the challenge posed by this new, vigorous economic community.

There is no doubt that the Market will affect any and all business in the U.S., whether they are engaged in direct foreign commerce or not. EEC nations can and do produce excellent materials, tools, and other products, and are already competing stiffly with U.S. products in Europe, in other areas of the world, and in the United States itself. If the U.S. now negotiates further reciprocal tariff drops, the competition is certain to increase.

(Tariffs, of course, are only a part of total barriers to trade. Import quotas, licensing agreements, cartels, and various taxes have an equally large effect.)

There's little opposition to the President's desire to cope with EEC: it is agreed that the Market exists, can produce, and must be lived with. Opposition has centered on the means rather than the end. Many are afraid of provisions in bills before Congress that seem to give the President unlimited power, without Congressional or court review, to change tariff rates, decide which industries and which workers should get relief in the form of Government money or other help.

Construction, of course, is a service industry and there's no prospect of any increased direct competition in the U.S. from European architects or contractors. But there will certainly be more competition from these groups in other areas of the world. (The threat of international giants such as the Constantin Doxiadis firm which is on the make in the U.S., is probably limited to specific cases.)

The immediate impact on architects and the construction industry appears to be centered on prices of materials and equipment. These should stabilize or even come down under the pressure of a system based on a wage scale that at present is somewhere between a quarter and a third of U.S. rates.

For example, in 1961 the six Market countries supplied 257,210 tons of the total of 284,400 tons of structural steel imported into the U.S.; 470,000 tons of the 583,000 tons of reinforc-

ing bar; and some 11 per cent of all aluminum imports. They also made heavy inroads into the plywood board and paperboard figures.

As to other production, the Market countries (in 1959 and 1960) produced a yearly total of 1,342,000 tons of plate glass; 61,280,000 tons of cement; nearly 5,000,000 tons of steel; and 510,000 tons of aluminum.

### FINANCIAL

The odd lull in business activity, flagged in P/A last month, seemed to be continuing through April. There was nothing especially alarming about it: it seemed that the economy had reached a small plateau and was content to rest awhile before moving along.

In March, for instance, the Department of Commerce reported that total construction expenditures were \$4.1 billion—up 8 per cent over February (\$3.9 billion), but rising at about the normal seasonal rate. One reason for the slow gain lay in the fact that although private and Government general construction expenditures were showing normal rises, housing construction lagged slightly behind. As of the end of February, private housing was running at the rate of about 1,126,000 units for the year, a drop of 11 per cent from the 1961 period.

But there were some paradoxes in the situation: Prices for secondary sales of FHA-insured new-home mortgages rose in February to the highest level in nearly a year (\$96.6), indicating a continuing tightening in available money supplies.

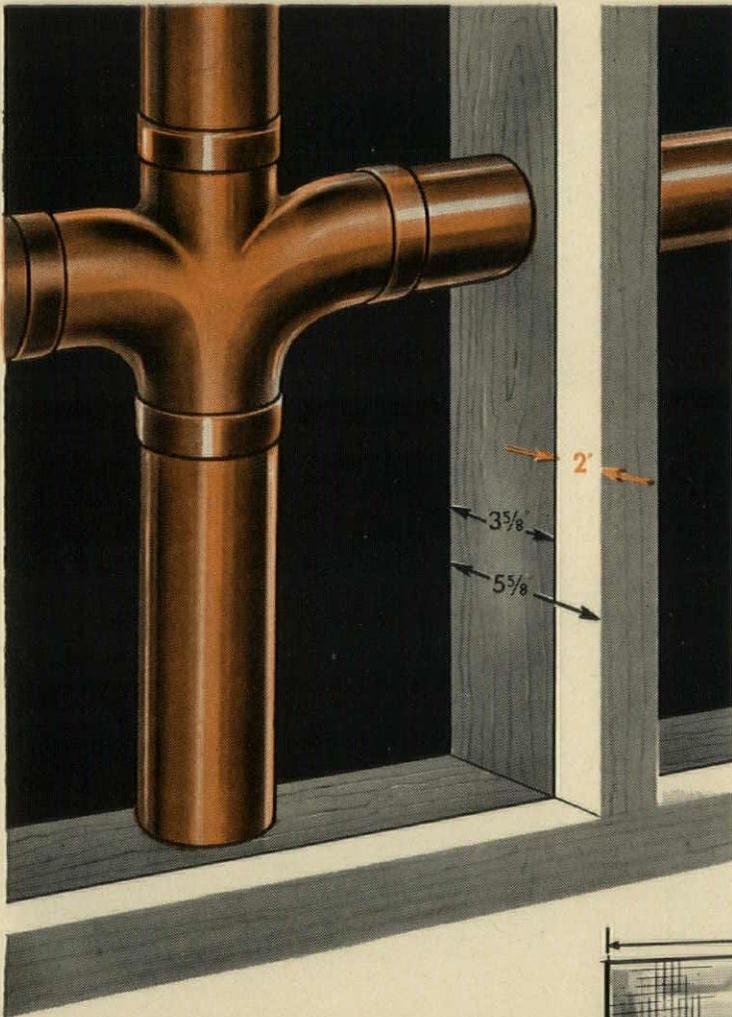
But the bond market reported the lowest rate of interest in three years on good grade municipal bond issues with tax-exempt features—a big break for the \$135.7 million's worth of such issues approved in December alone, for example.

It wasn't hard to see what was happening: Investors were looking for safer havens for funds, rather than higher paying but riskier avenues.

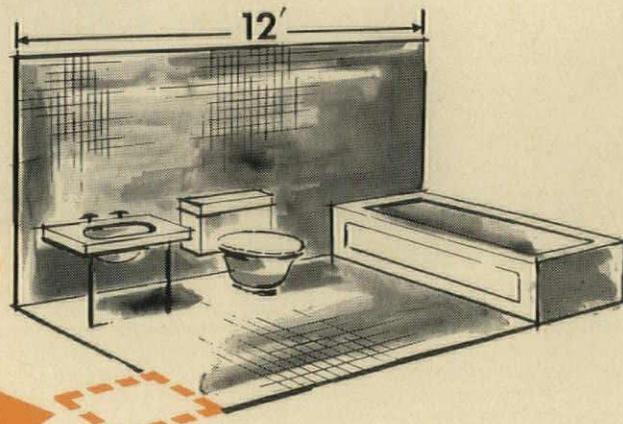
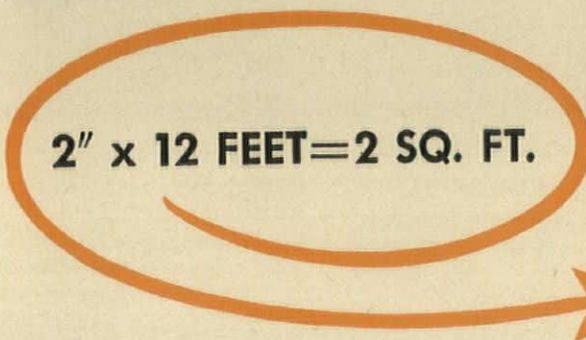
Meanwhile, there were evidences of a real stir in the private construction area—sparked largely by huge expansion plans of the utility companies. During the month of March alone, for instance, telephone companies announced plans for construction totaling \$681 million; electric companies, \$230 million; gas pipelines, \$156.7 million.

Private plant construction, however, still lagged—at a proposed \$10.7 million.

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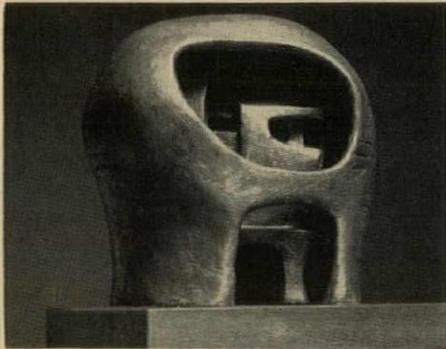
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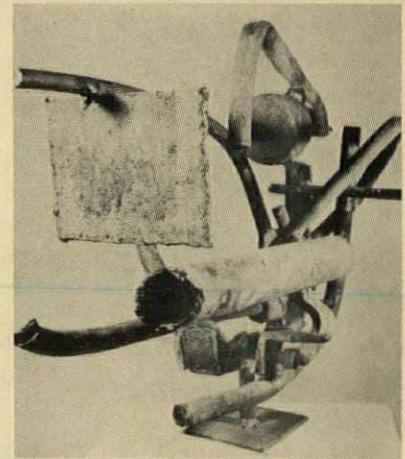
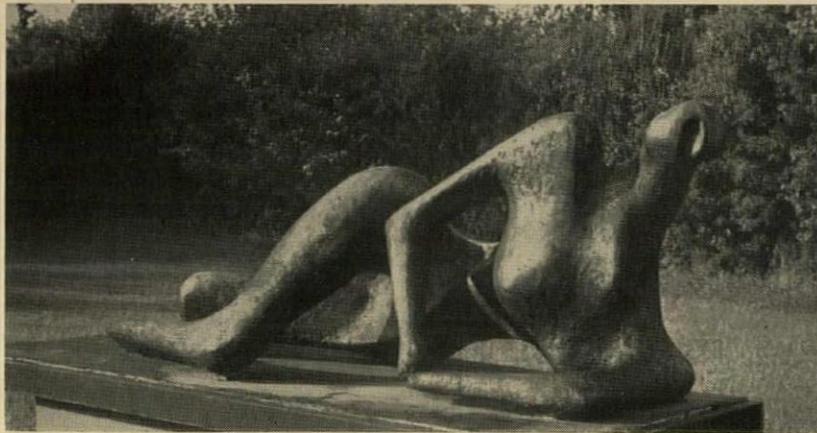
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ART: SCULPTURE



This has been quite a season for sculpture in New York. Following splashes made in various galleries and museums by Lipchitz, Rosenthal, Lip-pold, and Reder, among others, a large-scale exhibition of sculpture by the British giant Henry Moore closed recently at the Knoedler Gallery. Although there were no startling changes in his well-known technique, the show presented impressively the obvious admiration this strong artist has for the fundamental dignity of his fellow man. Shown are "Helmeted Head # 3," 1960 (left) and "Reclining Figure," 1956 (below).



The assemblage of wreckage and rubble into sculptural and/or architectonic arrangements continues to preoccupy some artists. Most recent among them has been Richard Stankiewicz at the Stable Gallery. There is undeniably a certain manic vitality about his pieces, one of which you see here.

*Item:* It has been announced that the Vatican will send over Michaelangelo's "Pietà" as the major drawing card for its pavilion at the New York World's Fair. Well, at least it did not send his "Moses."

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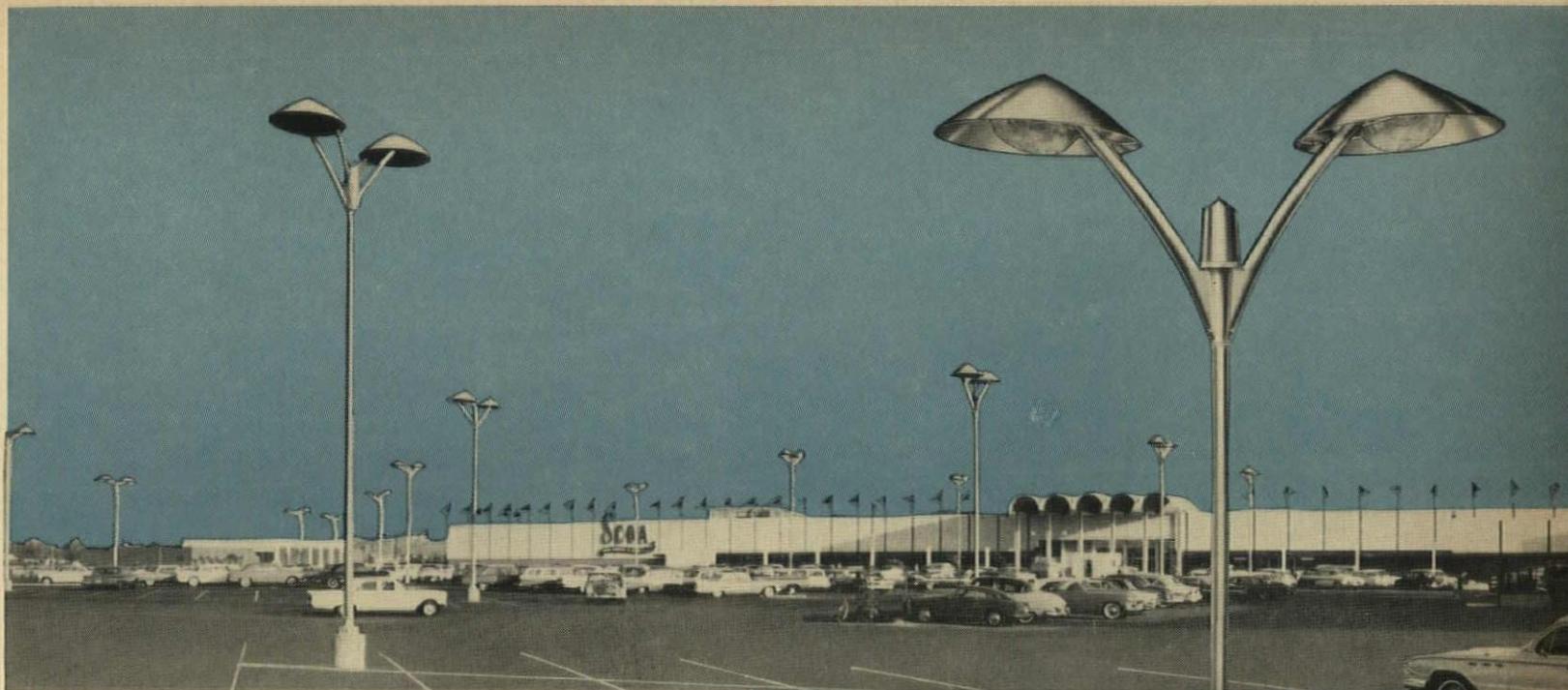
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**HUGE NEW S. C. O. A. SHOPPING CENTER** at West Covina, California, is lighted by 37 Twin and 7 Single L-M Stylaire mercury luminaires. These have 1000-watt pink-white lamps rated at 42,000 lumens per lamp, with an average light level of 4 footcandles on the blacktop surface. Units are mounted at 32-foot mounting height, on 25-foot fully galvanized steel poles, spaced 105-110-feet laterally and 115-feet transversely. Installation was made by Walters Electric, Los Angeles electrical contractors. Bruce Thyberg, the engineering consultant, is now president of Bruce Thyberg & Associates, in San Diego. Ballasts are built into the base. Installation is exceptionally easy. Units are available in brushed aluminum and five pastel colors, in two sizes for 400, 700, and 1000 watt mercury lamps, with or without photo controls.



## L-M Twin Stylaire™ Mercury Luminaires Light New California Shopping Center

Striking new design, and color harmonizing with contemporary architecture major factors in selection of Stylaire luminaires for huge S. C. O. A. center in West Covina.

Smart, modern styling and high efficiency with a minimum of glare led Engineering Consultant Bruce Thyberg to select L-M's newest lighting luminaire, the handsome Stylaire, to light this new shopping center in West Covina, California.

West Covina, "City of Beautiful Homes," is the commercial center for the San Gabriel valley. The new S.C.O.A. (Serving Communities of America) center provides a wide variety of stores and services for this heavily populated area, and evening business is an important factor.

Mr. Thyberg decided on L-M Stylaire Mercury units because of their well-styled design, excellent glare-free lighting, and because relatively few units could be used to light the broad expanses of the parking areas, resulting in savings in poles, wiring, and installation costs. Thus these units provide high-level lighting and

more parking area without a "forest" of poles taking up valuable parking space.

These units have wide acceptance for street and highway lighting, and for parking areas, public parks, malls, and hotel and motel grounds. They are particularly favored for airports because excellent light control eliminates upward glare.

### ASK THE L-M FIELD ENGINEER

L-M provides a wide variety of lighting equipment and cooperates with engineering consultants in Lighting Applications. Call the Authorized L-M Distributor or nearest L-M office, for complete information on L-M equipment and services; ask the L-M Field Engineer or Lighting Engineer; or mail the coupon. In Canada: CLM Industries, McGraw-Edison(Canada)Limited, Toronto 13, Canada.

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LINE CONSTRUCTION MATERIALS • PORCELAIN INSULATORS • FIBRE PIPE AND CONDUIT

For more information, turn to Reader Service card, circle No. 409

Line Material Industries, Milwaukee 1, Wisconsin

Please send information about your Styled Mercury luminaire line and name of nearest Authorized L-M Distributor. (PA-52)

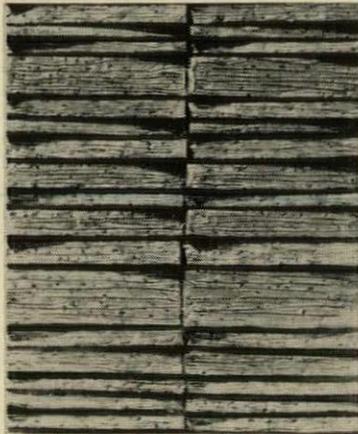
Name \_\_\_\_\_

Company \_\_\_\_\_

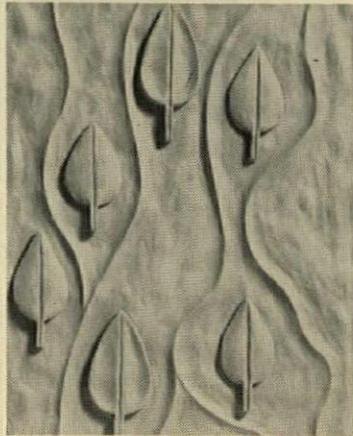
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## Now, your own design concept



can be dramatically reproduced



## in lovely, lasting ceramic walls

Visualize the handsome effects you can create with low-relief sculptured ceramic walls of  $\frac{3}{8}$ " CV Durathin. There is no limit to the design possibilities . . . no restriction on your choice of colors.

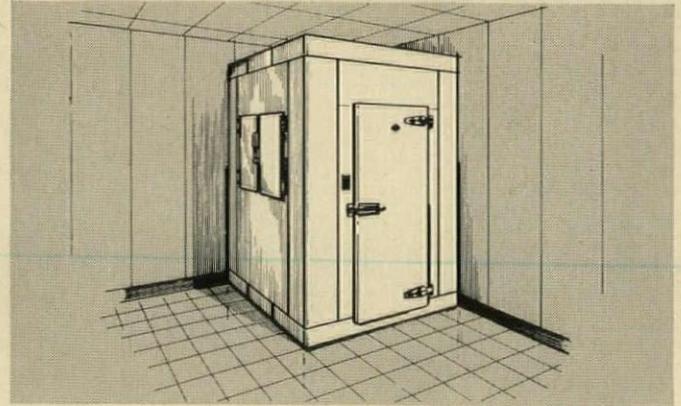
You will fully appreciate the versatility of sculptured CV Durathin when you see the 21 patterns illustrated in our new Design Series brochure. Send for it. Whatever design you select or create, Federal Seaboard will custom-make it for you. You have a choice of gloss, satin or unglazed finishes . . . and unit sizes range up to a maximum of 18" x 24" on centers. The price? Much less than you'd expect for walls of individualized beauty, quality and permanence.

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Installation in the Rosebud School, Rosebud, South Dakota, Bureau of Indian Affairs. Specifications prepared by Howard Parezo & Associates, 200 N.W. Security Bank, Sioux Falls, South Dakota.

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

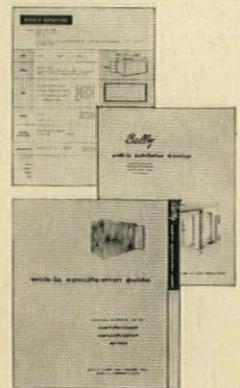
**Sectional construction! Expandable any time! Costs less than built-ins!\***

Newest concept in refrigeration storage makes construction of "built-ins" on the job obsolete. Precision made pre-fab sections permit installation anywhere, any size, any shape. Easy to increase in size or disassemble for relocation. Aluminum or galvanized steel are standard finishes. Stainless Steel and acid-resistant Porcelain also available. All finishes remain sanitary . . . odor-free . . . rodent and vermin proof.

### Free architect's fact file...

Includes guide for specification writers . . . 16-page Walk-In book . . . portfolio of 48 installation drawings and specifications. Also included is a Walk-In description form to request plans and specifications from Bally engineers for individual installations. **Write on your company letterhead.**

See Sweet's File section 26a/Ba.



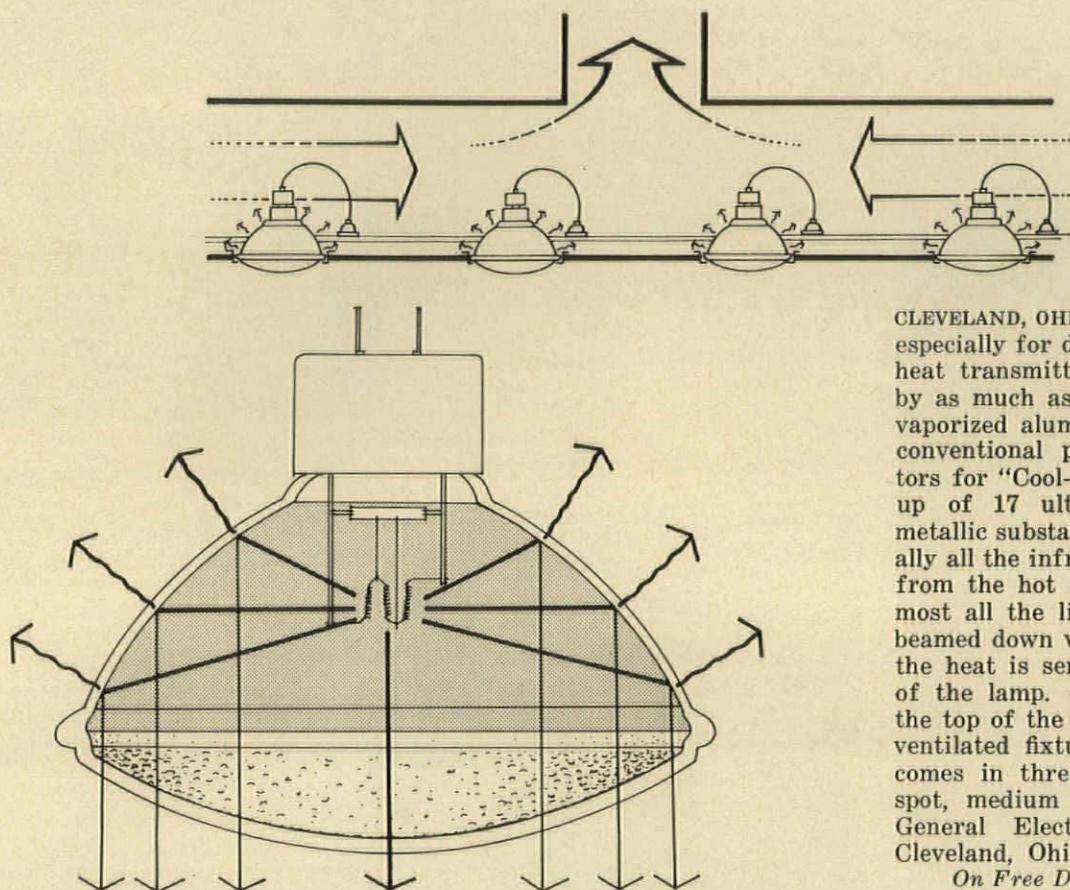
\*Based on cost scales in Metropolitan areas.



Bally Case and Cooler, Inc.  
Bally, Pennsylvania

For more information, turn to Reader Service card, circle No. 332

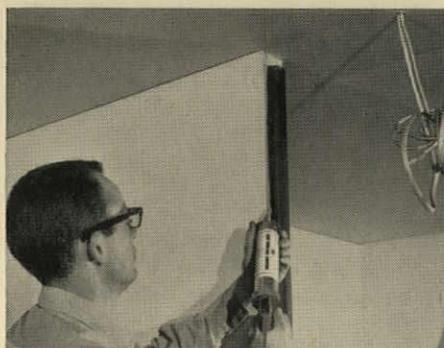
## Display Lamps Cool Off



CLEVELAND, OHIO A new lamp designed especially for display lighting cuts the heat transmitted to the area lighted by as much as two-thirds. Instead of vaporized aluminum coatings used in conventional projector lamps, reflectors for "Cool-Beam" lamps are made up of 17 ultra-thin coatings of a metallic substance that transmit virtually all the infrared energy emanating from the hot filament and reflect almost all the light. Thus the light is beamed down where it is wanted, and the heat is sent out through the top of the lamp. (Heat emanating from the top of the lamps requires open or ventilated fixtures.) The 300-w bulb comes in three beam types: narrow spot, medium flood, and wide flood. General Electric Co., Nela Park, Cleveland, Ohio.

On Free Data Card, Circle 100

## Tube Sandwich Provides Low-Cost Partitioning System



CHICAGO, ILL. A low-cost interior partitioning system called "Structicore" has been designed that utilizes heavy fiber tubes between face layers of fireproof "Sheetrock" gypsum wallboard. The inherent strength of tubular members provided by the fiber cylinders makes this a particularly strong partition. In addition, the hollow fiber tube cores provide convenient channels for electrical wiring. The panels are joined with spline tubes and a special joint stabilizing compound that eliminates face nailing and provides continuous structural support along the entire edge of the joining panels. Finished and in place, the system becomes a smooth, blemish-free, monolithic unit. Panels are provided with mill-installed top and bottom plates of kiln-dried lumber for easy installing. They may be cut at any point with a hand or power saw to meet varying length requirements. United States Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

On Free Data Card, Circle 101

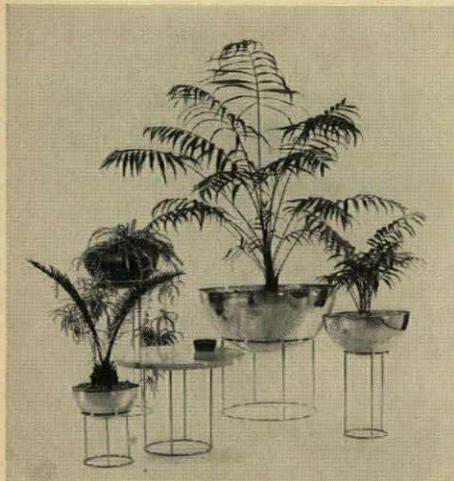
## Tent Design Uses New Type of Canvas Fabric

A permanent tent designed by Architect Robert Martin Engelbrecht for the Rocky Hill, N. J., Volunteer Company utilizes a new tent and awning



fabric made of "Acrilan" acrylic fiber. This solution-dyed fiber is watertight, colorfast, weather resistant, and resistant to stains, mildew, and moths. Manufactured by Glen Raven Mills, Glen Raven, N. C., the fabric's color is "locked in" by having it added while fiber is still in the liquid state. Other properties are dimensional stability, rapidity of drying, durability, pleasing feel to the touch, and resistance to chemicals and acids. Chemstrand Corp., 350 Fifth Ave., New York 1, N. Y.

On Free Data Card, Circle 102



## Sparkling Planters

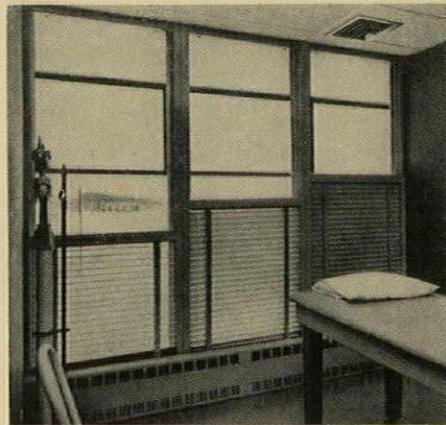
Bases of aluminum rods with mirror polished, anodized finish are used to support tabletops of marble or glass or to bear planters of heavy gage spun aluminum. Planter bowls are available in a variety of colored fused glass finishes as well as in mirror polished finish. A new process of fusing glass onto aluminum renders the surface virtually unchippable. The line should provide accents of controlled decoration for many areas. A line of smokers

is designed to co-ordinate with the planters and tables: smokers have spiral snuffers and removable ash receptacles. All are mirror polished steel. Designed by Thomas Tapert of Hugh Acton Design Associates, they are available from AMV Inc., 588 Brookside Drive, Birmingham, Mich.

On Free Data Card, Circle 103

## Take It from the Top

For a hospital surrounded by fine scenery, a venetian blind has been developed that lowers from the top so that patients under examination can enjoy the view and still have privacy. Its potential for any glass wall is great. The entire unit, mechanism and all, can be bellowed without losing its



ability to tilt the slats. Available in a variety of materials and colors from Levolor Lorentzen, Inc., 720 Monroe St., Hoboken, N.J.

On Free Data Card, Circle 104

## Exit Devices

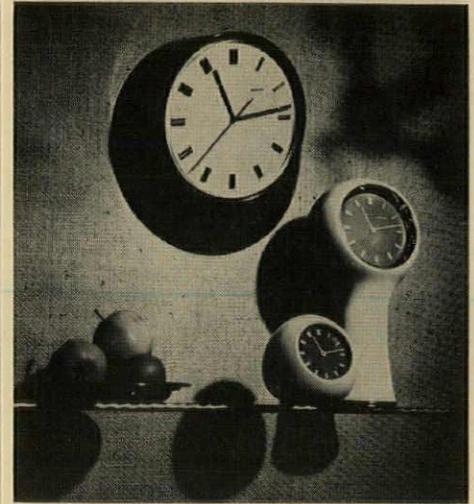
### No Longer Down and Out

Manufacturers of "Universal" exit devices have introduced three new panic bars. Uniquely designed for maximum efficiency and safety, the bars utilize the principle of pushing in the direction of traffic flow rather than pushing downward. Several models are available, in cast bronze, aluminum, or stainless steel. Roland D. Reed, Inc., Rensselaer, Ind.

On Free Data Card, Circle 105

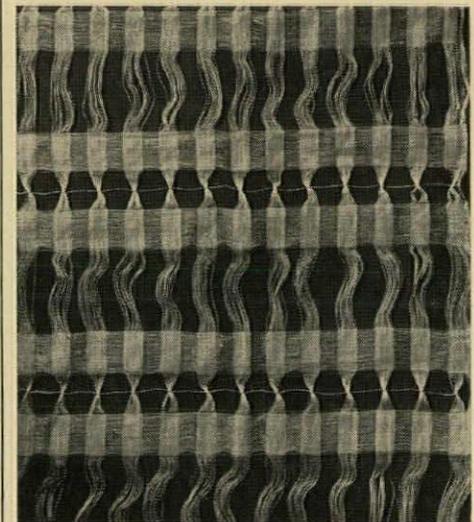
## Transistorized Clocks

Secticon clocks, designed by Italian architects Angelo Mangiarotti and Bruno Morasutti, run for two years on the power of an ordinary flashlight battery. No winding is necessary, and wires leading to the clocks are eliminated. The works, consisting of a



transistorized motor, a power adjustment device that insures accuracy, and the time mechanism, are contained within a plastic cube that can be easily removed for 2-year servicing. The cases of table models are molded in two pieces that are finely fitted to reveal only a scribed line. Raised numerals—parallel lines graduated in width—activate the upturned faces. Design-time, Inc., 16 E. 52 St., New York 22, N. Y.

On Free Data Card, Circle 106



## Hemp Sun Screens

Three casement fabrics, designed by Fede Cheti of Italy, use hemp that is hand drawn to produce open-mesh patterns such as "Essen" (shown). One is a variation on Essen and is called "Bruxelles"; the third is a four-pointed star form, which would be compatible with cement block screens. All three, suitable for the casual screening that glass walls occasionally require, are available from Denning & Fourcade, Inc., 867 Madison Avenue, New York 21, New York.

On Free Data Card, Circle 107

## Let There Be (Fluorescent) Light

First fluorescent post-mounted luminaire on the market has been announced by General Electric. Combining simple daytime appearance with economical light output after dark, the luminaire produces 6900 lumens from only 150 watts. Suggested applications are recreation, patio, and swimming-pool areas; industrial landscaped walkways; parks; development roadways. General Electric Co., Outdoor Lighting Dept., 1 River Rd., Schenectady 5, N. Y.

On Free Data Card, Circle 108



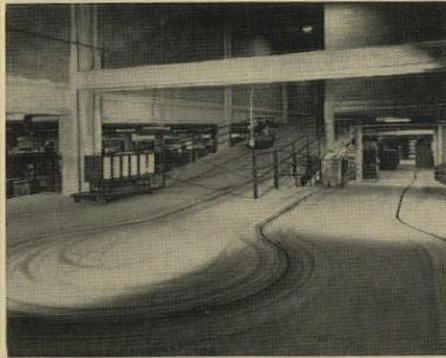
## Desks on the Level

Flexibility is the aim of a series of desks that employ interchangeable components that permit them to convert to either secretarial, executive, or conference desks, and also table and storage units. Mirror polished steel bases can receive a variety of walnut or teak pedestals, side attachments, and tops with economy of installation. Pedestal cases are engineered to accommodate drawers singly or in combination without change of the runners. A "Levelator," (circled) incorporated in each leg, makes possible leg length adjustment without lifting the desk. Scandix Design Series 5, manufactured in Denmark, is sold by Scandix Designs, Inc., 432 Park Ave. So., New York 16, N. Y.

On Free Data Card, Circle 109

## Half-Mile Conveyor Built into Floor

An in-the-floor conveyor, half a mile long, links Polsky's Department Store in downtown Akron with all departments of its new \$4.5 million service building across the street. Merchandise of every type, from ready-to-wear to furniture, is carried on a variety of four-wheel trucks by the "Trukveyor," which winds through three floors of the service building and



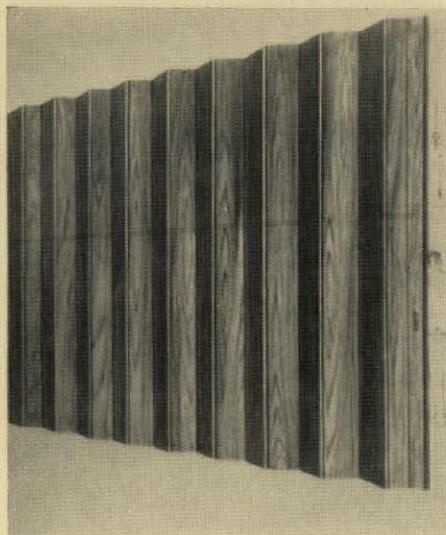
across a bridge to the fifth floor of the store. Similar conveyors have been widely used in railroad and truck freight terminals and in numerous warehousing operations, but this is the first time that such a system moves the entire spectrum of a department store's merchandise.

In the Trukveyor system, trucks are towed by a continuously moving endless chain under the floor; all parts of the system are in or under the concrete floor. The chain travels at a speed of 60 fpm, and can carry 110 trucks at a time. Only four to eight persons are employed to operate the line, putting trucks on the conveyor and taking them off. Link-Belt Co., Prudential Plaza, Chicago 1, Ill.

On Free Data Card, Circle 110

## Wood Folding Partition Is Lightweight

New wood folding partitions weighs only 2 lb per sq ft, has panels 1 ft wide for openings and space division in institutional and commercial buildings. Available in widths up to 50 ft and heights up to 16 ft, the panels are  $\frac{5}{8}$ " thick by 12 $\frac{3}{8}$ " wide, covered each side with three-ply hardwoods, faced with veneers of finished or unfinished Philippine Mahogany, Birch, Walnut,



or Oak. Full-length panel connectors of opaque vinyl are locked in on each side with hardwood edge strips and finished facings. Laboratory tests on the partitions equivalent to 25 years normal use have been conducted. New Castle Products, Inc., New Castle, Ind.

On Free Data Card, Circle 111



## Dimmers Fit Standard Wall Switch

Two new models of a miniature dimming device for incandescent lighting circuits have been introduced. "Dreamlitter Deluxe 1000" and "Deluxe 500," with capacities of 1000 and 500 w, join the 600-w version introduced during the past year. Since they replace conventional wall switches in size, no remodeling or rewiring is required. They provide gradual and uninterrupted selection of any degree of light intensity, from off to maximum brilliance, without using rheostat or variable transformer. Dreamlitter 1000 is designed for commercial applications; model 500 for commercial or residential. Electro-Solid Controls, Inc., 8001 Bloomington Freeway, Minneapolis 20, Minn.

On Free Data Card, Circle 112

## Oil and Water Do Mix

A "never before" mixture of linseed oil and water has produced a house paint that has double advantages: the durability and adhesion of linseed-oil paint plus the convenience and rapid drying of water paint. Staley's new "100% Pure Linseed Oil Latex House Paint" dries in 30 minutes, is blister and mildew resistant, gives excellent adhesion even on chalky surfaces, and can be cleaned up with soap and water. Staley Paint Manufacturing Co., 5243 Manchester Ave., St. Louis, Mo.

On Free Data Card, Circle 113

# New woodfiber acoustical tile that

## FIRST TIME EVER! INCOMBUSTIBLE TILE SAFETY AT WOODFIBER TILE PRICES!

Underwriters' Laboratories, Inc., inspects and labels Simpson PCP ceiling tiles. Like incombustible mineral tiles, PCP has a flame spread rating of less than 25.

PCP ceiling installations are now replacing mineral tiles that cost up to 50% more. Simpson PCP costs only a few cents more than ordinary woodfiber acoustical tile.

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.

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2087-2 Washington Building, Seattle 1, Washington

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The Bonitz Insulation Co.

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**CALIFORNIA**  
Fresno  
Lomen Acoustics  
Los Angeles  
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Products, Inc.  
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**Tampa**  
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Acousti-Engineering  
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**IDAHO**  
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Insulation, Inc.

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Co., Inc.

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Services, Inc.

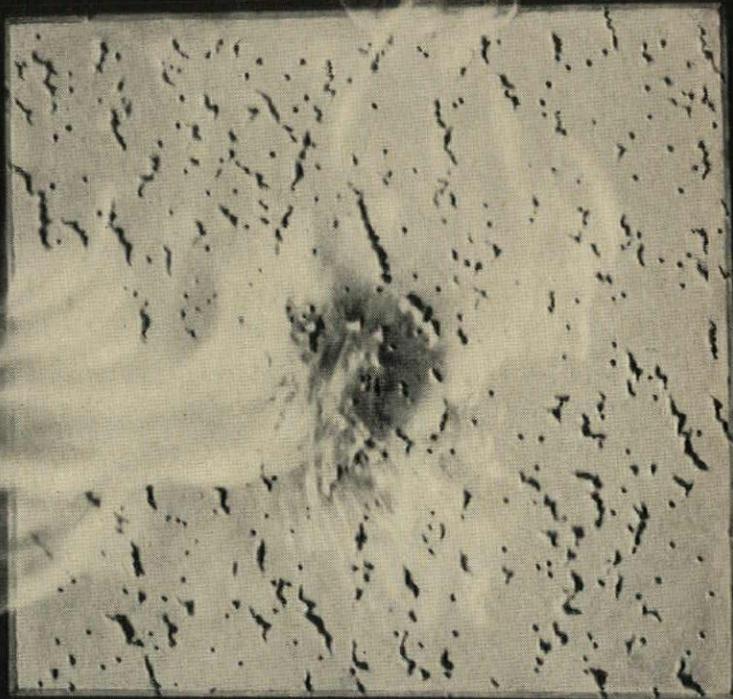
**Des Moines**  
Allied Construction  
Services, Inc.

**Sioux City**  
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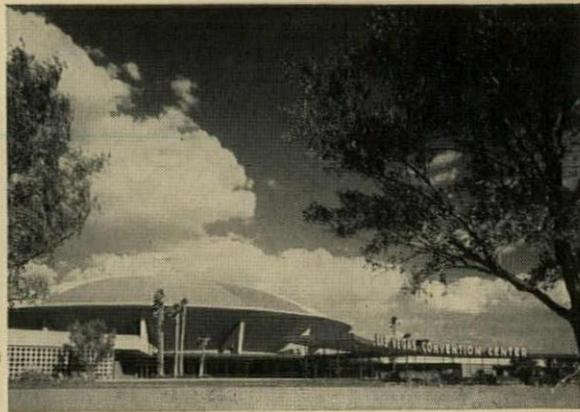
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# HERE ARE A FEW OF THOUSANDS OF BUILDINGS THAT HAVE INSTALLED ONAN STANDBY POWER

Halle Bros. Department Stores  
Middleburgh Heights, Ohio  
Rothrock Bldg. • Erie, Pa.  
Forbes & Wallace Dept. Store  
Springfield, Mass.  
Newspaper—La Presse  
Montreal, Canada  
Parking Ramp—Pigeon Hole Parking  
Montreal, Canada  
Phillip's Supermarket • Auburn, Mass.  
Loveman's Dept. Store  
Birmingham, Ala.  
Hudson's Bay Company  
Winnipeg, Canada  
Newfoundland Radio Station VOXM  
Newfoundland  
Radio Station CJAD • Montreal, Canada  
Tediskis Supermarket  
Plymouth, Mass.  
Chelle's Supermarket  
Barrington, R.I.  
Howard Johnson Restaurant  
Portsmouth, N.H.  
Radio Station WEEL • Medford, Mass.  
Birch Street Garage • Cranston, R.I.  
Hugo Hillstrom Hatchery  
Cokato, Minn.  
Ford Motor Co.—Twin Cities  
Assembly Plant • St. Paul, Minn.  
University of Minnesota  
Minneapolis, Minn.  
Jesuit Fathers Church  
St. Jerome, Quebec  
Pako Co. • Golden Valley, Minn.  
Vanderbilt Univ. • Nashville, Tenn.  
Sunbeam Farm Greenhouse  
Westlake, Ohio  
Lines Orchids, Inc.  
Signal Mountain, Tenn.  
Rhode Island Milk Assn. Bldg.  
Warwick, R.I.  
Beauchamp Dairies • Winter Haven, Fla.  
Rider College • Lawrence, N.J.  
Central Service Station • Edison, N.Y.  
Gulf Power Co. • Fort Walton, Fla.  
Bessemer Electric Service  
Bessemer, Ala.  
City of Nashville • Nashville, Tenn.  
Water Resources Board (State of New  
Hampshire) • Manchester, N.H.  
R E A (Clay Union Electric Corp.)  
Vermillion, S. Dak.  
Michigan Bell • Detroit, Mich.  
Wisconsin Southern Gas Co., Inc.  
Lake Geneva, Wis.  
California Interstate  
Carson City, Nevada  
Toll Road Service Area—Near Ohio Line,  
Ohio Turnpike • Lorain, Ohio  
KVOO-TV • Tulsa, Oklahoma  
Troy Elementary School • Troy, Pa.  
Chambersburg High School  
Chambersburg, Pa.  
Sioux Falls School (Axtell Park Jr. H.S.)  
Sioux Falls, S. Dak.  
St. Lukes Elementary School • Erie, Pa.  
Pure Oil Station • Cable, Minn.  
Wold Chamberlain Field  
Minneapolis, Minn.  
Police Bldg. • Lexington, Mass.  
Barrington Town Hall • Barrington, R.I.  
Radio Station WGL • Ft. Wayne, Indiana  
Southeast Colorado Power Assn.  
La Junta, Colo.  
Radio Station WPBC  
Minneapolis, Minn.  
Radio Station WBRY • Waterbury, Conn.  
Radio Station KSTL • St. Louis, Mo.  
Fire Station • Minneapolis, Minn.  
Sewage Disposal  
Columbia Heights, Minn.



First Federal Savings & Loan, La Crosse, Wisc.



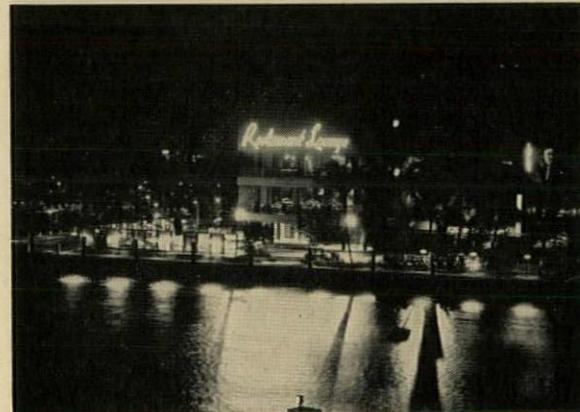
Las Vegas Convention Center



Central & Southern Florida Flood Control District



Montgomery Ward, Minneapolis, Minn.



Phillips Restaurant Lounge, Ft. Lauderdale, Fla.



Amityville Theatre, Amityville, L.I., N.Y.



Farm Bureau Mutual Insurance, Concord, N.H.



Shadowbrook Jesuit Noviate, Lenox, Mass.

# so many standby power problems

*Call in your Onan representative for suggestions  
on type of fuel, cooling system and other options*

Yours is the essential judgement in determining the practicality of standby electric power in buildings you plan or modernize. When, in your judgement, standby is a consideration, we hope you'll call in your local Onan man early in your planning. Fulltime specialists in this field, you'll find their experience helpful in deciding how much critical power insurance is needed. Often, you'll be surprised *how little* emergency power they'll recommend.

An Onan specialist will work closely with you, without obligation, to determine *where* in the building a standby plant should be located, the most efficient cooling system, the most inexpen-

sive fuel system, and all other options.

They'll help select—and supply—all necessary accessories including line transfer control and fuel lines and tanks. *Only Onan offers this complete one source responsibility.*

Bear in mind, too, that local factory service and parts availability is another important plus when you specify Onan. More than one hundred authorized Onan distributors are located in major cities, coast to coast.

Onan plants, gasoline, gas or diesel driven, are now available in sizes to 230 kw. Your local Onan distributor is listed in the Yellow Pages.

ONLY ONAN GIVES YOU THIS CERTIFICATION



**World's Leading Builder  
of Electric Power Plants**

ONAN DIVISION, STUDEBAKER-PACKARD CORPORATION • 2545 UNIVERSITY AVENUE S. E., MINNEAPOLIS 14, MINNESOTA



**Make sure  
your concrete  
cures hard . . .  
stays clean  
and undamaged**

Waterproof, super-strength Sisalkraft provides double-duty protection needed for top quality concrete.

**Maximum moisture retention** assures slower hydration . . . provides frost protection and minimum fluctuations of temperature in the slab.

**Surface protection** prevents damage from abrasion, staining and debris.

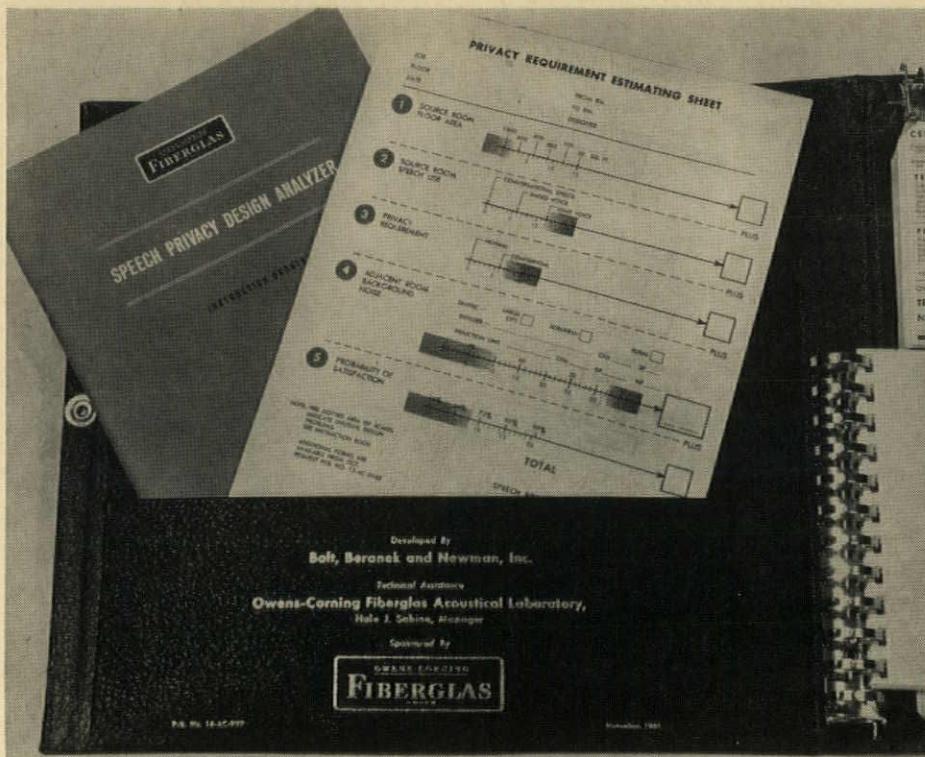
Results! Finished slabs with maximum density, and smooth, clean and more dust-free surfaces. Plus . . . low initial cost and extra savings in easier application and faster, minimum-cost clean-up.

For more facts about better concrete, send for report on "Curing and Protection", AIA file No. 4-C-2. Write: American Sisalkraft Company, Attleboro, Mass. In Canada: Murray-Brantford, Ltd., in principal cities.

# **SISALKRAFT**

## **REINFORCED CURING PAPER**

a development of AMERICAN SISALKRAFT COMPANY/DIVISION OF ST. REGIS PAPER COMPANY



## UNIQUE METHOD FOR DESIGNING SPEECH PRIVACY

New "Speech Privacy Design Analyzer" provides an accurate yet simple method of determining the degree of speech privacy required for any given room, and of selecting the building materials that will give the necessary sound insulation. According to Bolt, Beranek & Newman, developers of the Analyzer, the speech-privacy problem has become increasingly difficult in recent years, as materials that are inherently effective as sound isolators have been replaced by materials of lighter weight.

At the outset of this project, BB&N arranged carefully controlled experiments to try to define adequate speech privacy. Test subjects were remarkably consistent in their response, making it possible to establish—for the first time—definite criteria for acoustic privacy.

Research also indicated that a num-

ber of factors are significant in providing adequate speech privacy, in addition to the sound-isolating performance of the separating construction. Such factors as size and shape of the rooms, sound absorption in the rooms, speaking levels of occupants, nature of occupants' business, and—perhaps most important—level of air-conditioning noise, traffic, or activity noise present in the rooms are all accounted for in the Analyzer method.

The Analyzer resolves speech-privacy problems without reference books, product literature, decibels, or technical terms. Its most complicated arithmetic procedure is the addition of five numbers. Information on a wide variety of products will be kept up-to-date as necessary. For further information on the \$18 Analyzer, write to: Owens-Corning Fiberglas Corp., 717 Fifth Ave., New York, N. Y.

## AIR/TEMPERATURE

### Electric Heaters

Colorful 16-page catalog covers the complete line of Emerson Electric and Emerson-Pryne heating products. Among the units shown are a new baseboard heater, fan-forced built-in heaters, in-the-wall radiant heaters, and built-in bathroom heaters. Also described in detail are thermostats and other control equipment for these products, including new automatic set-

back control system. Specifications and dimensional data are given for all items. Emerson Electric Co., 8100 Florissant Ave., St. Louis 36, Mo.

On Free Data Card, Circle 200

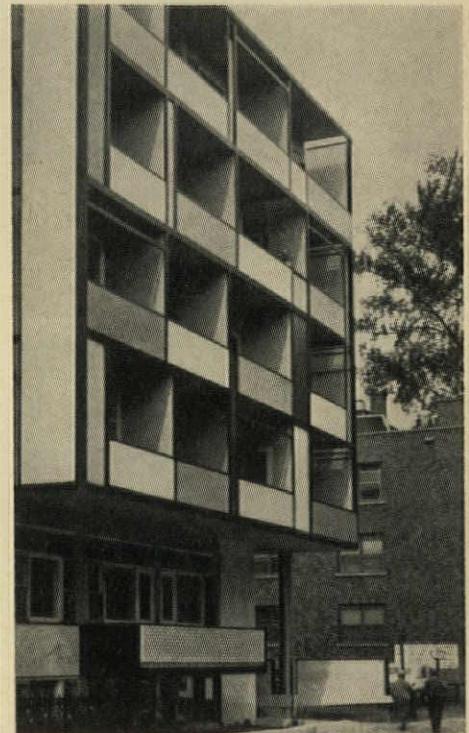
### Electronic Air Cleaners

New 28-page booklet presents benefits and features of electronic air cleaners for heating, ventilating, and air conditioning. Along with discussion of a variety of air-cleaner applications, the booklet covers design and engineering

of various models, and gives their dimensions, outputs, efficiencies, and specifications. Minneapolis-Honeywell Regulator Co., Commercial Div., Minneapolis 8, Minn.

On Free Data Card, Circle 201

## CONSTRUCTION



### Asbestos-Cement Panels Shown in Varied Uses

Applications of "Weldwood Glasweld" are illustrated in new 36-page brochure. The enamel-coated, asbestos-cement panel is shown in a variety of uses: insulated sandwich panels, balcony panels, window inserts, soffits, and facing panels. Color photographs and construction details are given of a number of recent buildings, from residences to refineries. United States Plywood Corp., 55 W. 44 St., New York 36, N. Y.

On Free Data Card, Circle 202

### Specs from Metal-Lath Industry

1962 edition of *Specifications for Metal Lathing and Furring*, 20 pages, is available. A general specification has been written for each type of metal-lath construction; this is then supplemented, where necessary, by a specification devoted to special details. The major sections include partitions and vertical furring, studless solid parti-

tions, metal lath attached directly to wood supports, and to noncombustible ceiling supports, furred ceilings, suspended ceilings, beams, cornices, column protection, reinforcing. MLA states that use of its specifications "will insure not only safe and durable construction at an economical cost, but will establish a basis for maximum competition among all manufacturers of metal lath." Metal Lath Association, Engineers Building, Cleveland 14, Ohio.

On Free Data Card, Circle 203

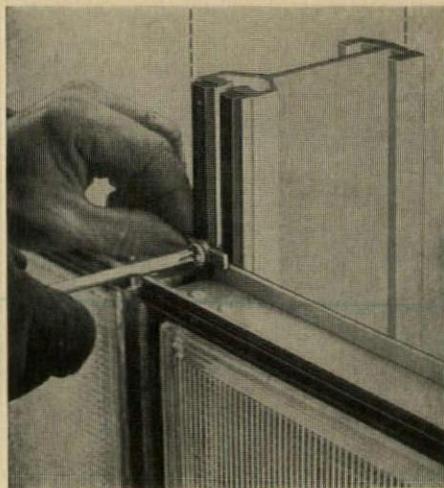
### Stainless-Steel Data

New series of design data sheets on stainless steel in architecture has been announced. The first in the series, entitled *Stainless Steel for Maintenance Economy*, is a 4-page folder describing use of the metal to minimize future cleaning and repair costs. Specifications for final cleaning, and a table of effective cleaning methods, are given. The second bulletin, *Detailing Column Covers*, discusses the basic considerations (grades and finishes, design, stiffening) in designing stainless-steel column covers. Column details from six different buildings are shown in the 6-page folder. Committee of Stainless Steel Producers, American Iron & Steel Institute, 633 Third Ave., New York 17, N. Y.

On Free Data Card, Circle 204

### New Developments in Curtain Wall

Latest catalog on "Thinlite" curtain wall, 8 pages, illustrates several new developments. Among the changes (aside from new lower prices) are: (1) new strut design for improved



appearance; (2) addition of precast stone panels for increased design possibilities; and (3) use of flame-retardant polyurethane instead of foam glass as lightweight core insulation. Thinlite is a completely integrated curtain-wall system, prefabricated and ready for erection, including all basic framing. Panels are in two standard sizes—2' x 4' and 2' x 5'—and in three general types: glass tile, opaque panels, and window panels. Kimble Glass Co., Subsidiary of Owens-Illinois, Toledo 1, Ohio.

On Free Data Card, Circle 205

### DOORS/WINDOWS

#### Labeled Doors and Frames

Available for the first time on a single sheet are complete specifications of Steelcraft fire doors and frames having the Underwriters' Label. The table shows label classification and use of doors, door types and sizes available, maximum glass area permitted, and hardware requirements. General notes on labeled doors and frames appear on the reverse side. The Steelcraft Manufacturing Co., 9017 Blue Ash Rd., Cincinnati 42, Ohio.

On Free Data Card, Circle 206

#### Plastic Dome Skylights

Catalog on plastic-dome skylights by Naturalite states that correlated lighting (daylight and artificial light) is "the most practical and economical method of illumination with complete environmental control." Featured in the 12-page catalog are square and rectangular dome skylights, which are available as single or double domes in 26 stock sizes and five daylight-control materials. Other units are: a new "Low Profile" skylight, a dome with insulated metal curb, ventilating domes, and units with automatic vent-

ing of heat and smoke. Complete technical and dimensional data, and short-form specifications, are included. Naturalite, Inc., 5115 E. Grand Ave., Dallas 23, Texas.

On Free Data Card, Circle 207

### Entrances Cataloged

Natcor entrances and store fronts are detailed in new 8-page catalog. The complete line includes three door types and three basic framing systems, to meet every entrance requirement with the adaptable components. Catalog describes features of the extruded-aluminum entrances, gives typical details and dimensional data on the various lines. Specifications are included. The Natcor Co., 712 Fogg St., Nashville 3, Tenn.

On Free Data Card, Circle 208

## ELECTRICAL EQUIPMENT

### Bullet Fixtures

New catalog illustrates a variety of bullet fixtures designed for specific architectural needs. Included are two-way adjustable units for use where ceilings are sloped, two-light stem-mounted fixtures, and twin pendants. Special new deep-well canopy plates and surface mounting adapters are intended for installation problems in existing buildings. Stonco Electric Products Co., 333 Monroe Ave., Kenilworth, N. J.

On Free Data Card, Circle 209



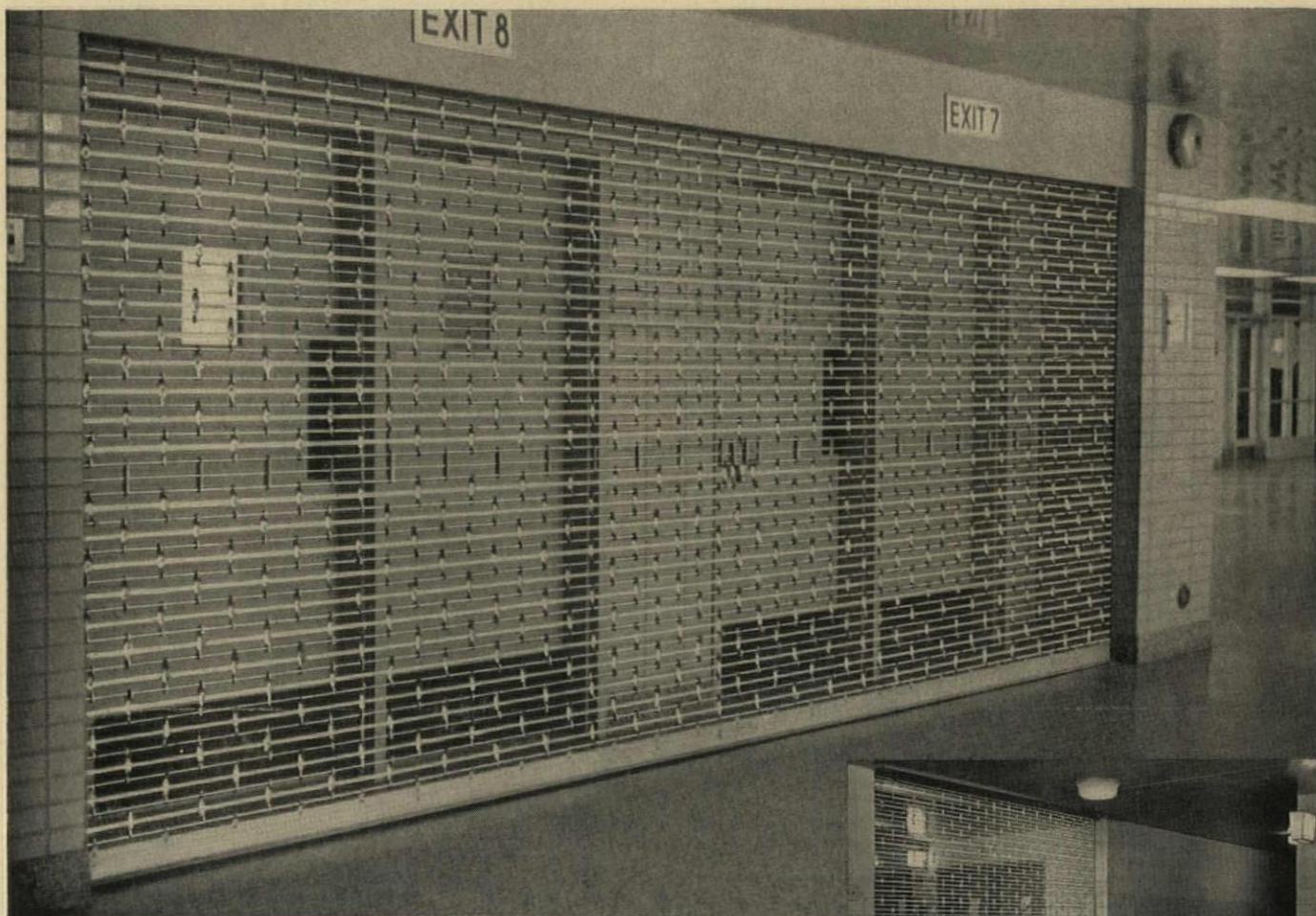
### Store Lighting

New technical publication, entitled *Store Lighting*, discusses the importance of quality lighting in commercial

Continued on page 106



For Good School Planning specify  
**CORNELL ROLLING METAL GRILLES, SHUTTERS & DOORS**  
 for sure protection with beauty



ROLLING GRILLE: EXCLUSIVE BUTTERFLY DESIGN: 5 INSTALLATIONS IN FRANCIS LEWIS HIGH SCHOOL, LONG ISLAND, NEW YORK

**ROLLING GRILLES:** As light and airy as a butterfly in appearance . . . yet they give "steel-door" protection. Introduced by Cornell in 1931. Widely used to close off corridors and stairways without shutting off air and light. Cannot pinch fingers. Furnished in galvanized steel, aluminum, bronze, stainless steel.

**ROLLING STEEL FIRE DOORS:** Underwriters labelled, 3 hr. test approved. Maximum protection and maximum savings in insurance rates. Advanced space-saving features including automatic closure in case of fire.

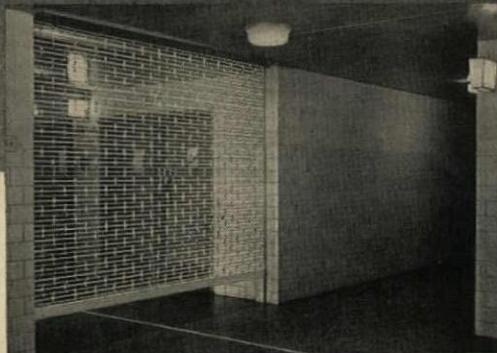


ROLLING STEEL FIRE DOOR

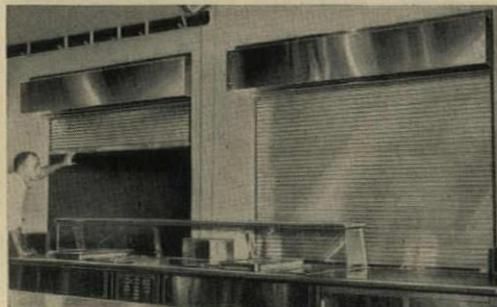
**ROLLING COUNTER SHUTTERS:** For cafeterias, kitchens, etc. 1/4" flatslat rolling shutters. Aluminum, stainless steel, bronze, galvanized steel.

**PACKAGED PASS WINDOWS:** Completely assembled. One installation. Integrated stainless steel frame with 1/4" Flatslat aluminum shutter.

**ROLLING SERVICE DOORS:** Manual and motorized for shop & receiving entrances, piano enclosures, etc. All metals.

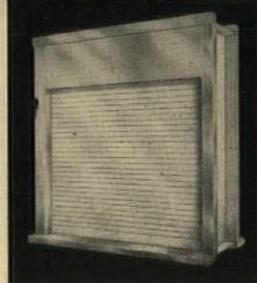


ROLLING GRILLE, CORRIDOR INSTALLATION



ROLLING COUNTER SHUTTER

PACKAGED PASS WINDOWS



**CORNELL IRON WORKS, INC.**

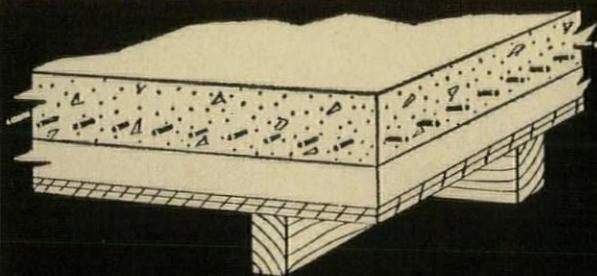
Established 1828

36th Ave. at 13th St., Long Island City 6, N.Y. • Stillwell 4-3880  
 REPRESENTATIVES IN PRINCIPAL CITIES

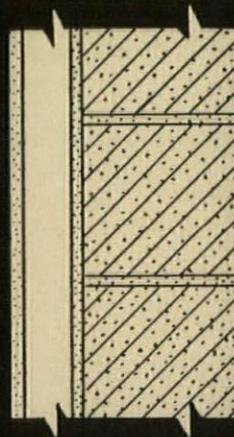


# STYROFOAM<sup>®</sup>

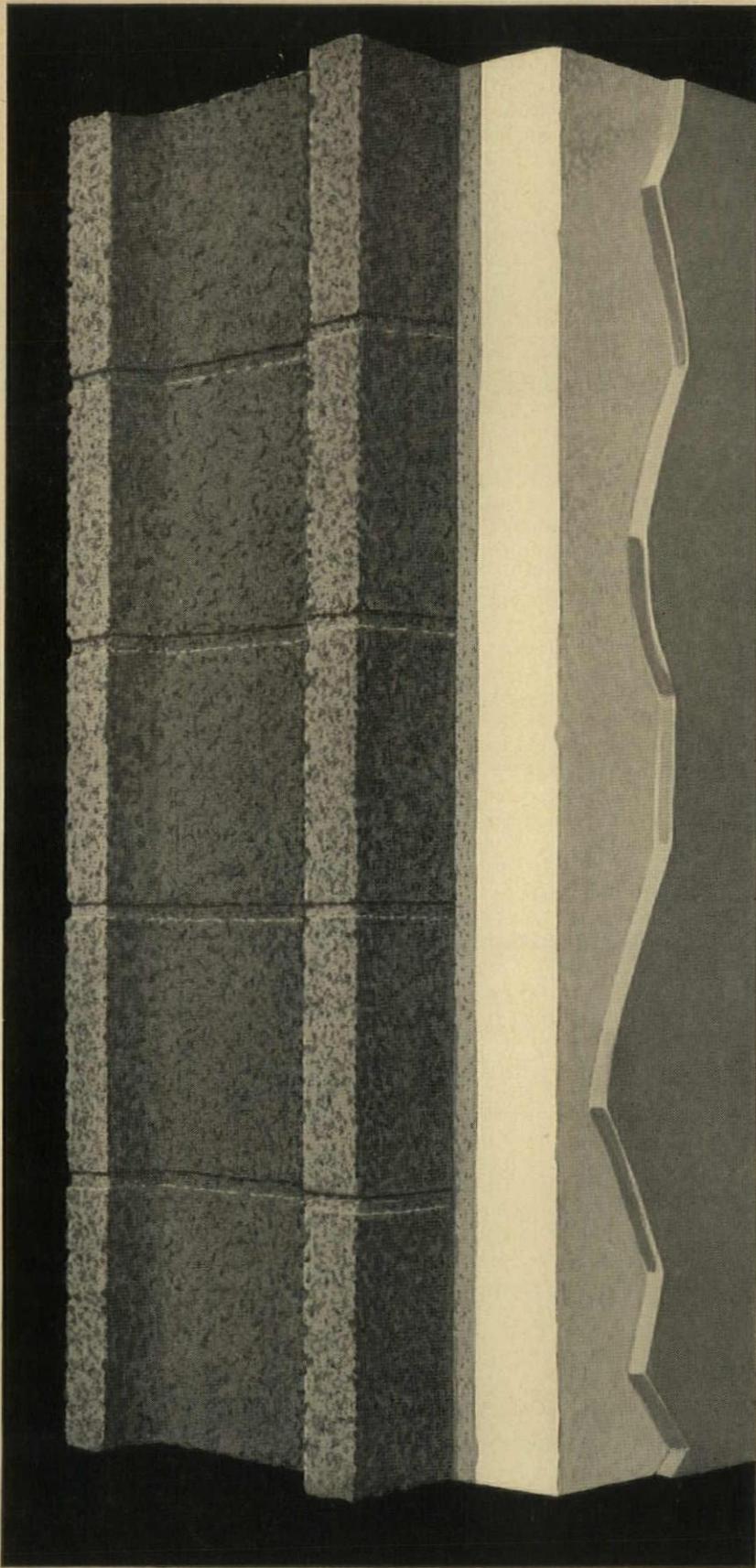
**Rigid insulation**  
**saves masonry insulating costs and time,**  
**gives permanent insulating values**



**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 1300EB5.

*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.*

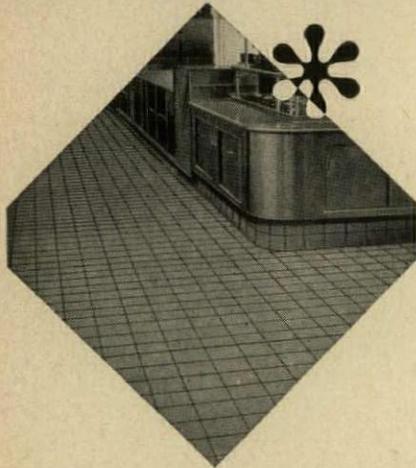
**THE DOW CHEMICAL COMPANY**

**DOW**

Midland, Michigan

wherever there's...

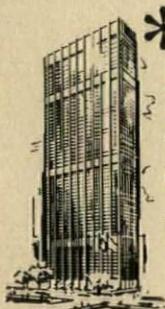
# DRIPPING SPILLING SPLASHING



men who know tile floors best, specify and install

## HYDROMENT JOINT FILLER

Wherever there's food handling, there's sure to be spilling, dripping and dropping. Ordinary grouts can't withstand the corrosive attack of food acids and alkalis. That's why Hydroment Joint Filler was specified for the quarry tile kitchens and cafeterias of No. 1 Chase Manhattan Plaza. It forms a permanently tight, dense, joint — non-toxic, odorless, highly resistant to wear and corrosion. It inhibits bacteria growth; very easily maintained. Widely used with brick or tile for over 20 years in cafeterias, restaurants, hotels, motels, hospitals, schools, etc. . . . wherever there is mass feeding and mass housing. Seven colors, plus black and white.



### NO. 1 CHASE MANHATTAN PLAZA

Architect:  
Skidmore, Owings & Merrill  
General Contractor:  
Turner Construction Co.  
Tile Contractor:  
Peter Bratti Associates, Inc.

Pioneers in Industrial Research Since 1881  
**THE UPCO Co.**  
4805 LEXINGTON AVE. • CLEVELAND 3, OHIO  
In the West: **HYDROMENT, INC.**  
829 N. Coffman Drive • Montebello, Calif.

For more information, circle No. 402

Continued from page 102

design. The 20-page booklet describes principles, outlines techniques, and suggests proper light sources for effective lighting in various types of stores and in specific store areas. Attention is focused on general lighting, display lighting, and perimeter lighting. Photos, diagrams, and tables are included. General Electric Co., Inquiry Bureau, Nela Park, Cleveland 12, Ohio.  
*On Free Data Card, Circle 210*

## FINISHERS/PROTECTORS

### Maple Topping

New list of MFMA tested and approved floor-finishing products is available. All products have been examined under the revised specifications issued three years ago, and give the user the benefit of extensive research carried on during this time. Both penetrating sealers and bakelite types of finishing products are included: the sealers are recommended for finishing hardwood floors in residences, school classrooms and gymnasiums, ballrooms, and industrial plants; finishes of the bakelite type are recommended for floors under comparatively light traffic. The list also includes a number of products of epoxy and polyurethane composition. Maple Flooring Manufacturers Association, Research Dept., 35 E. Wacker Drive, Chicago 1, Ill.

*On Free Data Card, Circle 211*

### Zinc-Coated Steels

Selection and use of zinc-coated steels is the subject of a 28-page manual from Armco. Tables give physical properties and costs as compared with painted steel sheet. Fabrication techniques, paintability, and weldability are covered for each of four grades of the zinc-coated steel. Booklet also illustrates typical applications and includes a guide to specifications. Armco Steel Corp., Product Information Service, Middletown, Ohio.

*On Free Data Card, Circle 212*

### Masonry Surfacing

Colorful chart describes new masonry-surfacing compounds that serve a variety of maintenance and repair needs. The epoxy materials change worn, dangerous areas into durable, skid-resistant surfaces. Unusually high adhesive strength, durability, and chemical resistance provide long-lasting protection against wear and corrosion of industrial floors, loading docks,

processing areas. E. V. Roberts & Associates, Inc., EVRA Plastics & Chemicals Div., 5068 W. Washington Blvd., Los Angeles 16, Calif.

*On Free Data Card, Circle 213*

## INSULATION

### Low Flame-Spread Rating —at Low Cost

Unique in the acoustical-tile industry is Simpson's new process that combines the advantages of wood-fiber acoustical tile with the flame-spread safety of mineral tile. Through the "Pyro-Chem Protection" process, fire resistance becomes an integral part of the tile itself. New catalog, 4 pages, gives physical properties and specifications of the new PCP tile, comparing it with incombustible mineral tile and with regular acoustical tile. PCP products are available in six patterns. Simpson Timber Co., 2044 P Washington Building, Seattle 1, Wash.

*On Free Data Card, Circle 214*



### Multipurpose Insulation

"Spintex," a versatile insulating material felted from long siliceous fibers, is described in new 12-page bulletin. Spintex is recommended for applications ranging in temperature from subzero to 450 F (although the fiber will withstand continuous temperatures up to 1000 F). The material is noncombustible, noncorrosive, and non-absorptive. It is widely used for air-conditioning ducts, for storage tanks, for ceiling of metal buildings, and for cold-storage walls. There are six dif-

*Continued on page 110*



Jet age smoothness with SPEEDRAMP PASSENGER CONVEYOR SYSTEMS . . . to terminal and planes . . . and back again

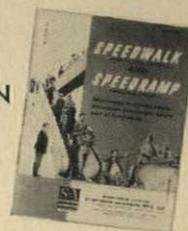
Public convenience keeps pace with the jet age via SPEEDRAMP Passenger Conveyor Systems at the new Akron-Canton Airport, Akron, Ohio. Passengers and spectators are carried effortlessly and safely from entrance to terminal lobby and from terminal lobby to plane concourses and back again by four SPEEDRAMP Passenger Conveyors. Operating in pairs, the SPEEDRAMP Passenger Conveyors carry pedestrian traffic between ground level and the second floor terminal lobby. This most modern method of moving people over a vertical plane provides convenience, efficiency, speed, safety, combined with showcase beauty, low initial cost and minimum maintenance. SPEEDWALK and SPEEDRAMP Passenger Conveyor Systems have logged an enviable record for eliminating needless steps for millions of passengers at installations across the nation and abroad. Investigate these advantages by requesting full details today.



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**STEPHENS-ADAMSON MFG. CO.**  
 GENERAL OFFICE & MAIN PLANT, 45 RIDGEWAY AVE., AURORA, ILL.

PLANTS LOCATED IN: LOS ANGELES, CALIF. • CLARKSDALE, MISS.  
 BELLEVILLE, ONT. • MEXICO, D.F.

WRITE FOR BULLETIN 1060





## IN THIS WINDOWLESS CLASSROOM... STUDENTS

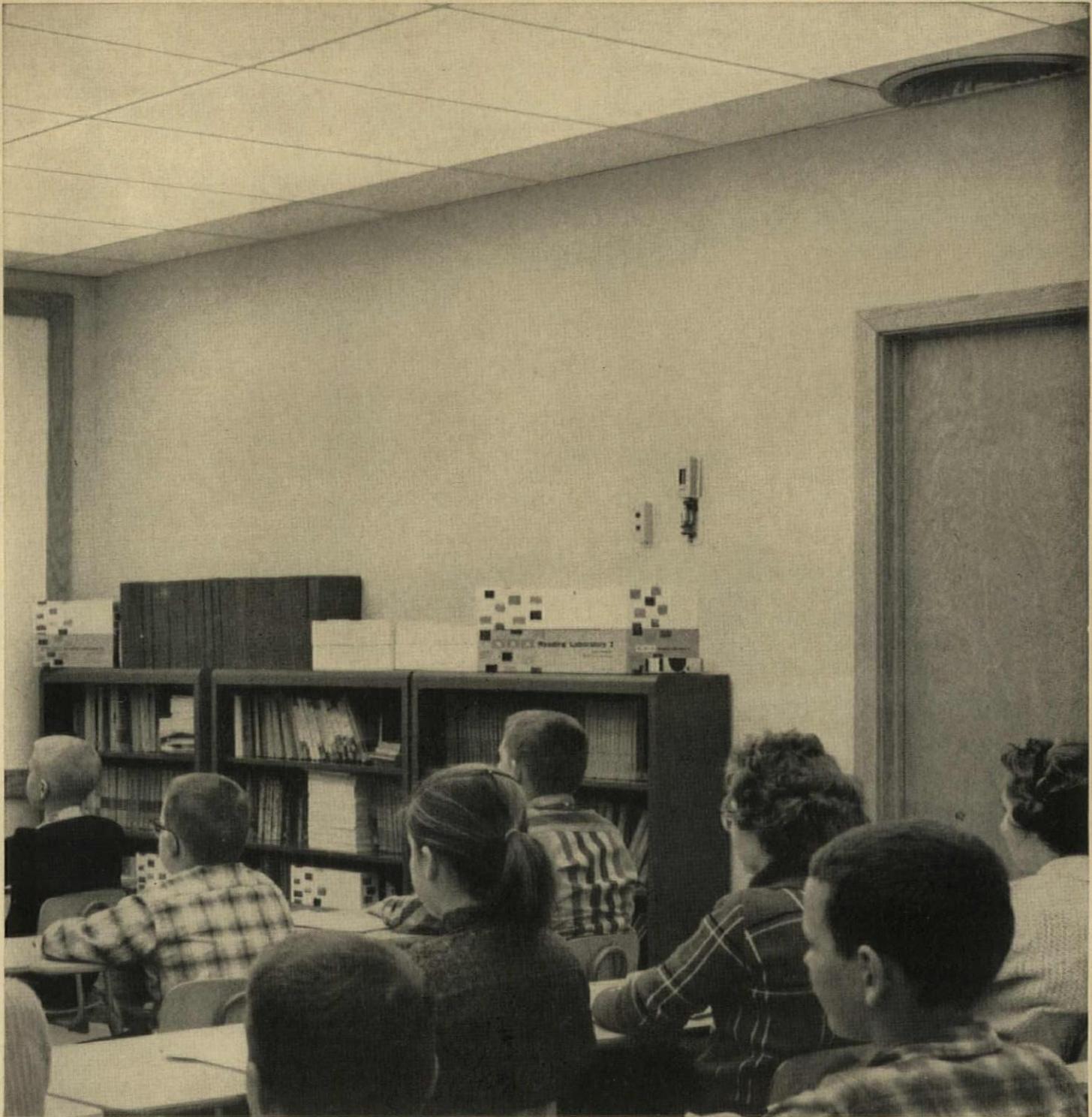


In this classroom, visual details are sharp and clear, colors are distinct and true. The light is bright, yet with no shadows or glare, because it comes from Fiberglas Polarizing Light Panels. The staff of Roeland School praise the lighting this way: Superintendent Walter C. Giffin: "The coming thing for classroom use."

Principal Harry Mahon: "A very soft light, better than any other system I know of."

Reading Consultant Robert Phillipps: "No glare or shadows—even for the high level of illumination."

Recently, at Ohio State University, the benefits of polarized



This well-lit though windowless classroom is in the Roeland Elementary School, Roeland, Kansas. Curtis & Cowling, Architects; J. R. Custead, P.E., Illuminating Engineer.

## SEE BETTER...WITH POLARIZED LIGHT!

light were tested and verified. It was demonstrated that this type of light virtually eliminates reflected and direct glare, and reduces veiling glare. It also significantly improves color definition, visual performance, and task visibility in comparison with nonpolarized light at equal candlepower.

For the most advanced improvement in interior illumination, insist on Fiberglas Polarizing Light Panels in any lighting enclosure you specify.

For full information or a visual demonstration, write: Owens-Corning Fiberglas Corporation, Dept. MD, 717 Fifth Ave., New York 22, New York.

OWENS-CORNING RESEARCH pioneers new ideas in

OWENS - CORNING  
**FIBERGLAS**  
T. M. REG. U. S. PAT. OFF.

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

Continued from page 106

ferent types of Spintex, from flexible to rigid forms, with six types of vapor-barrier facings. Johns-Manville, Insulation Division, Box DOC-2, 22 E. 40 St., New York 16, N. Y.

On Free Data Card, Circle 215

### Long-Term K-Factor

New 4-page bulletin on low-temperature insulation with Dow's "Thurane" emphasizes the long-term insulation value of the product. Initial thermal conductivity of Thurane at 70 F is in the range of 0.11 to 0.13. Dow research has determined that the long-term equilibrium K-factor for cut urethane-foam boards can be established at 0.16 to 0.17. The long-term value, Dow believes, should provide a much more reliable guide to the designer. Bulletin also gives information on Thurane's properties, includes tables on size and thickness of boards, and lists general principles of proper installation. The Dow Chemical Co., Building Products Sales, Midland, Mich.

On Free Data Card, Circle 216

## SANITATION/PLUMBING

### Pumps and Water Systems

New 69-page catalog presents the full line of Deming products, ranging from boiler feed pumps to turbine pumps. Catalog describes centrifugal pumps, condensation return units, hydraulic test pumps, jet pumps and water systems, reciprocating pumps and water systems, rotary pumps, submersible pumps. Complete product information is given on all units and accessories. Wiring diagrams and price lists are also included. Deming Div., Crane Co., Salem, Ohio.

On Free Data Card, Circle 217

### Corrosion-Resistant Piping is Evaluated

New 8-page booklet will aid in selecting the proper thermoplastic material for low-cost piping of corrosive fluids at elevated temperatures. The best combination of chemical, thermal, and mechanical properties is discussed for a variety of applications: chemical and

food processing, laboratory and other industrial piping, and waste-drainage systems. Economic and operating advantages are summarized for each of seven types of industrial thermoplastics and for plastic-lined piping. A checklist is provided to rate each material on a point basis for specific applications. Tube Turn Plastics Inc., 30th and Magazine Sts., Louisville 11, Ky.

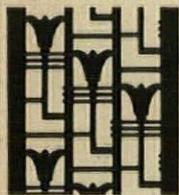
On Free Data Card, Circle 218

## SPECIAL EQUIPMENT

### Metal Components for Screens and Railings

Condensed catalog of architectural metal components is now available from Julius Blum. Among the several new additions to the company's line are: (1) recently introduced "Curtain-screen" system of stock decorative-screen components; (2) new group of components for the "Carlstadt" aluminum railing system; (3) new colors

Continued on page 114



It's **H & K** for

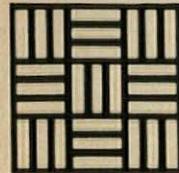
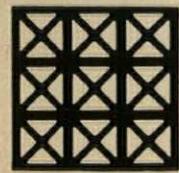
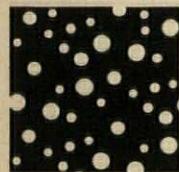
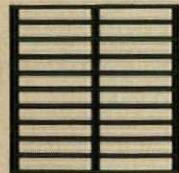
## ARCHITECTURAL GRILLES

(Write for H&K Grille Catalog)

and

## DECORATIVE PERFORATED MATERIALS

(Write for General Catalog 75)



A wide selection of designs assures you of the motif "just right" for your plans. H & K perforated metal grilles are furnished in accordance with the architect's specifications for type of metal—gauge—finish—and margins. Decorative perforated materials include metals, wood, composition, plastic.

See Sweet's File— 30f/Ha



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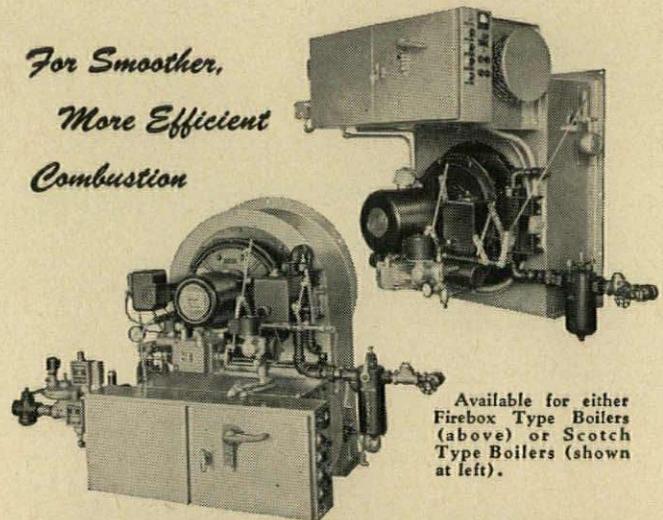
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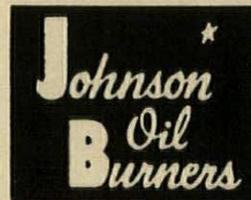
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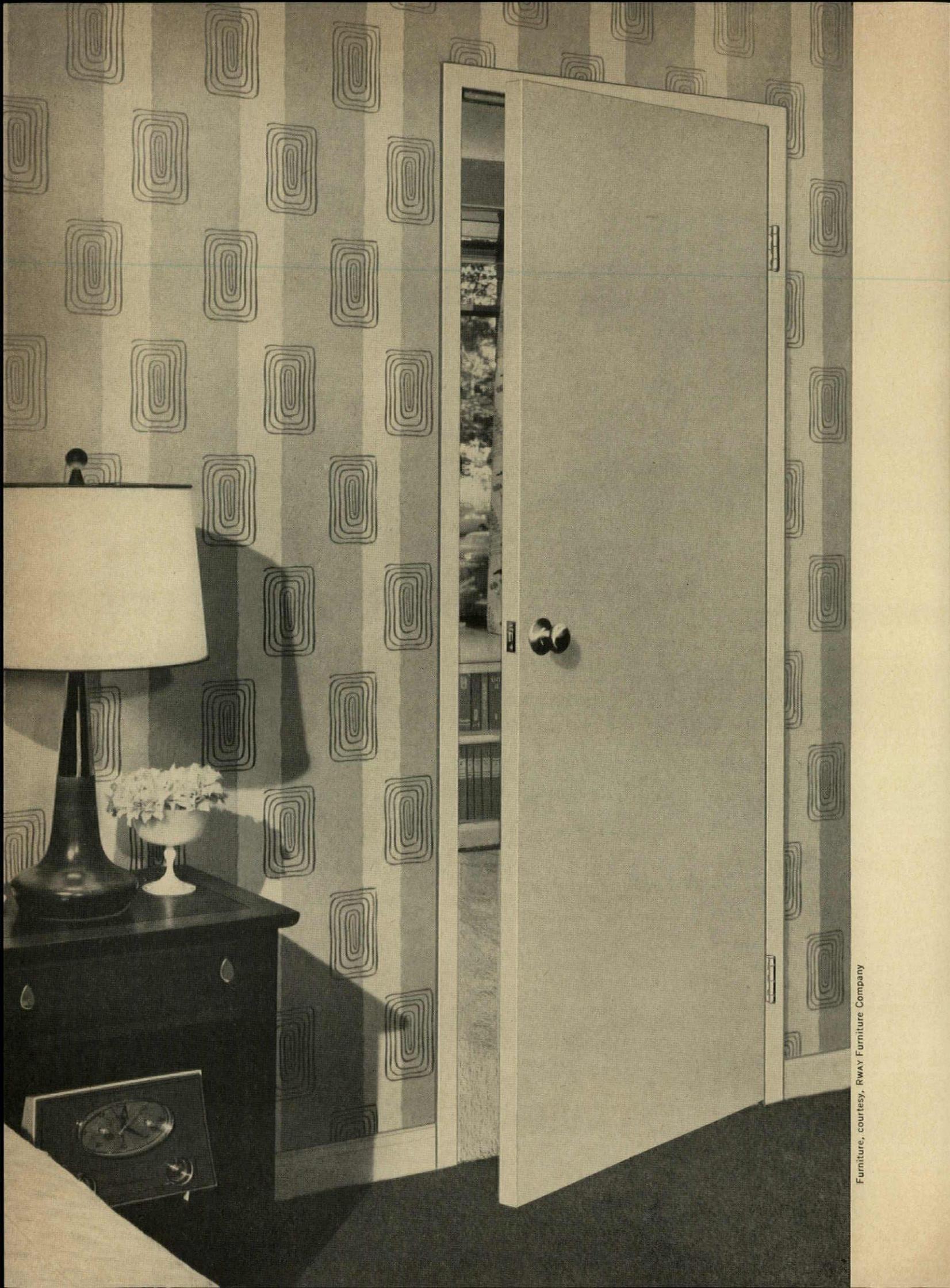
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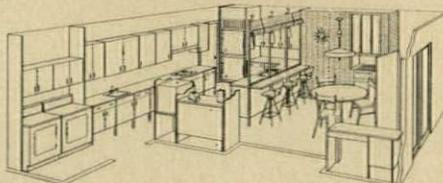
Continued from page 110 for "Colorail" plastic handrail; and (4) new treillage patterns of contemporary design. Besides these new products, the 28-page catalog illustrates other stock items: pipe railings, wrought iron and nonferrous railings, steel tubing and caps, aluminum shapes and tubing. Booklet is illustrated with detail drawings and sketches that show fabrication features and finished appearance of the various components and systems. Weights and dimensions of all items are listed. Julius Blum & Co., Inc., P.O. Box 92, Carlstadt, N. J. On Free Data Card, Circle 219

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wheelchairs or with heavy leg braces or artificial limbs, and 16,500,000 who are over 65. The standard gives specific recommendations for site development as well as for building elements (entrances, stairs, floors, toilet rooms, identification of facilities, warning signals, etc.). The President's Committee on Employment of the Physically Handicapped, Washington 25, D.C.

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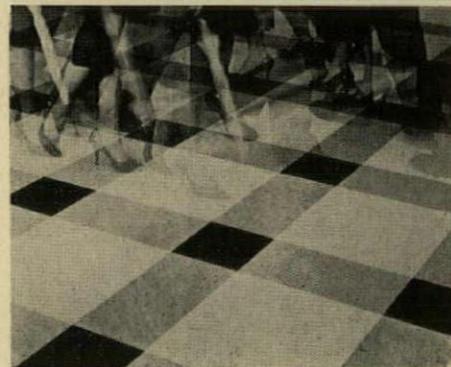


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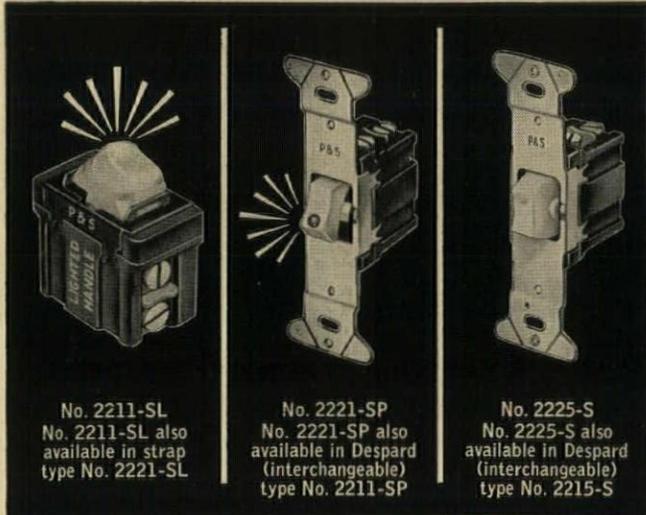
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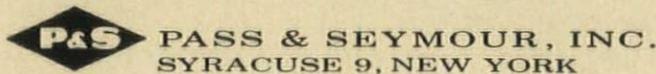
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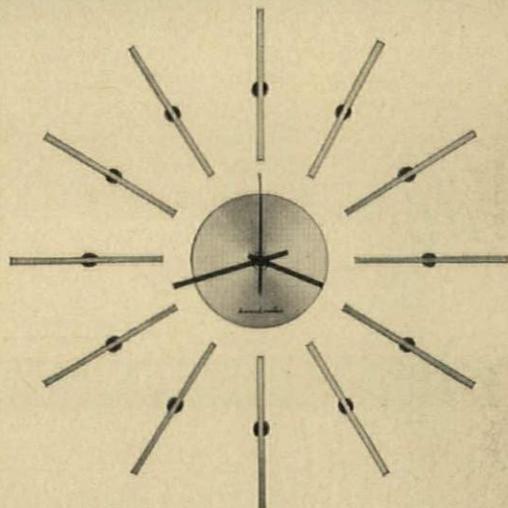
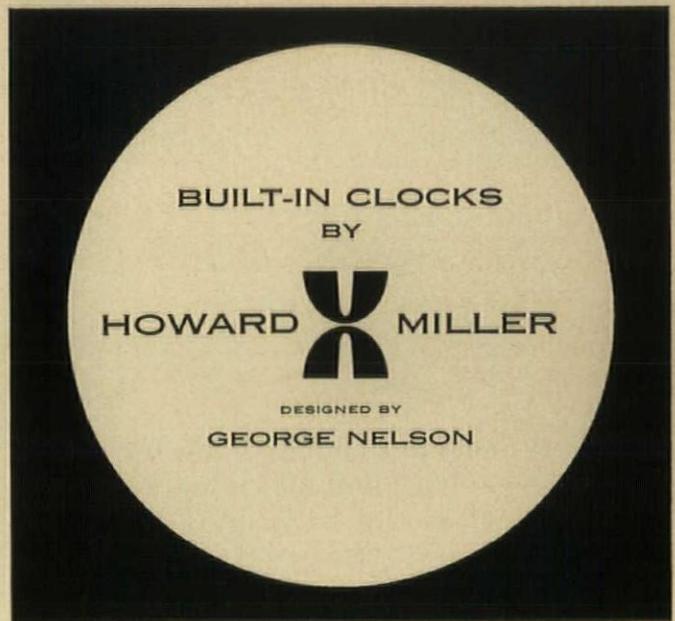
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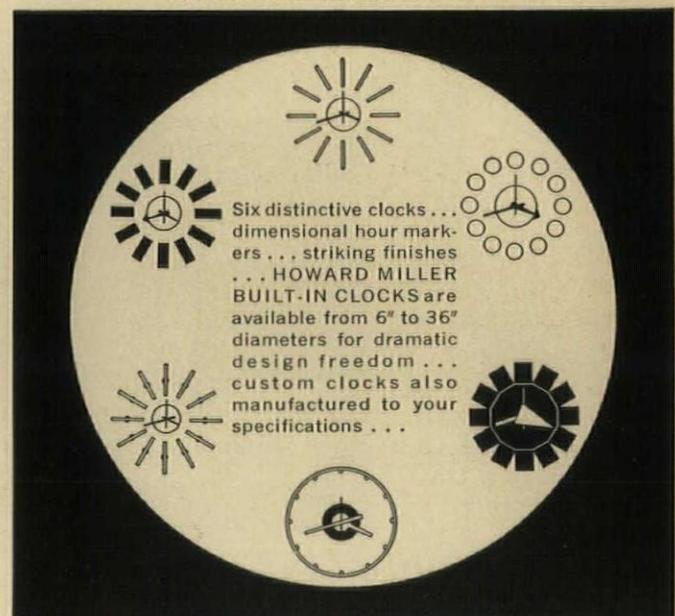


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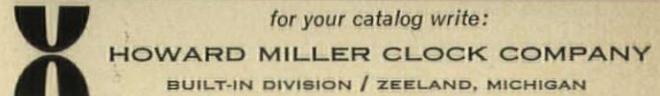


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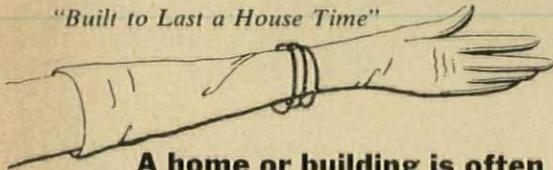


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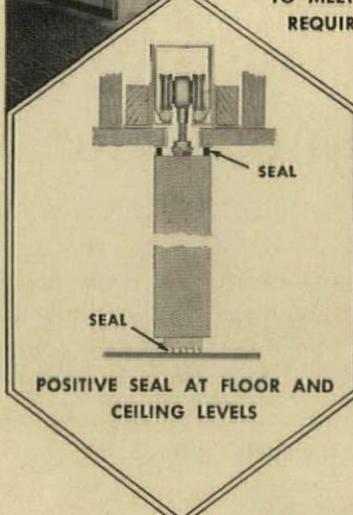
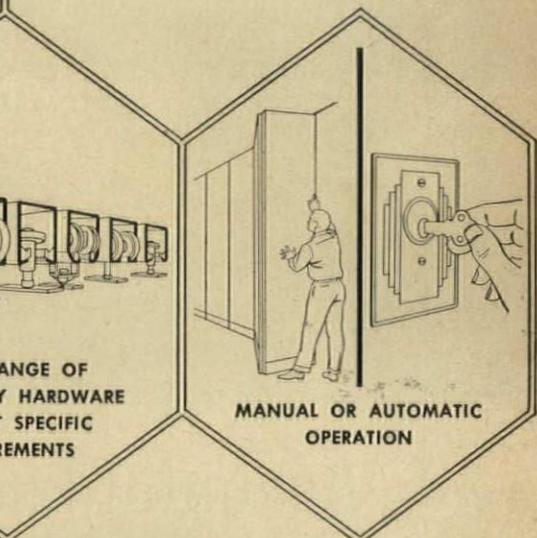
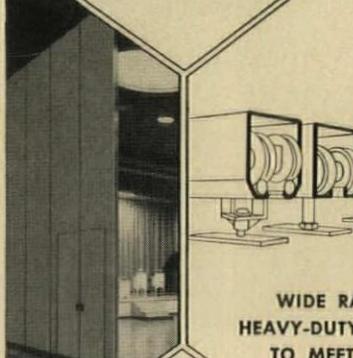
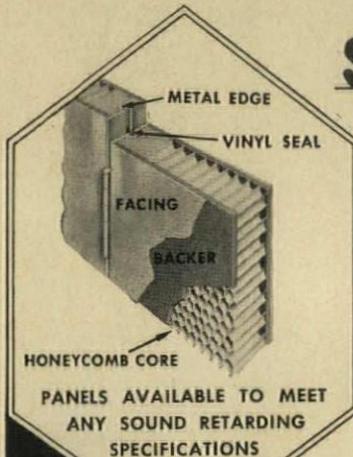
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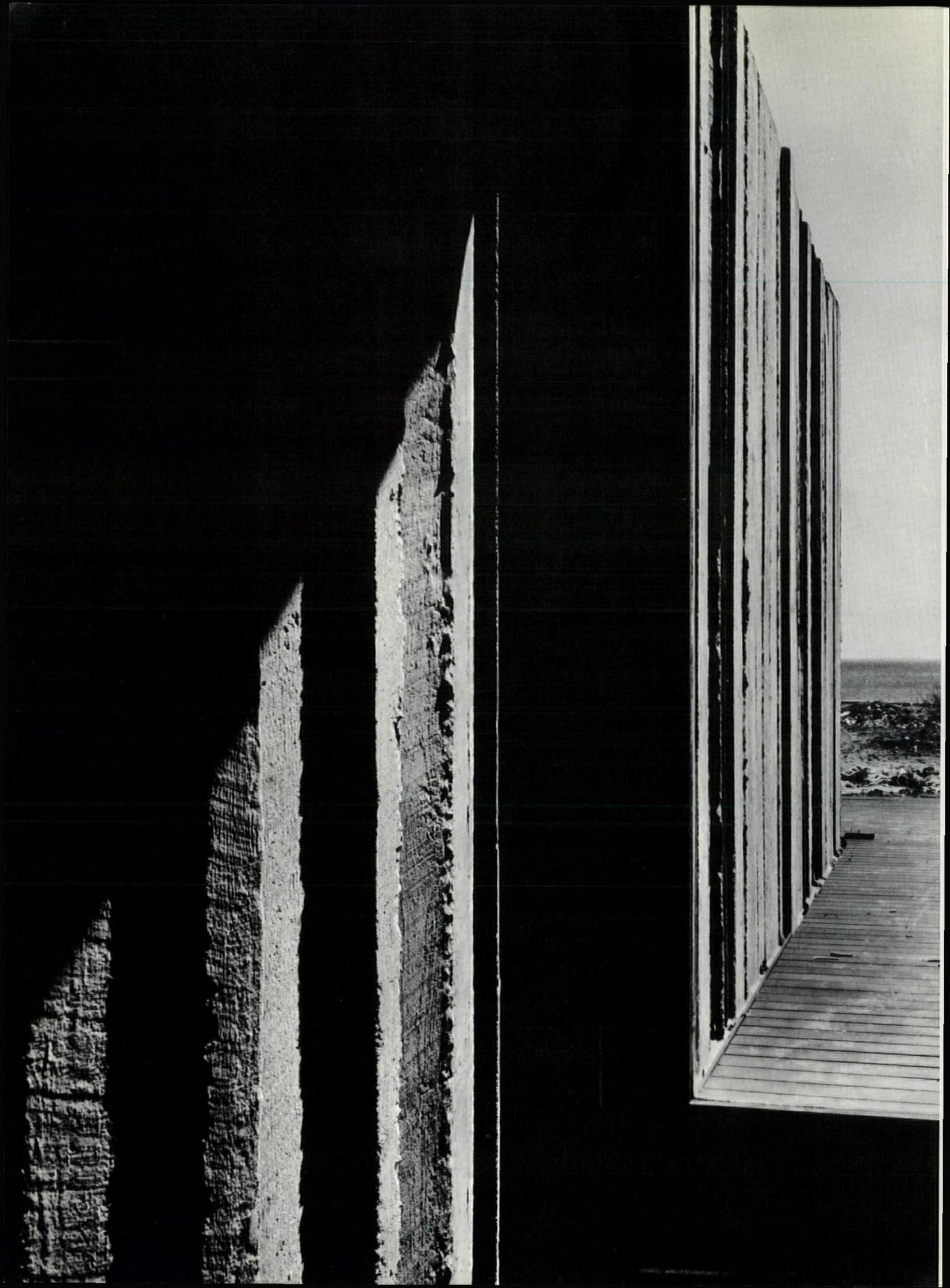
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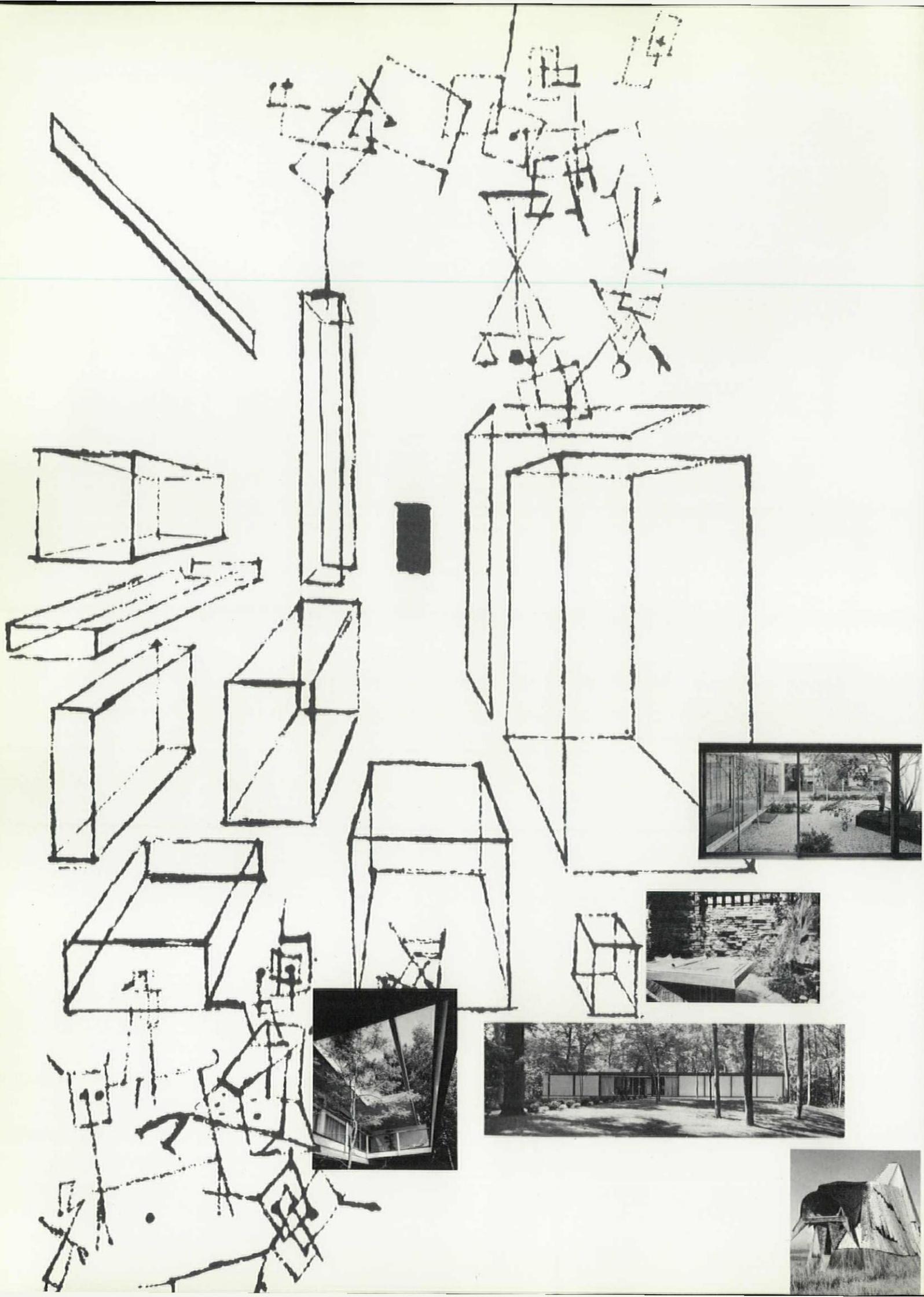
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## EDITORIAL FEATURES

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- Frontispiece*    **DETAIL OF WALL OF HOUSE BY JOHANSEN** (page 180) Photo: David Hirsch
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# HOUSES: THE MULTIFARIOUS LIFE

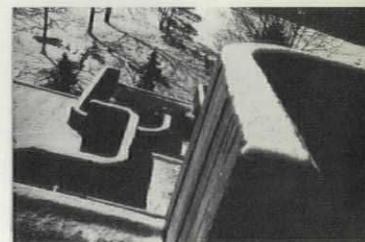
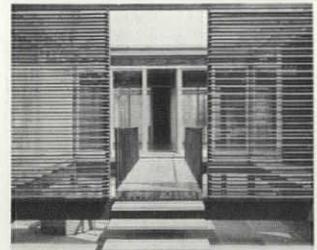
This introduction and the following presentations on houses were prepared with the assistance of P/A's Contributing Editor, Ilse M. Reese.

The custom-designed house, more than any other type of building, is an intensely personal creation. It is the architectural expression of two distinct personalities—the architect and the client—who bring to their common effort wide differences in backgrounds, in personal likes and dislikes, in individual idiosyncrasies. The architect has the advantage of appropriate professional training and competence; the owner of controlling the purse strings. The dialogue between the two, then, is intimate, without the usual intermediary committees, consultants or specialists; contact is direct and unbuffered.

As exemplified by the ten houses shown below and in the following pages, this direct interplay of personalities can inspire almost unlimited design variations. And, taking into further consideration the current architectural climate of free expression and uninhibited experimentation, design ideas appear inexhaustible today. All of them are represented—from the totally constructivist to the totally organic, from the cubist to the plastic, from the informal to the formal, from the serious to the playful. All are valid in terms of the personalities who played their respective parts in the realization of these designs.

The strongest architectural statements are possible, of course, where the architect is also his own client, as was the case in four out of the ten houses. This does not imply, however, that the other six designs are any less imaginative or forceful. The necessary rapport between client and architect—the prerequisite for successful design—was established without question.

Paul Klee, in his extraordinarily perceptive way, has symbolized such an interplay of two personalities in his drawing shown on the facing



page, which he titled "Starres und Bewegtes Geistert." Loosely translated, this means "Static and Animate Forces at Play." The static forces are those objects at rest or in equilibrium—in architectural terms, the final, fixed building anchored to its site. The animate forces are those that supply life, spirit, and vigor—in this case, the human activity for which the house is planned, the program based on the client's way of living. Klee shows the two forces, and indirectly the two personalities, as they should ideally exist—in perfect balance and harmony.



Jay Fleishman, Architect

## THE STATIC AND THE ANIMATE

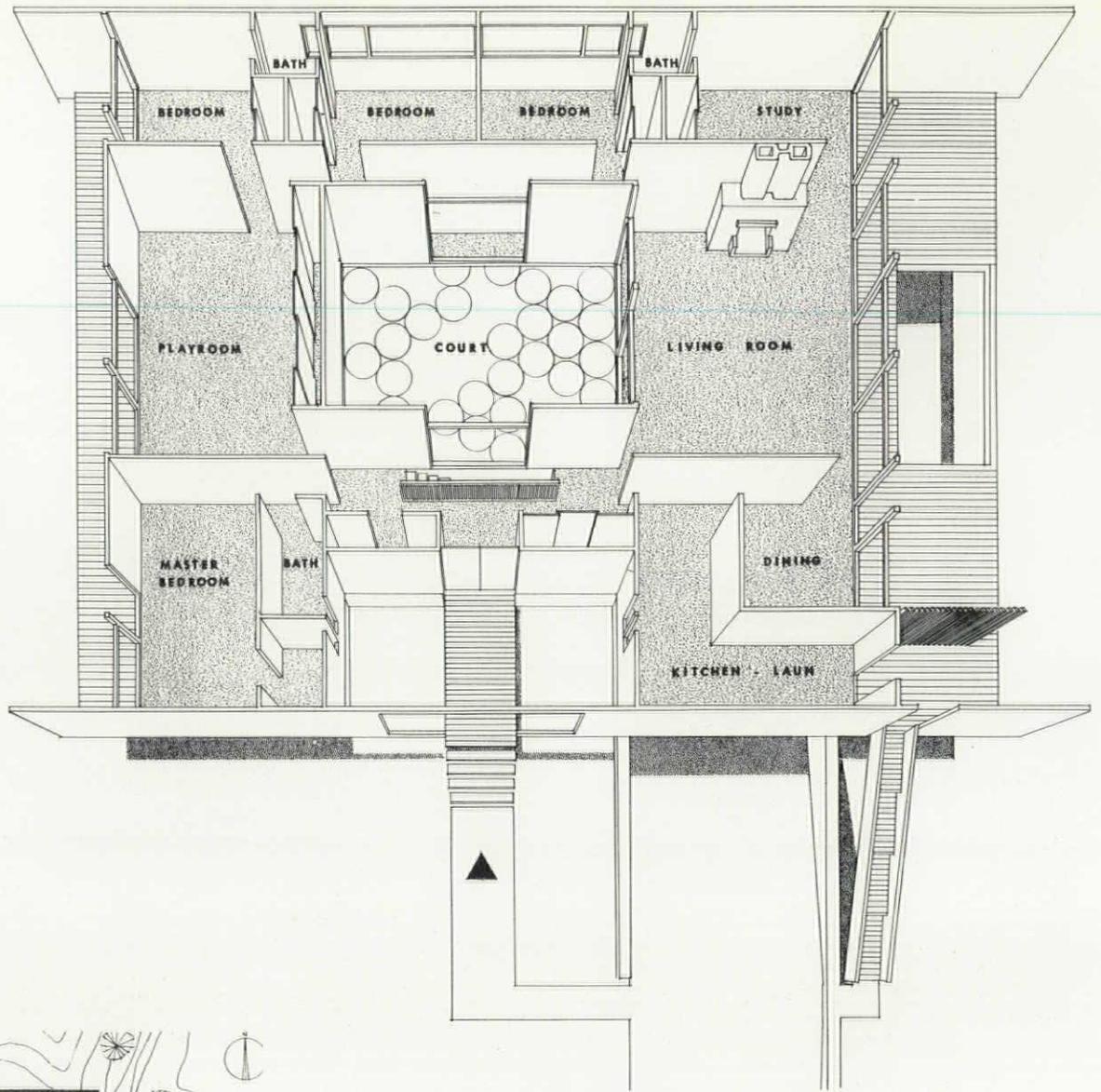
*Site:* Poughkeepsie, New York. Well-preserved area, formerly apple orchard, now containing larches, pines, and ash, surrounded by developed lots; line of evergreens along east property line; two parallel spines of outcropping rock along north-south axis. *Program:* To design house within deed restriction requiring minimum building height of one-and-one-half stories; client—family of two adults, two daughters, and one son—wished variety of private outdoor spaces; stair climbing to be limited to one-half flight; privacy desired also within interior. *Structural system:* Conventional wood framing; wood cantilevers over steel beams at the east. *Mechanical system:* Continuously circulating forced air for heating and cooling. *Major materials:* Concrete block, colored charcoal gray, at lower level; redwood battens on plywood, painted white, at upper level; ceilings and soffits of cypress, left natural; floors of oak; interior walls of gypsum board painted white. *Associates:* Wiesenfeld, Hayward & Leon, Engineers. *Photos:* Robert Damora.

The development of an architect's professional personality—the particular direction his aptitudes, ability, and ambitions will take—will obviously be influenced by his exposure to other architects and extensive travel. This young architect, who was born in 1930, has already behind him a surprising amount of such experience. Upon graduating from MIT, he was awarded a Fulbright Fellowship for study in Italy. There he attended the CIAM school in Venice, collaborated on a town planning competition with Mangiarotti, Santi & Borrachia, and later worked in the studio of BBPR, Milan. As member of the U. S. Army Corps of Engineers, he was involved in the design of military housing. Later he spent time in the offices of Joseph Neufeld and Marcel Breuer, among others, and since 1959 has executed a number of commissions on his own.

Perhaps the most recognizable influence in this design is that of Marcel Breuer. This building has all of the clarity and simplicity of a Breuer house. All aspects of the design have been thoroughly studied: the structure in relation to its site; the structure as a workable answer to the program; the structure in relation to works of art.

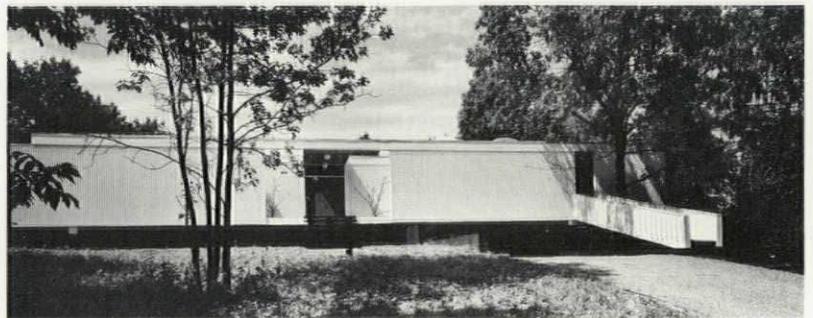
In its relation to the site, the building, with its dark foundation wall, appears to be, as the architect suggests, "a floating white box I seen among the treetops." Location





SITE PLAN

0 10 20 40 ft



of the house was determined by the two spines of outcropping rock, establishing a natural terracing of the site. The house has been situated across these terraces, using the lowest level for the carport, and the upper level as a play area off the play room. The design of the house was further influenced by a public road that will eventually pass within 50 ft to the south of the building, "making the opening of the house to the south at the very least questionable." To overcome this difficulty, the elevation to the south was designed almost entirely without openings 2, 3. To permit sun and light to penetrate this large house, the architect cut a series of courts into the simple box of the building. The largest of these is the central court, which, together with the opening into the east porch, brings sunlight into the living room all through the day. A carport, large enough for four cars, was created by setting the east side of the house on three massive piers and by cantilevering the porch.

The plan is arranged in such a way as to maintain the necessary degree of separation of functions desired by this family. Living areas have been grouped to one side of the entry-bridge axis, while the children's playroom and bedrooms face in the opposite direction.

The relation of structure to works of art 4 has been worked out unusually well. The large court sculpture by Chaim Gross, in particular, is a perfect example of the integration of these two elements. In scale and in texture, the sculpture effectively completes the court, and, conversely, the architecture complements the sculpture.

This conscious balancing and contrasting of both textures and forms holds true in detail as it does in the total composition. As in Klee's representation of "The Static and the Animate," the architect has played off the simple architectural planes of the house against the more intricate and rather ethereal lines of the trees, the sunlight, the rocks, the sculpture, and the multifarious activities of the owners.

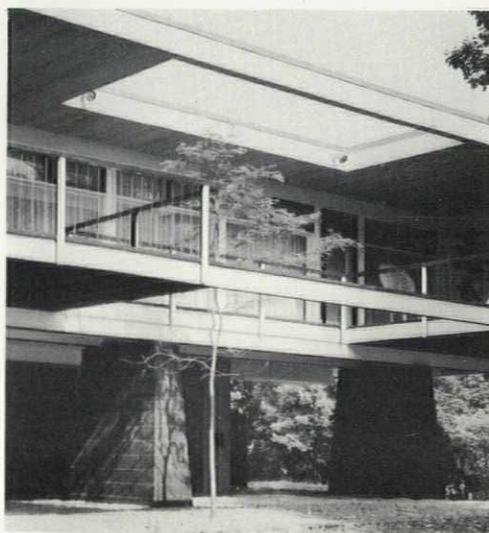


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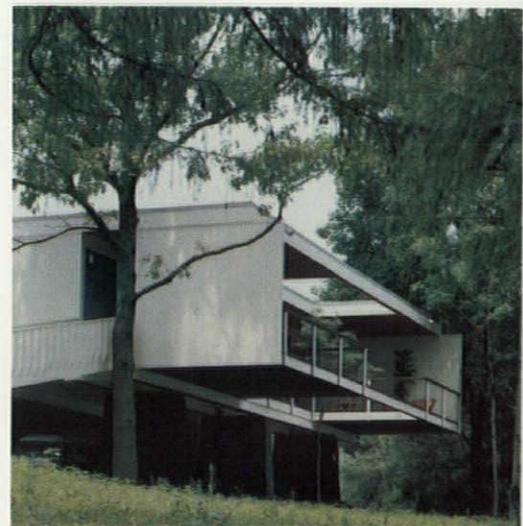




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Openings in floor and roof of east porch 5, 6, 7 serve to interlock nature and architecture more closely, and permit the penetration of sun and light into the living room. For privacy, sidewalls are brought forward to edge of balcony. Dining room wall 8 is also carried past glass line to provide a visual barrier between service entrance and outdoor dining space. Bedrooms 9 face onto another semi-enclosed, though narrower porch on the west. Bedroom painting is by Arnold Arbeit.



9

8







11

*Slate-surfaced interior court 10, which contains sculpture by Chaim Gross, is focal point from living room 11 and the main entrance 12. L-shaped kitchen 13 is accessible from main entrance hall and service entry. Living room furniture is by Swinburne; wall sculpture in court by Arbeit.*



13

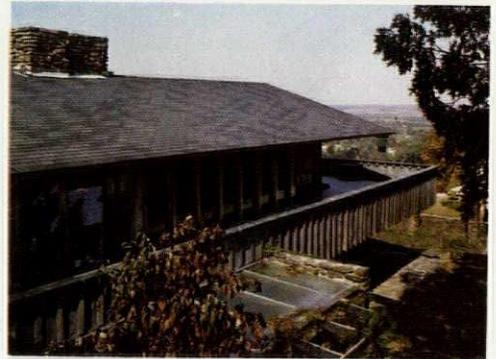
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Euine Fay Jones, Architect

## ORGANIC FABRICATION

*Site: Fayetteville, Arkansas. Property measuring 70' x 140'; street at west; slope downward to north and east property lines. Program: House for architect's own family of four, providing for maximum liveability and minimum maintenance; house to offer privacy, yet to be open onto near and distant views; private apartment for two teen-age daughters; studio for architect. Structural system: Combination of bearing walls and columns; standard joists extend across three parallel built-up wood beams to frame a balcony at upper floor level. Mechanical system: Central, gas-fired, forced-air heating. Major materials: Native fieldstone for foundation walls, columns, and fireplaces; rough-sawn oak for exterior siding; fir for inside paneling and cabinet work; corrugated steel for lower level exterior soffit; douglas fir for upper level soffit; sloping ceiling of gypsum board, painted flat gold and sprayed intermittently with metallic gold paint; rough-sawn oak boards for balcony rail; balcony deck of 1 3/8-in.-thick concrete; 3/4-in. wood decking, asphalt felt, and composition shingles for roof. Photos: Wayne Wright.*

Training in civil engineering and architecture at the University of Arkansas, followed by a master's degree at Rice Institute, led to Fay Jones's Taliesin fellowship—an education that has left a distinctive mark on his work. Not unlike Frank Lloyd Wright, Jones sums up his own design approach, "Always, my design philosophy is one of organic fabrication, the unity of part and whole." Yet Jones's work is in no sense imitative. He did not allow study with the Master to suppress his own creative potential, as was the case with so many others of Wright's students. This structure is definitely his own answer to very specific personal requirements. "The solution," says Jones, "must grow directly out of the problem itself—the program, the site, orientation, and the materials to be used." For instance: "What seemed a costly disadvantage to the original concept was a large underground boulder, uncovered when excavation was begun for the entry and studio area 1, 2, by redesigning and enlarging this area into a garden room, complete with pool and skylight, the boulder became an entire wall and feature of that space."

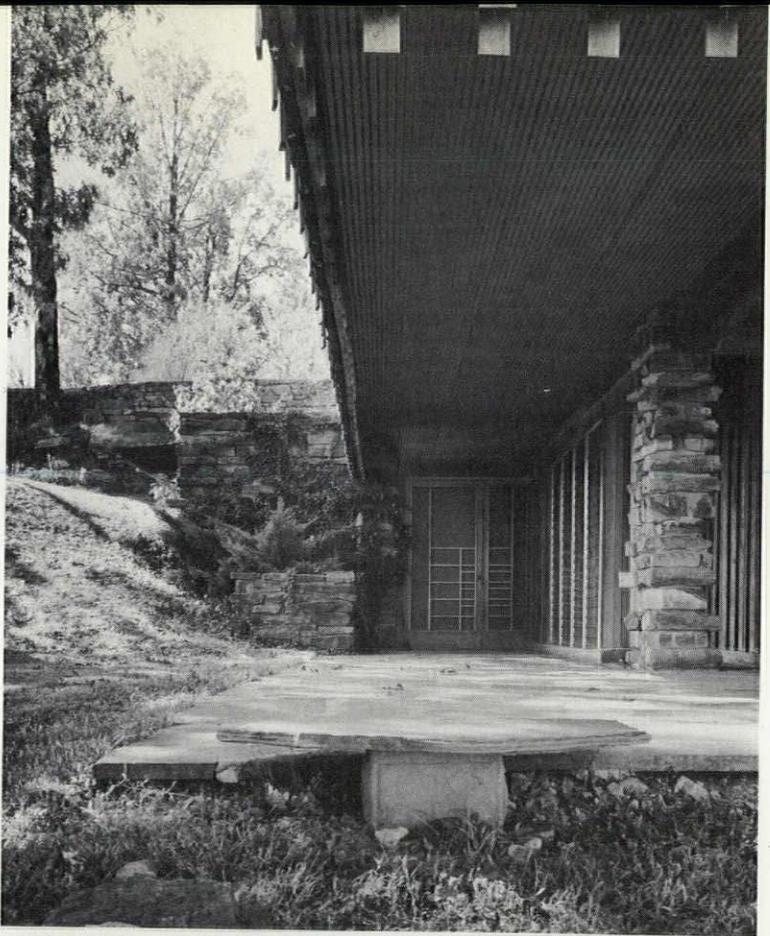
Part of this garden room now serves as Jones's own studio 1. This space, with its natural rock outcropping, its walls "laid in flat projecting courses in much the same way they were found in a nearby creek bank, a variety of colorful plants, the sparkle of running water, and natural light conditioned by the clouds," is an excellent demonstration of the architect's design philosophy.

Elsewhere, natural rock outcropping serves both as a wall for a narrow hillside garden and as a base for a piece of sculpture outside the parent's bedroom on the upper level. Used in the foundation walls 3, this same native fieldstone helps to tie the house to the ground. In conjunction with this material, rough-sawn oak was the natural choice for the sheathing of the upper floor and the low parapet wall at the balcony. Boards and battens were left unpainted and unstained to encourage weathering to a silvery gray. Throughout, exterior color is supplied by materials left in their natural state, except for a dark stain at the upper window sills and the top rail of the balcony.

A large part of the lower level is devoted to the apartment

3





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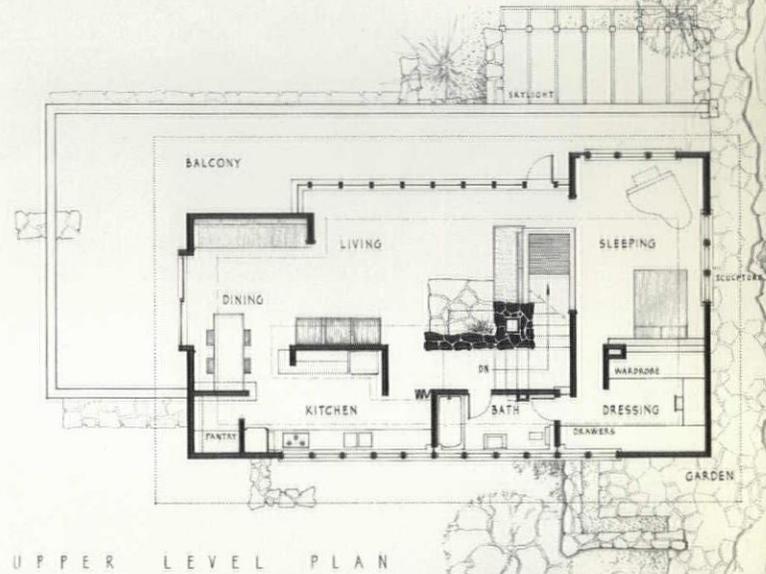
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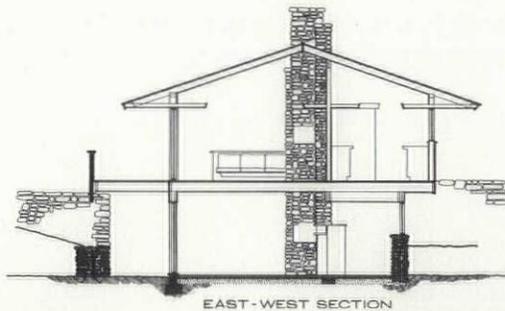
designed for the two daughters. Off the main entry 4, this living/bedroom/study 5 has its own fireplace, access to the outdoors, bath, dressing and storage area. Fabrics, furnishings, and works of art in this and the upper living area are primarily of warm-toned natural materials. All of the furniture was designed by the architect as an integral part of the architecture.

Jones, who has completed about 25 houses since beginning his own practice, started construction of his own house in a rather unorthodox fashion. Since the opportunity to build arose quite suddenly, the house was designed over a weekend and construction was begun the following week. "I played the thing by ear all the way," he says. Most of the structural details were worked out full size on sheets of gypsum, which were later painted and mounted on the ceiling. He explains, however, that these are not his usual working methods, "though improvisation is fun."

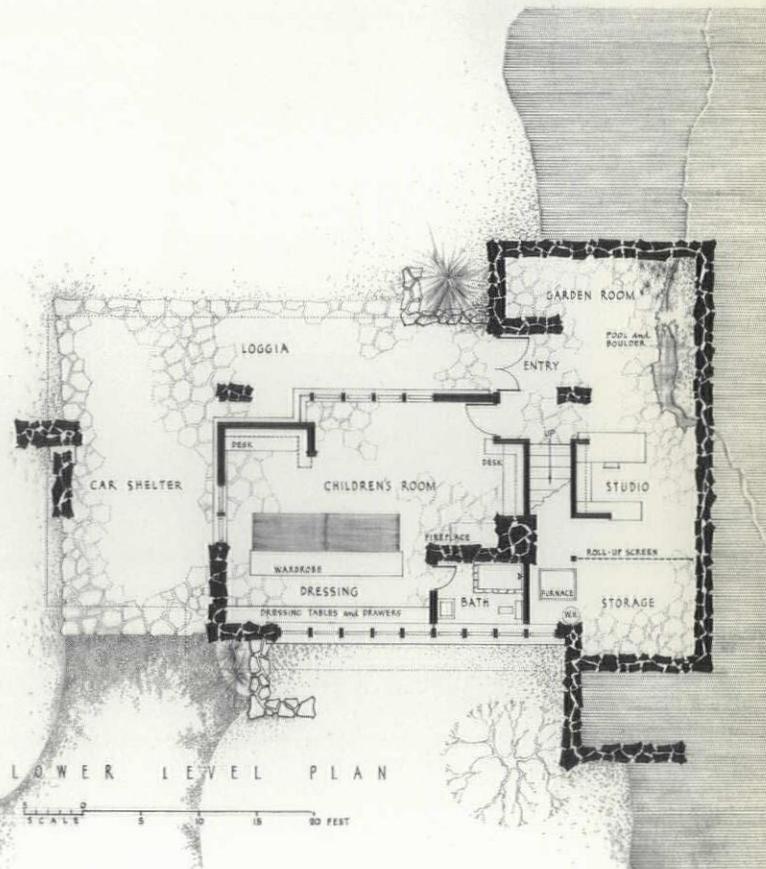
But it is exactly this improvisation, this informality carried even into the construction method, which has resulted in a design that is in strong contrast to some of the overly rigid and calculated solutions. This is not the typical static enclosure to which a family must adjust; it is, rather, the flexible, organic shelter that responds naturally to life as it progresses. The design of this house and its garden will always be in transition.



UPPER LEVEL PLAN



EAST-WEST SECTION



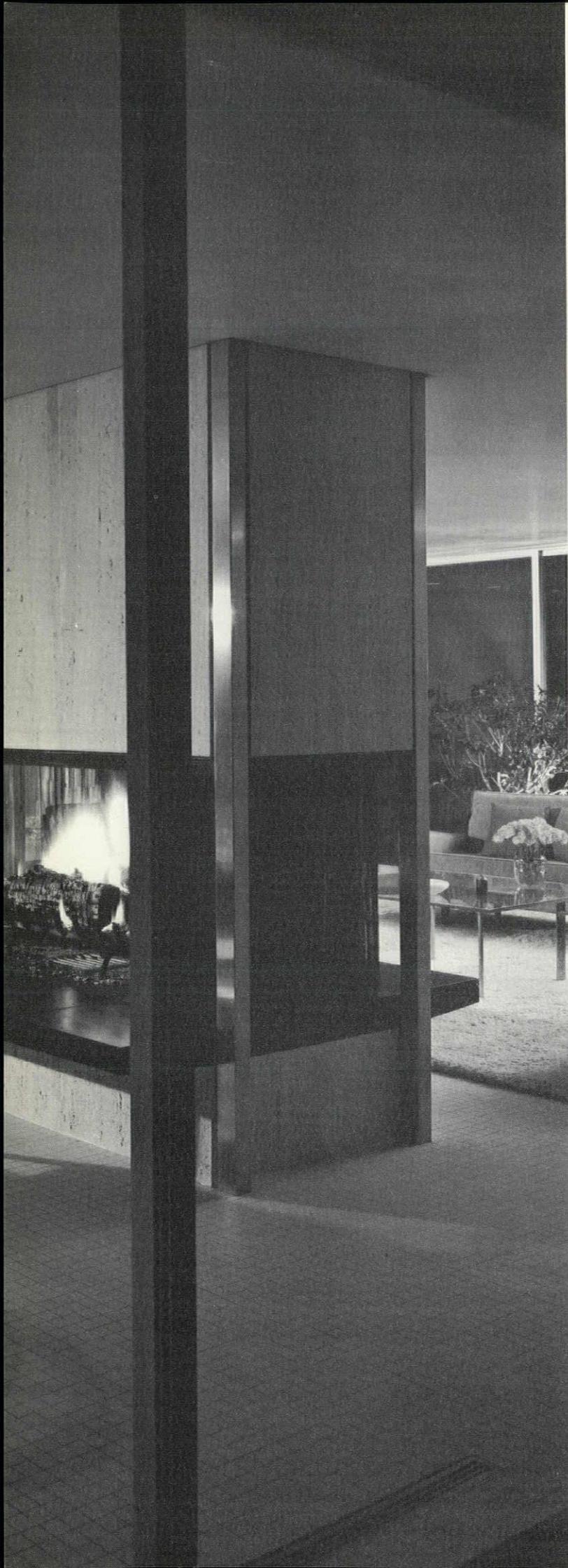
LOWER LEVEL PLAN





*On the upper level, kitchen, dining area, and living room flow freely into each other; fireplace is focal point of this space.*





Arthur Witthoefft, Architect

## DOCTRINE IN STEEL

**Site:** Armonk, New York. Heavily wooded property with large outcroppings of rock; sparsely developed area in two-acre zone; rural atmosphere; brook through property. **Program:** Single-story home with living, dining, and bedrooms on one floor for architect's own family of five; ease of daily maintenance; ease of child supervision; abundance of glass walls to permit views of wilderness and for solar heat gain in winter. **Structural system:** Welded, exposed steel frame, 10' x 25' bays; wood joists span 10 ft direction on 24-in. centers; 5/8-in. plywood decking and rigid insulation at roof. **Mechanical systems:** Oil-fired warm air furnace; three-zone heating; each zone varied by change in temperature while maintaining constant air quantity; air supplied to rooms through registers set flush with floor, fanning air out in vertical plane upward along glass panels; fresh air duct incorporated in system; by introducing minimum of outdoor air through the system, slight positive pressure is created to prevent air infiltration around sliding glass panels. **Major Materials:** Steel for structural frame; white glazed brick laid in Flemish bond; glass in anodized aluminum frames; white, mat ceramic tiles 1 1/2" x 1 1/2" for flooring in living, dining, kitchen and playroom area. **Associates:** Ellie Witthoefft, Interior Designer; Harry Kaufman, Structural Engineer; George L. Smith & Associates, Mechanical Engineers. **Photos:** Alexandre Georges.

This uncompromising architectural statement is no doubt the result of three circumstances: the architect was associated with Skidmore, Owings & Merrill for eight years and is thoroughly versed in the vernacular of that office; the architect is also the owner of the house; and the architect's

wife designed the interiors and carried the theme to its consistent conclusion. "We were in complete agreement," explained the Witthoeffts, "about designing a single-story home with living, dining, and bedroom elements on one floor. This would offer a long, low expression with a flat roof that would lend itself to a steel structural concept."

The house, in its over-all idea and in every detail, is an extremely craftsman-like and precise "machine for living"—so much so, that it almost appears as though a floor of one of SOM's office buildings had been sliced away and lifted physically into the countryside. The solution, however, is not farfetched—not when one considers the architectural preferences of the owners, the demands of this family with three small children, and, above all, the countryside in which it was placed. The concise lines of the house are the perfect foil for the irregular, heavily wooded and hilly site, with its large rock outcroppings and its meandering brook.

Since the surrounding land is sparsely populated, and since it is anticipated that this rural atmosphere will be maintained, privacy is no problem. The architect was able, therefore, to open the house toward undisturbed nature by means of large glass areas on each side of the building.

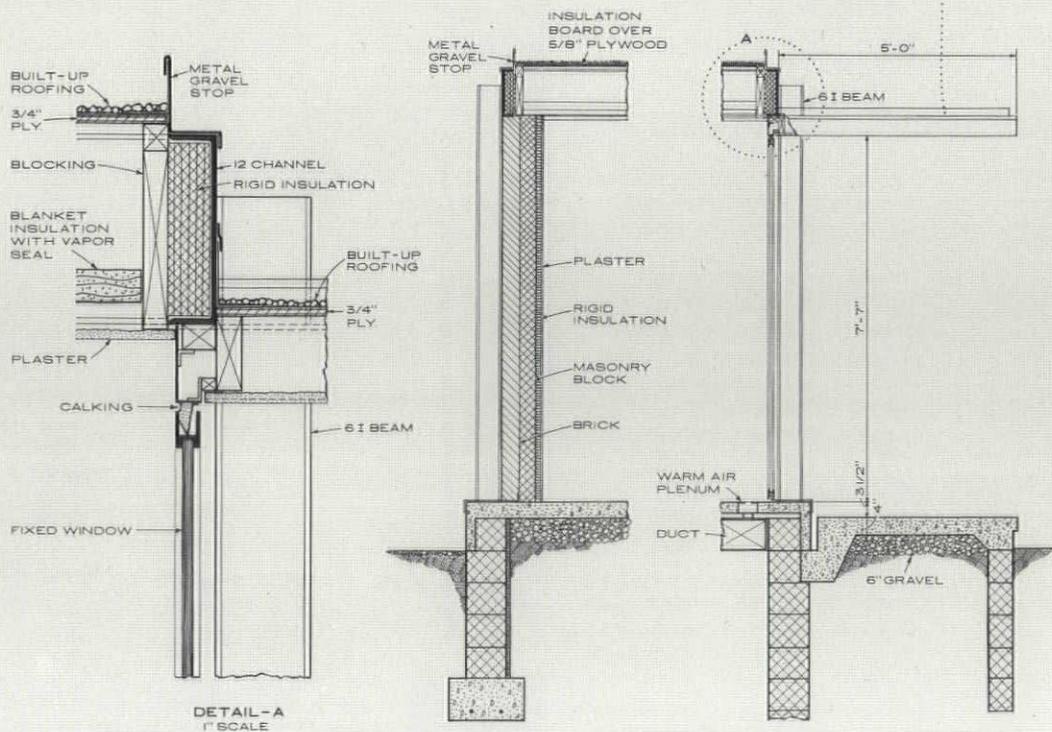
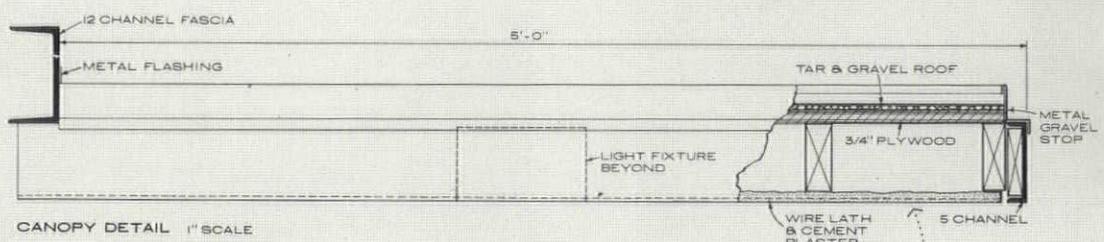
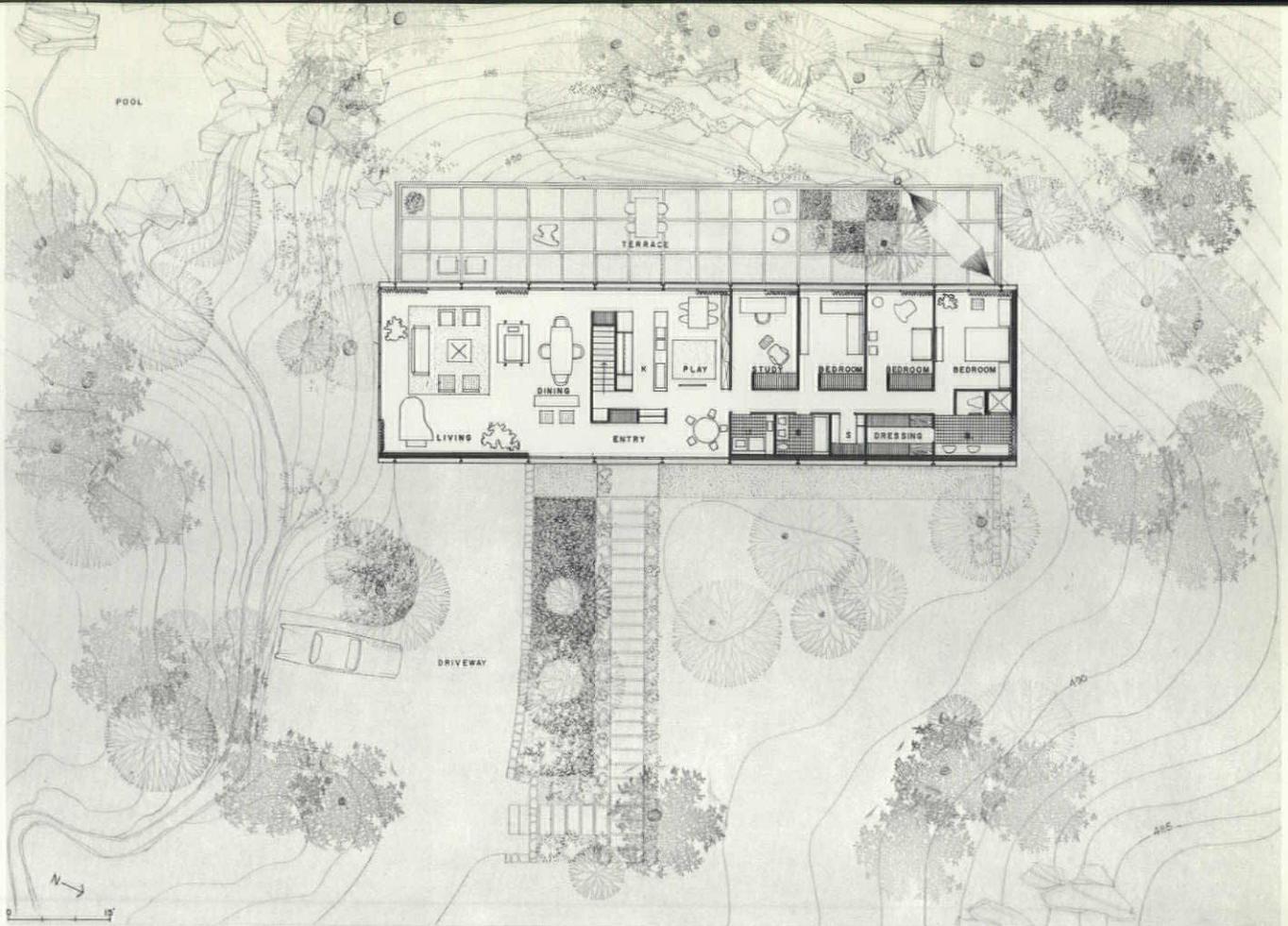
Natural ground covers, unavoidably disturbed during construction, are being encouraged to grow back. On the whole, site work was not extensive, since the house was placed on a promontory which slopes away on three sides. Advantage was taken of the change in contours to place garage, recreation room, and workshop beneath the living area.

The structural system was selected because of the architect/owner's "predelections for working in steel, and a desire for column-free space in the living/dining area." He further desired "a bold crispness on the exterior," and achieved this "by contrasting white brick with the black steel frame." White glazed brick, laid up in Flemish bond, was chosen "because of its pleasing contrast with black steel and also because of its self-washing qualities."

The interiors, with their neutral treatment on the walls and ceilings and color contrast in draperies and furniture, designed by Cranbrook-trained Ellie Witthoefft, carry through to completion the concept of this house. Works of art by Panalba from Otto Gerson Gallery, by Armitage from Bertha Schaefer Gallery, and Harold Krisel put the finishing touches to a house in which the original premise of the "steel concept" was never once forgotten.





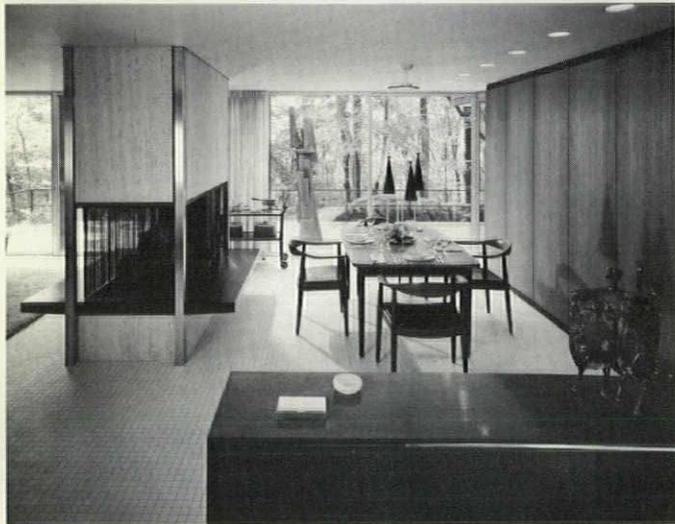




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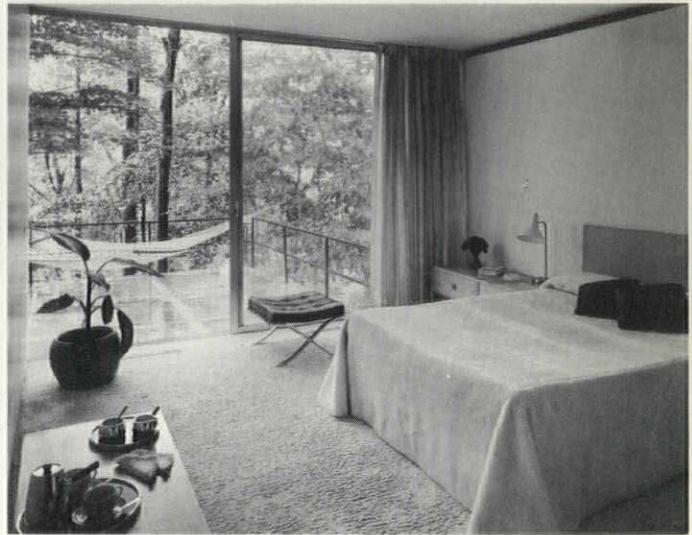
*Free-standing fireplace of marble and stainless steel serves as room divider in 32' x 25' living-dining space. Floor of white tiles, white ceiling, white curtains, and white walls tie together living room 1, dining room 2, family room and kitchen 3. Master bath 4 is also tiled white; towels are in vibrant colors. Two children's rooms 5, 7, and master bedroom 6, are carpeted.*

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SHELTER AS ADVENTURE

Site: Four miles east of Norman, Oklahoma; no neighboring houses within half mile; landscape of straw-colored prairie, scrub oaks, ravines and gullies showing bright red clay; sky variable and spectacular; extreme exposure to wind and weather; surroundings combine harsh and gentle aspects. Program: Home for architect's family to reflect these unusual aspects of site; wife preferred curved shapes and soft textures; architect desired two-story scheme to give height over prairie and to "afford privacy for children and from children" (aged 3 1/2 and 1 1/2); upper level, for use of adults, to have large wall area for display of paintings (mostly by architect); lower level to contain kitchen, dining, and play space for children; entry to double as dining room for special occasions; screened porch to be added later. Structural system: Balloon framing for economy and strength; steel frame at carport; building rests on concrete shafts that reach down to hard clay base. Mechanical system: Forced warm air distributed from central core; gas-fired furnace; ducts sized for cooling as well as heating; attic fan in penthouse. Major materials: Unfinished, rough-sawn boards and shakes of Western red cedar for siding—to weather naturally; corrugated aluminum siding and smooth granite paving for carport to contrast in color and substance with wood mass of main structure. Photos: Julius Shulman.



This highly imaginative design is the work of a 32-year old architect who lists among his early influences Frank Lloyd Wright, Bruce Goff, Le Corbusier, and the painters Tchelitchev and Matta; and more recently Antonio Gaudí, John Hurtig (class '56 University of Oklahoma), and Louis Sullivan. Although he respects the work of Aalto and especially the early work of Mies van der Rohe and Gropius, he does not credit these men with having exerted great influence on his work. From among the architecture of the past, Greene admires the forms of India's temples, Japan's architecture and, what is to this writer a very noticeable influence, the early wood-shingle constructions of northern Europe.



His schooling included one year at Syracuse University, from which he transferred, in 1948, to Oklahoma University. Upon graduation, Greene worked intermittently with Goff, Lautner (Los Angeles), Krakower (Houston) but returned to the University of Oklahoma in 1958 to teach, since he hoped "to contribute to the imaginative side of Oklahoma University architecture," and also because he wanted further to pursue his other two interests—painting and montage.



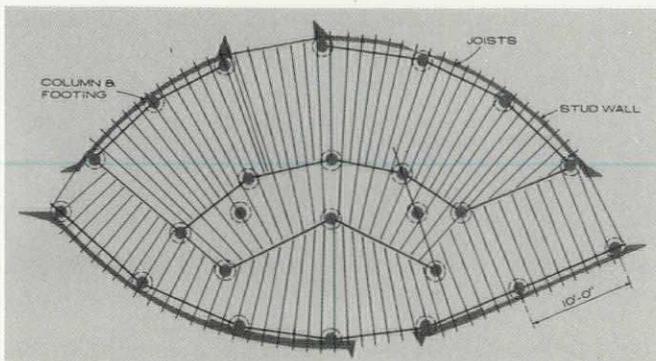
Greene has, without doubt, contributed to the imaginative side of the university's architecture with his own house. For the students who, incidentally, took an active part in the construction of the house, this project must have served as a great stimulus. The design solution is a singular one, and, as Greene suggests "the form is not to be repeated by me or anyone else. The occasions of time, place, and circumstance have changed even for myself."

"I wanted something awesome, yet friendly," he explains, "something ancient yet new, something rather huge, yet human in scale—with humor." The elliptical form 1, 2 (following page) was arrived at "for strength against storm winds; for spatial variation inside and out. The house resolves into one main form—to attain the feeling of an entity." Though the carport/penthouse unit contrasts with the main form, it repeats its basic shape. The elevation drawing 3 delineates this design element as it continues from the carport to the penthouse, and finally encompasses the as-yet-unbuilt screened porch at the top of the house. When this porch is completed, "the expression of vertical circulation will then be more clear, adding the weight of purpose to what now looks too much like an effect in itself."

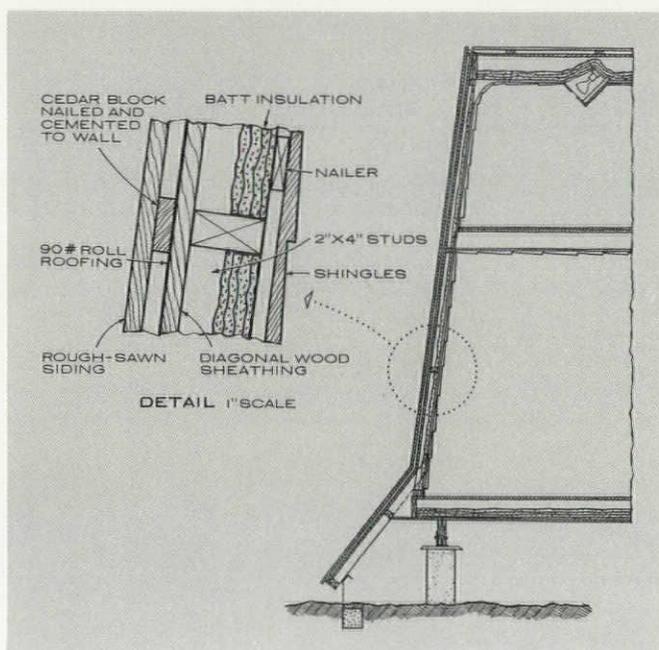


As to the actual construction, the architect states that

“straight 2 x 4’s and 2 x 8’s were used to generate the slightly curving walls.” A ¼-in. scale model was useful in placing the basic structural members. During assembly of the outside walls, black mineral-coated roll roofing was



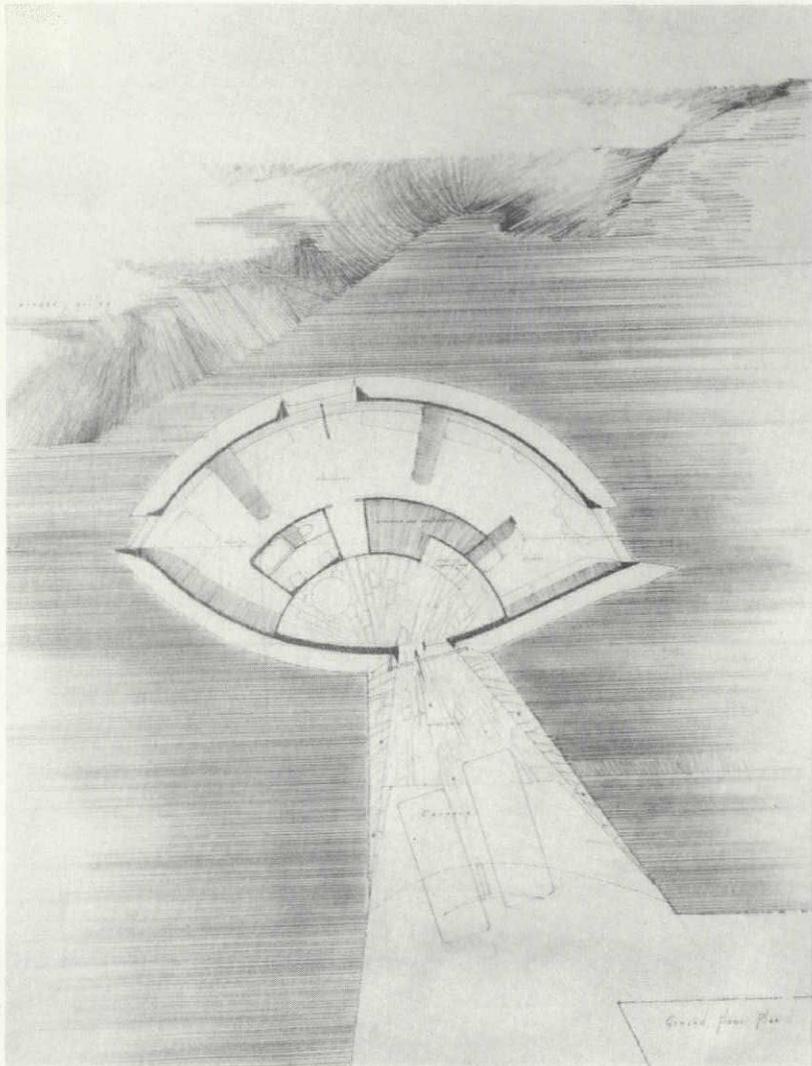
applied to wood-sheathed sides. Cedar boards—the architect would have preferred cypress—were nailed to blocks, which in turn were nailed and glued to the sides of the house. “Since a high, light structure like this is subject to much



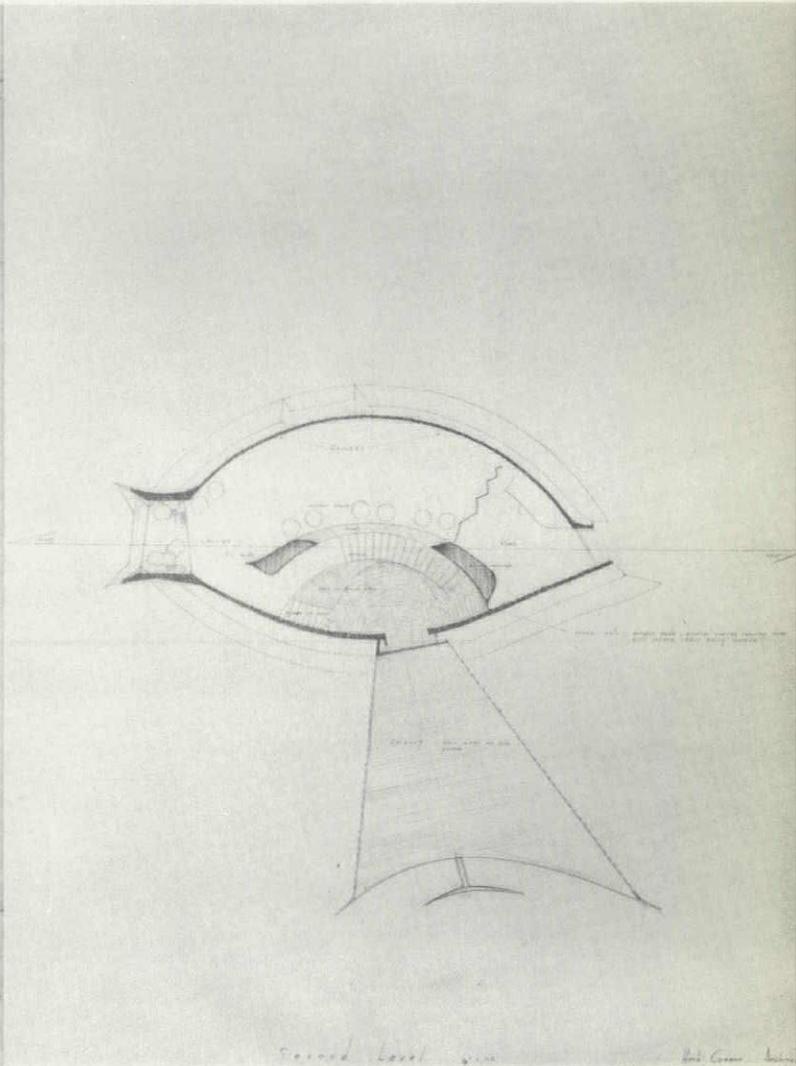
buffeting from prairie blasts, we were glad to avoid tight wall-finishes like sheetrock and plaster; the shingle walls are flexible with cracks already built in.”

All of the interiors 4, 5, 6, 7 are shingled except for some rough-sawn cedar siding on closets. “The texture is soft, the scale human. The incandescent light at night reflects from the walls an almost Rembrandt-like glow.”

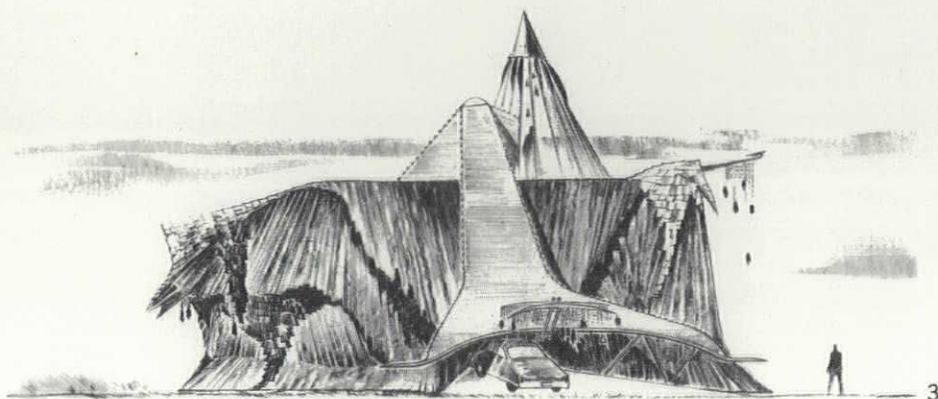
It will be interesting to watch the further development of this young architect, who at this relatively early stage of his career has revealed uncommon talent. One senses that this house was not designed simply “for an effect of awe, of humor, of surprise,” as he himself suggests, but that it goes far beyond in an attempt to resolve the many influences, drives, ambitions, philosophies, as well as practical considerations that Greene set for himself. His architecture is totally organic—a living thing, a continuation of the habitat.



1

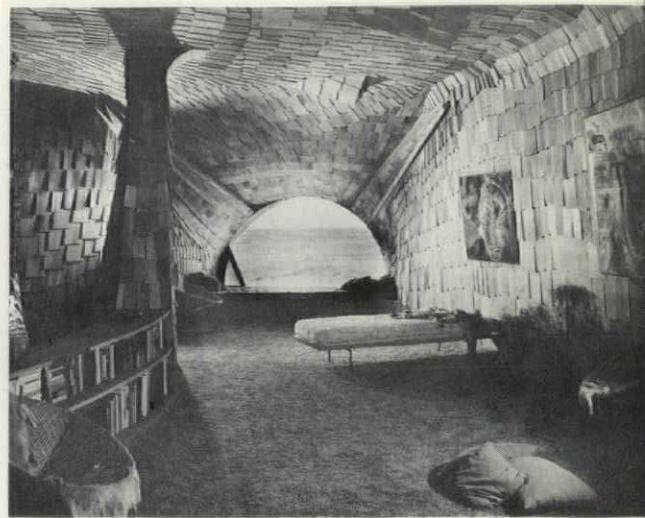
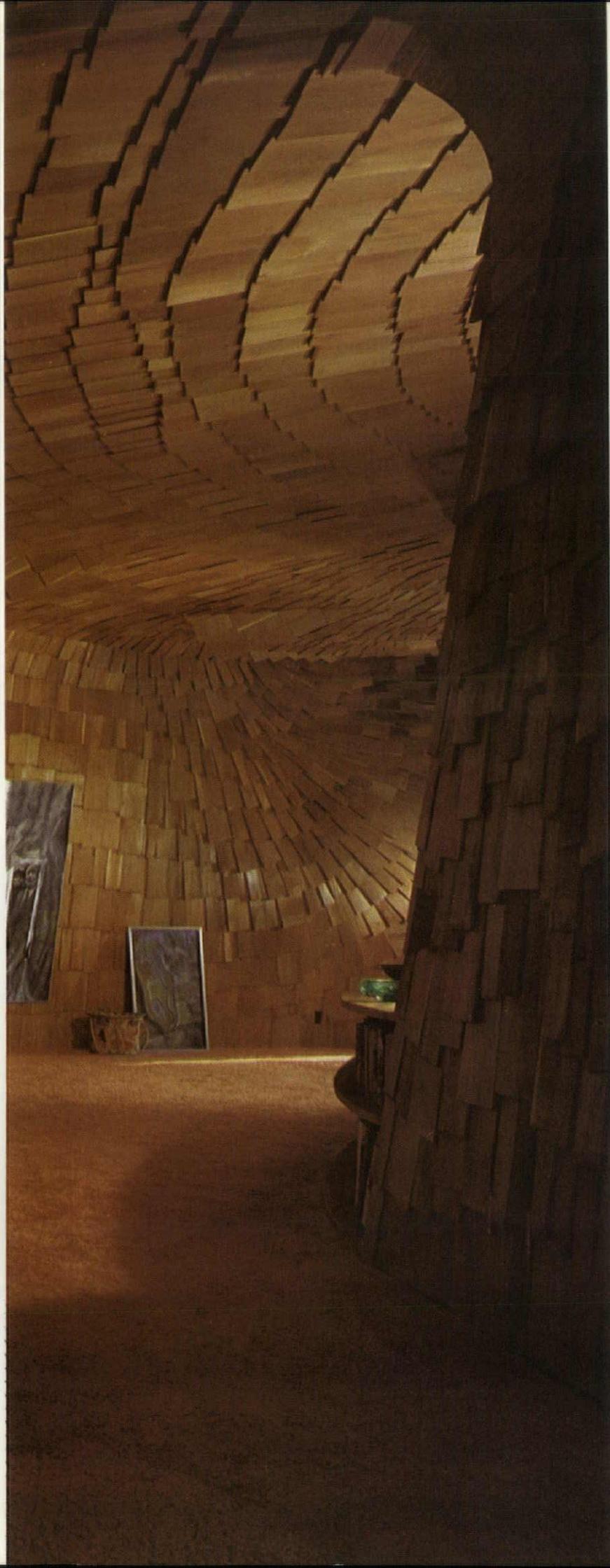


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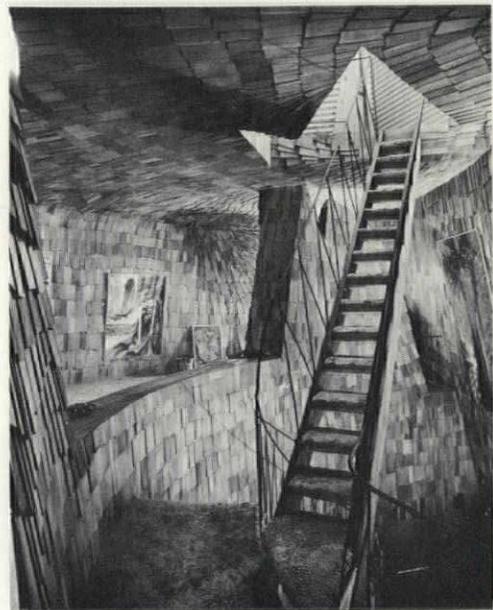
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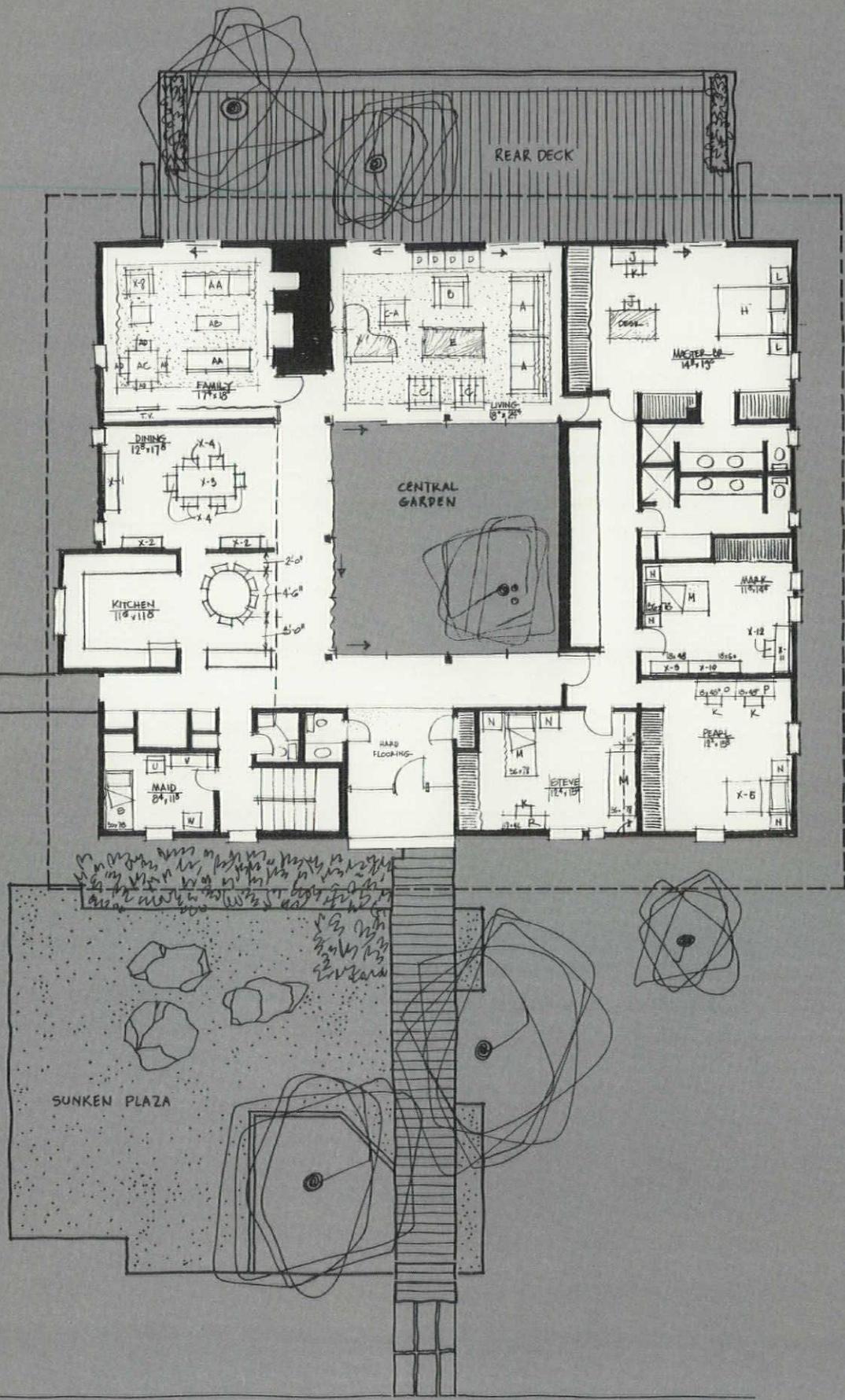
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STREET

NATURE AS PIVOT

*Site: Tenafly, New Jersey. Property measures approximately 150' x 250'; contours drop downward from road line for a total of 23 ft in 250 ft; setting is suburban. Program: House for two adults and three children; primary requirement, privacy from neighboring houses. Structural system: Stud walls supporting trussed roof, constructed alternately with King Post and scissor trusses. Mechanical system: Central gas-fired, three-zone heating and air-conditioning system supplying floor registers; cooling cycle powered by three air-cooled condensers. Major materials: Fir for structural members; clear cypress for exterior vertical T & G siding; cypress window frames with steel sub-frames; black asphalt shingles; copper cornices, gutters, and leaders; plaster walls and ceilings; float-finish stucco for garage and one wall of interior court. Associates: James C. Rose, Landscape Architect; Robert E. Levien, Engineer. Photos: Alexandre Georges.*

Norval White has had training in both engineering and architecture. He received his engineering degree from MIT but decided, after a period of trial and indecision and after some practical experience in engineering, to return to the field which had always interested him most—architecture. Since he wanted a complete change and a diametrically opposed pedagogical and professional viewpoint, he chose the Princeton School of Architecture. There he was exposed to such diverse personalities as Bunshaft, Stone, Peressutti, Kilham, and Labatout. The greatest influence on him, White feels, was exerted by Gordon Bunshaft, whose precept of discipline in approach, in design, and in application to the job was the underlying philosophy of his “experimental year.” That White was drawn to these concepts is not surprising, considering his own inclinations, his maturity at the time of architectural study, and his previous training in engineering.

Results of this schooling are evident in the planning of this house in relation to its own and neighboring sites. Discipline is evident in the design of the house itself and its details; in this instance, however, it does not imply design rigidity. Discipline here is inherent in the logic of the plan, in the understatement of the architecture, in the subordination of all details to the total composition.

White’s design approach was to develop a “contained exterior space,” in order to compensate for the lack of privacy within the neighborhood. He planned “this necessary exterior space” **1** as a central point around which major rooms could pivot, allowing them maximum light from this private garden, which in turn permits the outside walls facing neighboring houses to be mostly opaque. Small vertical slit windows are provided in most spaces for views of the outside and secondary light. Somewhat larger sliding glass doors open toward the relatively private aspect in the rear (west)—a dense wood of large, deciduous trees. A deck outside the sliding glass doors affords a raised sitting platform **2** as a distinctly different relationship with the outdoors than the tight central courtyard **1**.

Landscape design is an indispensable part of this scheme. The central garden is truly an extension of the interior spaces. Another street-side garden **3**, **4** attempts to recall





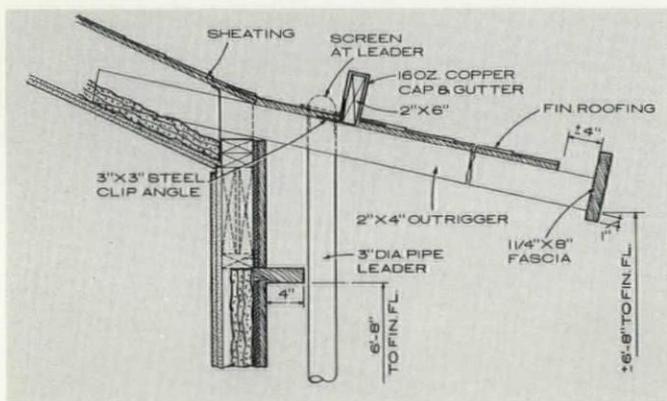
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3

this central garden by using the same materials—birches in pairs, Japanese maple, azaleas, pebbles. However, even though this street-side garden is a very handsome detail in itself, one senses a lack of continuity of understatement in this particular area, in contrast to the underlying motivation of the design as a whole. The garden obviously was not intended for viewing from indoors, since the maid's room and stair to the basement border this area. The house was admittedly oriented inward. Since privacy was made a very important point in the program, what is the specific purpose of this garden? Is it meant to embellish the approach to the entrance door?; to attract attention to an otherwise quiet architectural statement?; or to consciously interrupt the row of typical suburban front lawns that adjoin? "This garden was originally meant to be more private," answers the landscape architect, "and also more extensive. It was to be tied to the garage, using a higher terrace and a formal row of clipped trees that would have screened this front garden to make it more private and less of the artificial ornament that it now appears to be."

Everywhere else the design is extremely consistent—in the interior detailing 5, and especially in the construction details. White's solution to the perennial problem of leaders



and gutters for widely overhanging roofs, for example, is both ingenious and handsome. A copper-capped 2" x 6" placed on end at the building line, and repeated use of the copper capping at the up-ended ridge beam, gives the roof a graceful, almost oriental, line.

The disciplined application of both of White's talents—engineer and architect—has resulted in an unusually fortunate balance of the practical and the aesthetic.

1





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1

Nicholas Sakellar & Associates, Architects  
VERNACULAR BACKDROP

**Site:** Catalina Foothills Estates, Tucson, Arizona. Twelve-acre property overlooking city to the south, Catalina mountains to the north. **Program:** Four-bedroom house for three adults and three teen-age children; adult members of family very active socially and in business, with frequent travel keeping them separated for prolonged periods; home to serve as retreat and place of reunion. **Structural system:** Concrete slab on grade; block bearing walls, piers and posts supporting nail-laminated wood roof; decking composed of alternate 1 x 6's and 2 x 3's, spanning up to 18 ft. **Mechanical system:** Heating by electrical coils under tile floor; air-conditioning through standard duct system. **Major materials:** Concrete blocks, tinted light beige at plant; smooth poured-in-place concrete hearth and lintel beams contrasted with large rough stones found on site; floors of highly polished 8" x 8" Mexican cement tiles in beige. **Photos:** Jack Laxer (1, 2, 4, 5); Bill Sears (6, 7).

Since establishing his own office, Nicholas Sakellar, a graduate of the University of Michigan School of Architecture, has executed many large commissions, among them office buildings, shopping centers, schools, and the planning of sizeable developments. Sakellar, like many of his colleagues drawn from all parts of the country and now settled and practicing in the Southwest, has followed a by-now recognizable architectural language. In a curious way, it is an amalgamation of elements from Frank Lloyd Wright, Aztec culture, and the International Style, yet one which seems appropriate to the environment and way of life of the Southwest. Sakellar has made good use of this "vernacular" **1** in the design of the house for a client who has retained the firm of Nicholas Sakellar & Associates as architects and land planners for several extensive real estate projects. Sakellar describes his client as "a former attorney from New York, who, upon retiring to Tucson in 1958, found that he was too energetic to avoid the fascination of real estate development here. My client is an extremely dynamic person. His appreciation of art and architecture is his only relaxation, and sound planning with proper visual appeal is the driving force in his land development."

For this client, Sakellar designed a living/dining room 45 ft long, bordering a terrace equally long. At each end of this central space are the bedroom wings. "The long room and

the long terrace," according to the architect, "are effectively separated for activities and traffic control by changing levels."

For example, "The portion of the terrace **2** adjoining the sunken end of the living room is also sunken. Its level is 16 in. below the waterline of the pool, which adjoins on the south.

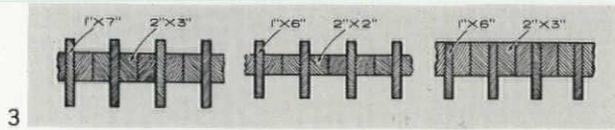


2

A garden separates this formal terrace from the other end and makes it almost inaccessible except through the living room—or by hopping across a corner of the pool, or through the garden. This play at grade level is effective in that it permits a spacious feeling from all areas."

In studying the plan (*following page*), however, one could take issue with some of this "traffic control," as for example the traffic from the master bedroom to the pool. Also ques-

tionable is the overly informal approach into the house, whereby visitors at the front door can survey at a glance the dining room, family room, and kitchen, as well as the living room. There does seem to be a need for a slight baffle at the entry and the simple amenity of a coat closet.



3

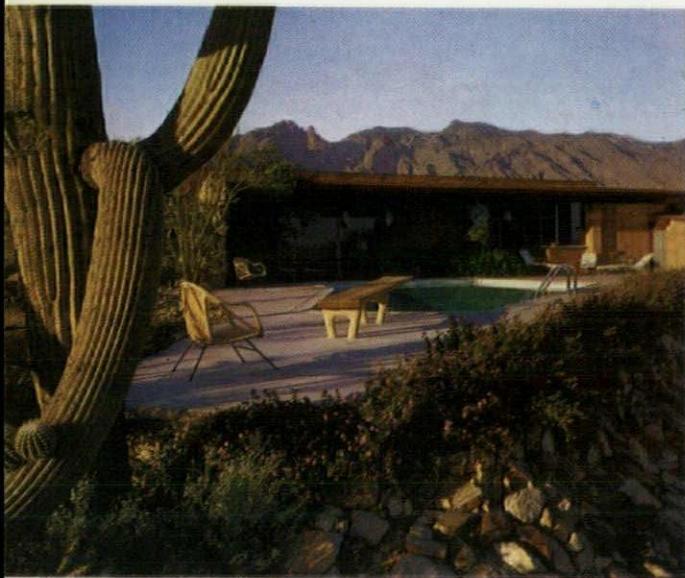
Use of the nail-laminated wood roof decking, a system which Sakellar's office has used on other occasions, provides a ceiling treatment **3** that is both decorative and practical. Alternation of wood members has several advantages: rough surface and staggering provides natural acoustic treatment; staggering of members permits concealed runs of electrical conduits and air space for insulation; further, this treatment provides, as the architect puts it, "an opportunity for a little flair at the cornices and ceiling corners, by the elimination of the extended 1 x 6's short of the walls, and the elimination of the 2 x 3's short of the fascia line."

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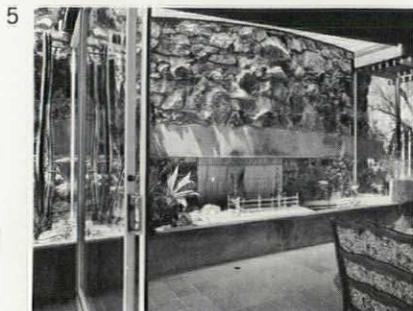
Other materials were thoughtfully chosen **4** in relation to this rough-sawn, laminated roof decking, such as smooth concrete lintels in combination with rough, large stones from the site at the main fireplace **5**; and the use of solid and pierced concrete blocks at the entry court **6**.



The need for interior furnishings and drapes was largely eliminated, since glass lines were protected by large roof overhangs, and privacy was assured by shielded outside gardens. The client brought in his own furnishings and very colorful art collection from his previous residence. "It seems," states the architect, "that we merely provided the background for our client's tastes." It is this statement which seems to sum up most effectively the architect's chief goal and guiding principles, and what, according to the client, he has commendably achieved: a house specifically suited to the landscape **7** and the family—an appropriate backdrop for their busy lives.



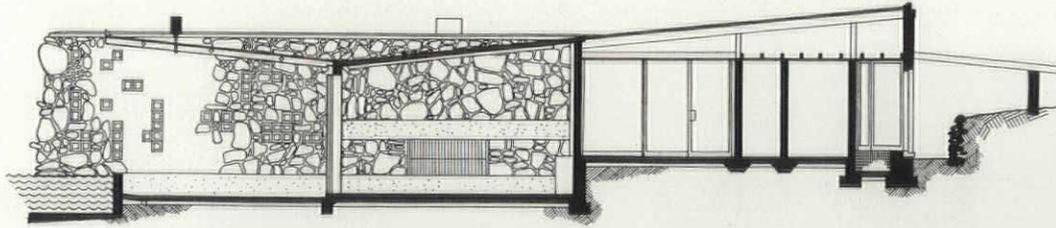
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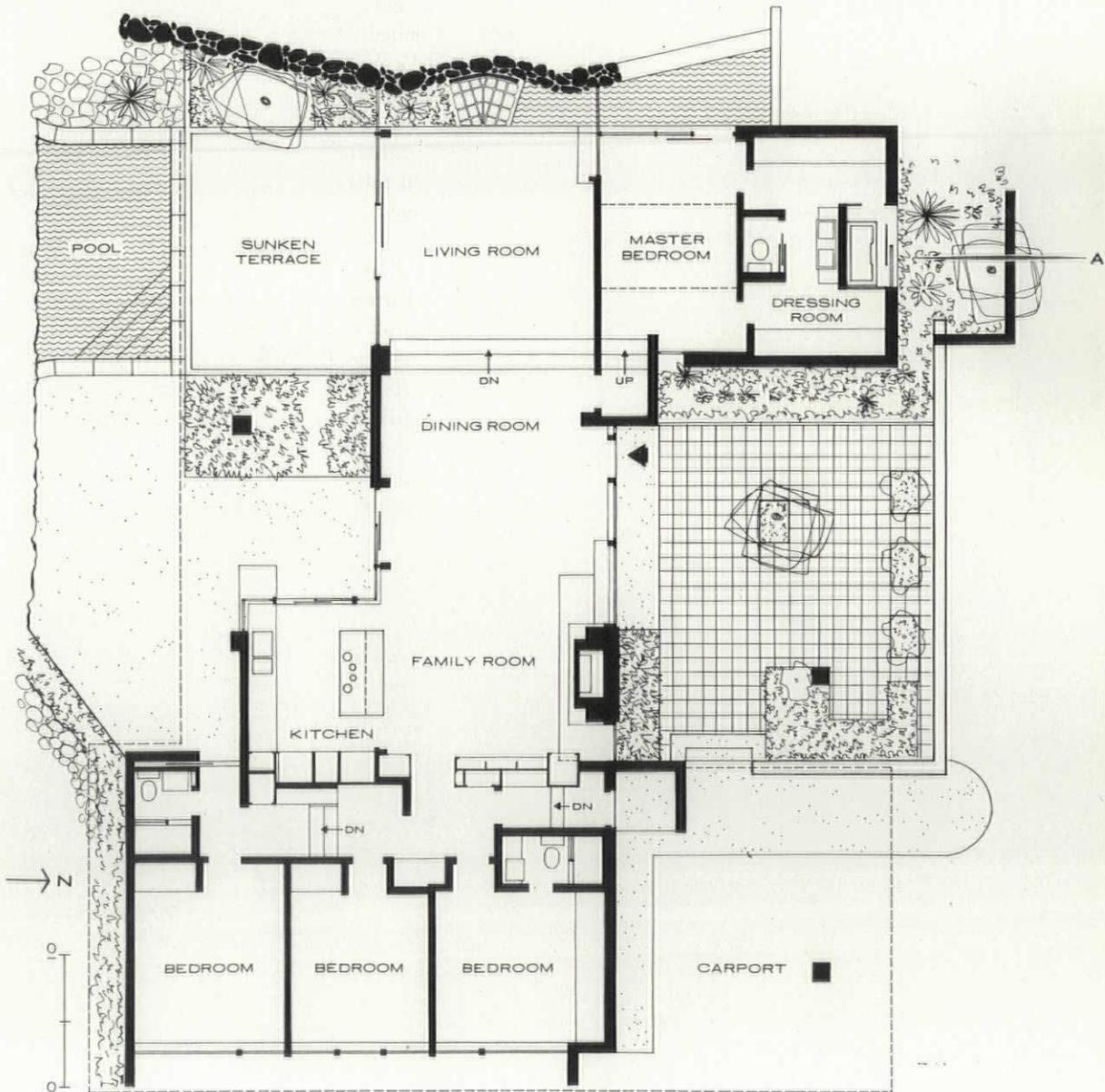
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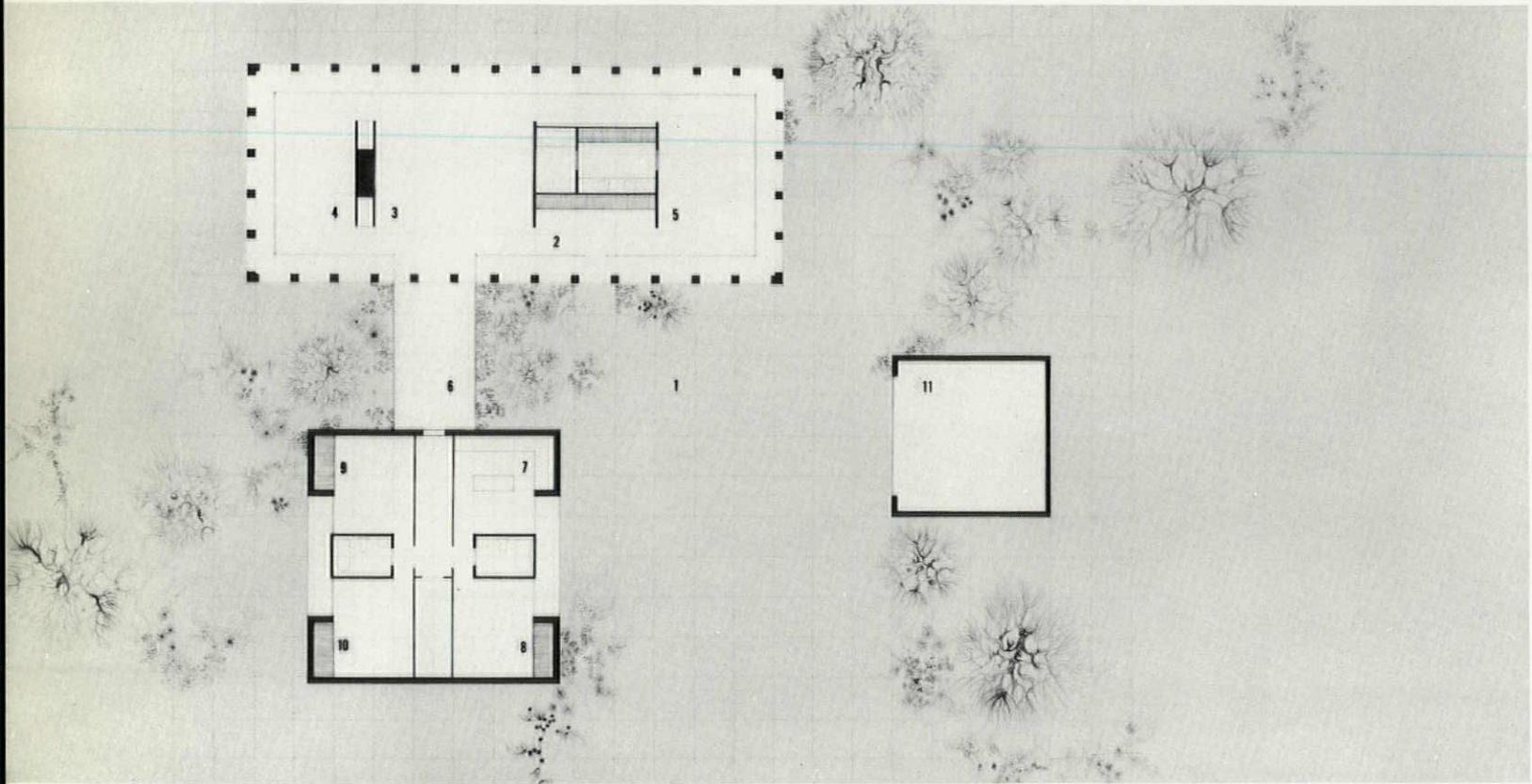


6



SECTION-A





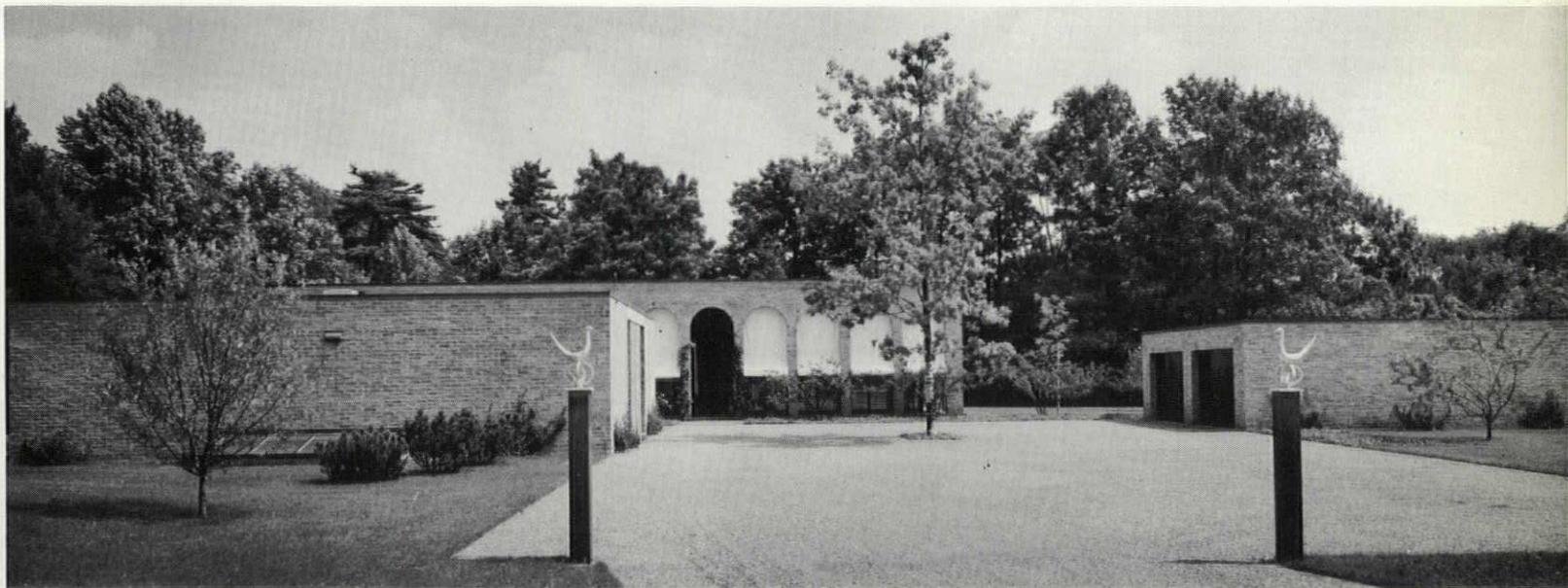
I. W. Colburn & Associates, Inc., Architects

## ELEMENTS IN REPOSE

*Site:* Benton Harbor, Michigan. Three-acre property in rural setting; golf fairways to the north, deep ravine and pond to the east, winding road approaches from south; site is studded with large, handsome trees. *Program:* Space for living and entertaining for two adults and two college-age sons; accommodation for maid and guests; sons' rooms to double as guest suite. *Structural system:* Open-web steel joists or wood joists on brick piers; poured concrete foundations; slab on grade; built-up roofing; wood stud and plaster interior partitions. *Mechanical system:* Radiant heating coils in ceiling; oil-fired furnace. *Major materials:* Unpainted common brick for exterior walls; brown Merrimac River gravel for paving of entrance court; brick paved floors for living room wing, dining room, and terraces; vinyl tile for kitchen and guest room wing; walls and ceilings of plaster; steel sash windows; aluminum sliding glass doors. *Associates:* Frank Klein, Structural Engineer; S. R. Lewis & Associates, Mechanical Engineers. *Photos:* Robert Nowell Ward.

Colburn is a native of Boston who received his architectural training at Carnegie Institute and Yale University. He has been practicing architecture in the Midwest since 1955, with offices in Chicago. The house is the latest in a series of experiments by this architect with "pierced brick volumes to form spaces."

The program in this case lent itself to subdivision into three parts. First, the "master wing" consisting of reception hall, living room, library, and master bedroom (nos. 2, 3, 4, 5, on plan, facing page). This element is the dominant pierced brick volume. Secondly, kitchen, maid's room, and



guest rooms (7, 8, 9, 10) are contained within an almost solid brick volume. A garage structure (11) is the third and smallest—though indispensable—element in the total composition. Completing the composition is the simple connection between volumes one and two, in the form of a glazed passage between the two buildings that also serves as a dining room (6).

In the largest of the three brick volumes, the outer walls



1



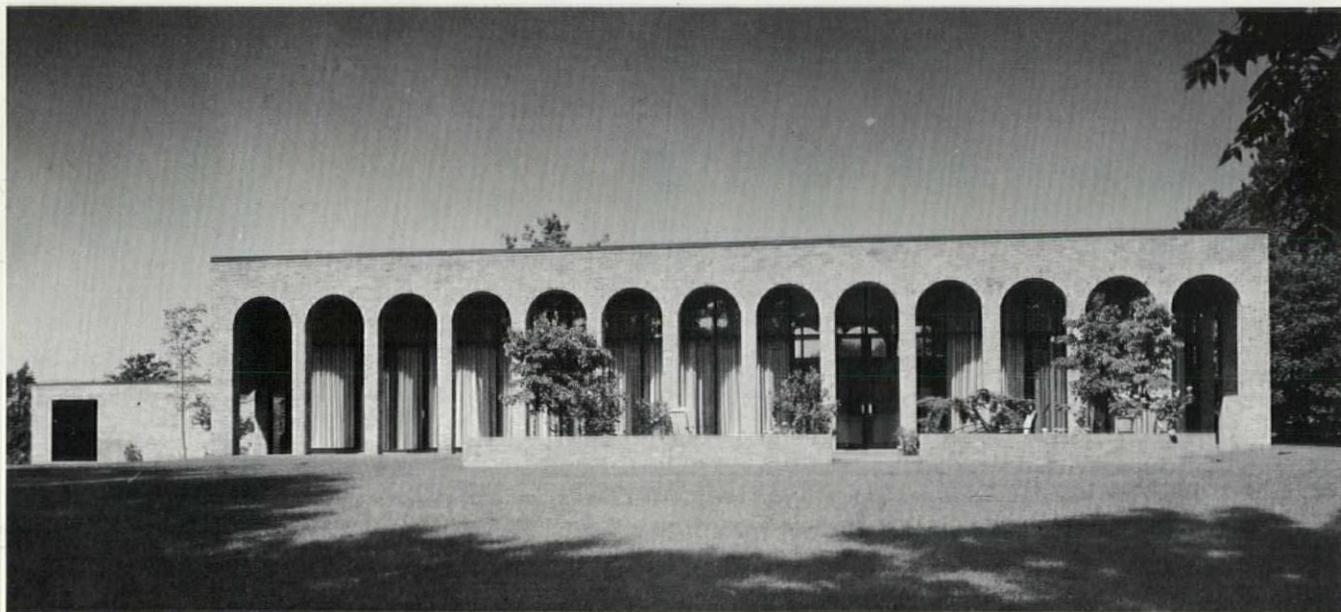
2

are "pierced with arches, forming a structural enclosure for the glass core." Inner glass core and outer structural envelope differ enough in size so that a 3-ft passage is left between the two envelopes shown in the detail and photo 7. Aside from the purely visual interest that this device adds to the building, there are obvious practical advantages in separating bearing and non-bearing walls to control sun, glare, and weather. Seen from the outside, the effect of the pierced brick enclosure is imposing—especially at night, when the inner glass core tends to disappear almost entirely 4; or in the daytime, when it becomes apparent that the usual clutter of glazing members is cleared away from the brick piers (1, 3). Seen in reverse, however, looking from the inside out, the result is less fortunate because of the apparent heaviness of the glass mullions 2. These appear to be carrying the weight of the roof, leaving the impression that the outer brick arches are a mere decoration and affectation.

Again, in another instance, the intersection of the glazed passageway with the brick arches is well resolved, as seen from the outside 5. Inside, however, the meeting of the brick arches, two roof lines, two intersecting glass lines, and also floor to ceiling poles for the support of book shelves, is uncoordinated 6.

These less pleasing details do not, however, detract from the success of the total scheme: the very carefully and thoughtfully balanced architectural volumes; the appropriate orientation of the parts in relation to site and program requirements; the evident practicality and workability of the

3

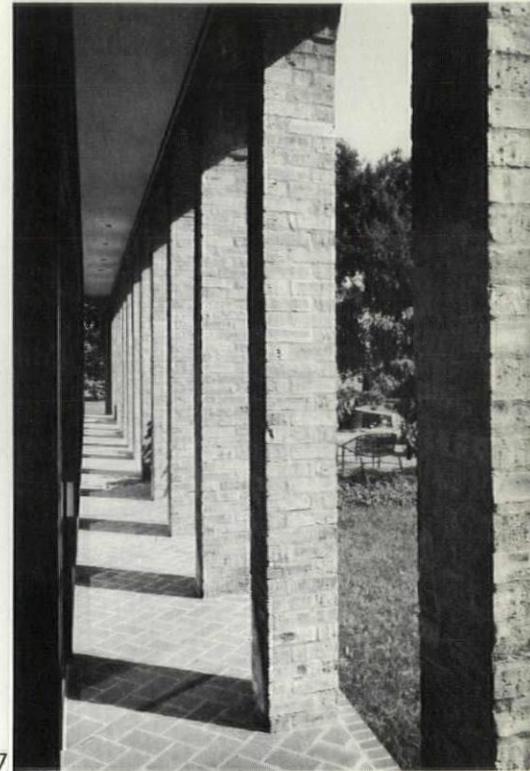
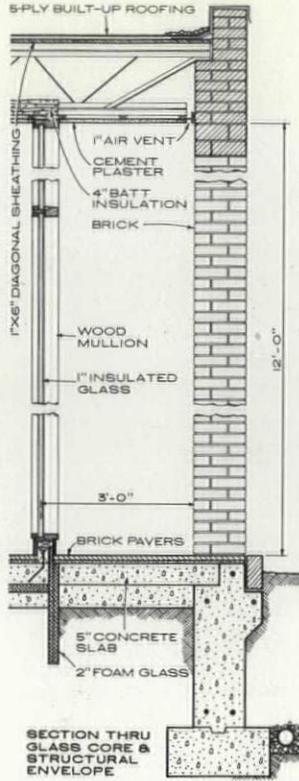


plan; and finally the timeless elegance that the architect has succeeded in conveying.

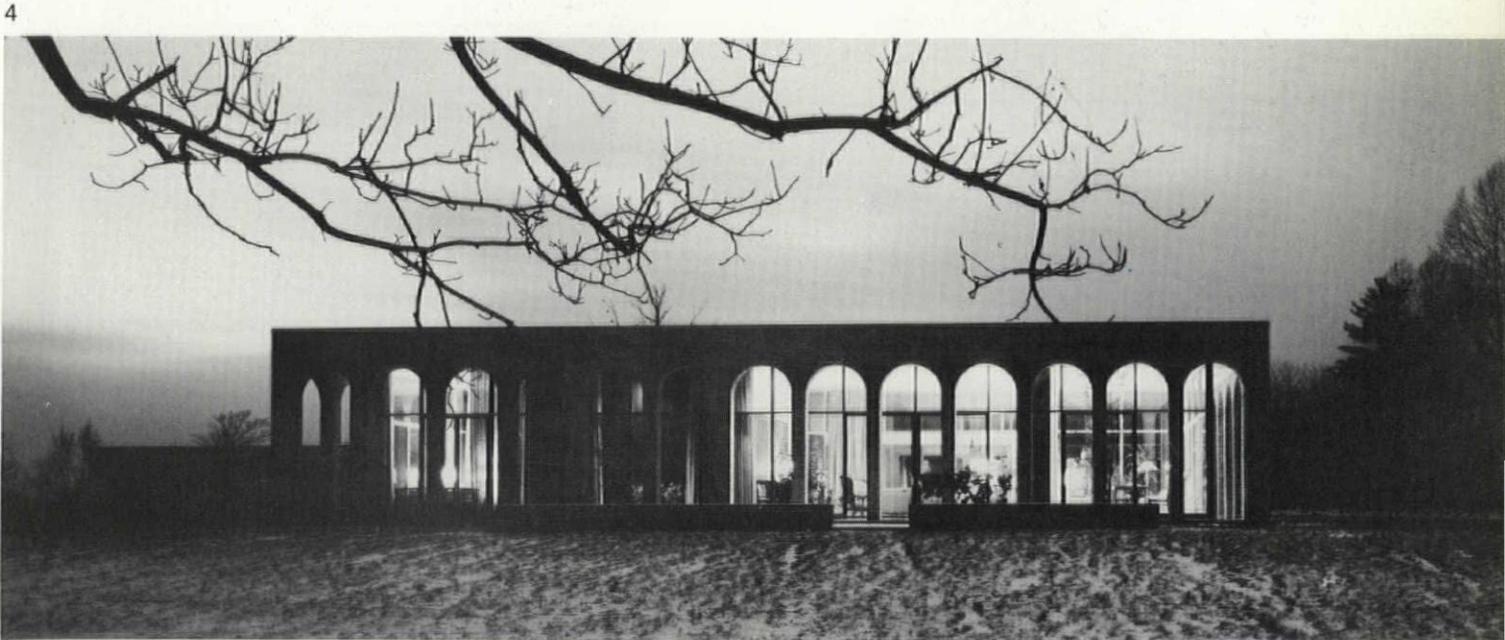
In the history of Western architecture, masonry has predominated as the traditional material for residential construction. This house represents a logical return to this material, and once more makes the point that the well-designed masonry structure connotes permanence, comfort, timelessness, an architecture in repose.



5  
6



7



4



Benjamin Gingold, Architect

## PLAY SCULPTURE

*Site: Minneapolis, Minnesota. Twenty minutes by car from downtown district; steep hillside property bordering on established street with two and three-story houses among fine old trees. Program: Quarters for the architect and his wife providing the usual living areas, master bedroom, den/guest room, nursery, and enclosed two-car garage; interior spaces to lend an "aura of spacious elegance in an abstract and interesting form." Structural system: Concrete block foundations; Western wood frame; stucco exterior in deference to neighborhood architecture; plaster and stud partitions inside. Mechanical system: Gas-fired, forced-air perimeter system divided into five zones. Major materials: Cement stucco, white sand-finished plaster and, in contrast, dark-stained mahogany for wall paneling and trim; flooring in dining area and kitchen of Walnut Travertine, a marble quarried in Tuscany, elsewhere wood parquet. Photos: Warren Reynolds, Infinity Inc.*

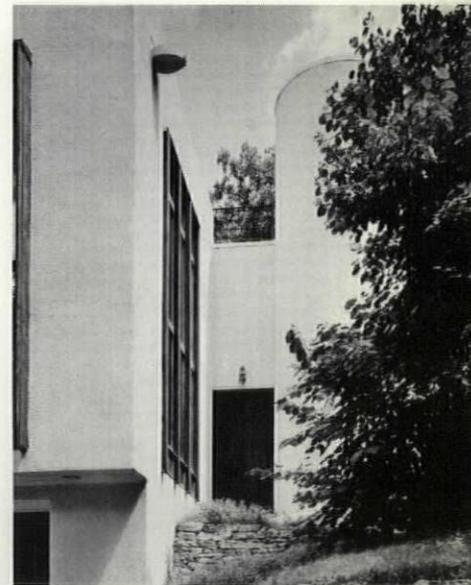
"It's not for me," said one of the many ladies after tramping through the house while it was still under construction. "Indeed it isn't," thought the architect to himself upon overhearing this remark as he stood in overalls among the construction crew, unrecognized by the lady: "This house is not for you but for me and my wife."

In fact, few of the houses shown here convey as much of the personality of their architects as does this one. Gingold is a man of many talents and interests and his house reflects it. He received his professional training at Yale University, traveled extensively in Europe, has held jobs with Holabird & Root and Ellerbe & Company, has been a design critic for a number of years at the University of Minnesota School of Architecture, and has had his own practice since 1955. Gingold's other consuming interest, that of being a motorcycle policeman (see NEWS REPORT, APRIL 1961 P/A), has become so important to him that he has installed radio receiving and sending equipment in his architectural office.

That his architecture is not altogether of a piece is mildly regrettable, but that it has vitality, humor, and imagination is undeniable.

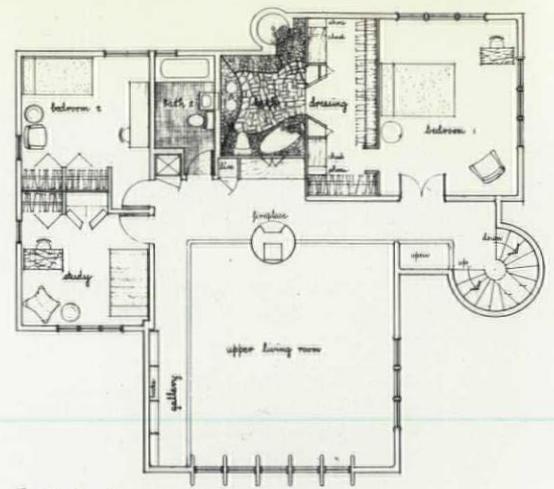
Architecturally, one questions the duality of exterior versus interior design. It appears almost as though one architect had developed the outside, and another the inside. Though Gingold states that he designed the exterior in deference to neighboring houses, it seems that the building would be much more at home among neighbors of the Weissenhof Siedlung, the first large-scale permanent exhibit of modern architecture in the Germany of the 1920's. However, this rather self-conscious early Bauhaus approach applies only to the exterior. Inside, the architect comes into his own. Here, Gingold's exuberance finds full expression. He reveals himself not only as an imaginative sculptor and stage designer but also as a man possessing a fine sense of humor.

As sculptor, he realizes that "the possibilities for sculptural design in space, created with stucco over wood frame, are endless." He designed a stair rail which "winds like the peel of an orange from top to bottom." And another plastic element, the fireplace in the form of the "circle within the

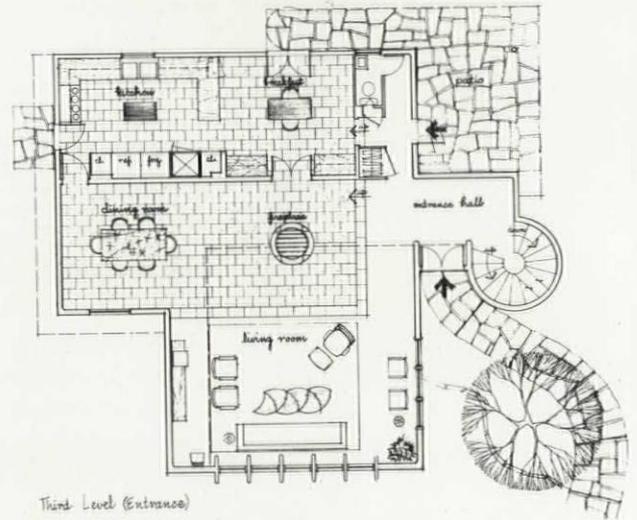


cube," has become the symbolic center of the building. "The house is organized vertically," says Gingold, "owing not only to the hillside site but also to a desire for interpenetration of space in three dimensions." Spiral stair (*opening page*) and circular fireplace **2, 3, 4** play important roles in this vertical interpenetration of space.

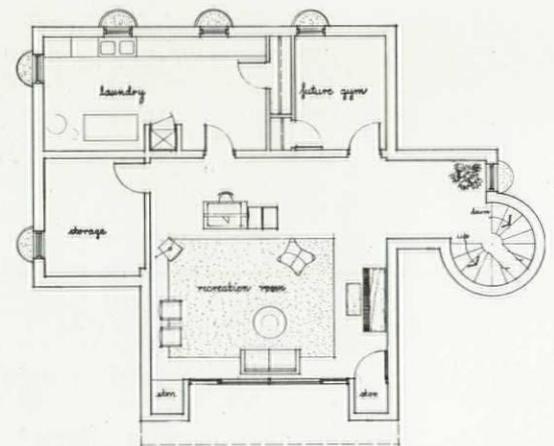
As stage designer, he finds "the mystery and appeal of spatial interplay" in the bridge from stair to living room balcony which he continued along two sides of the room in the form of a gallery. To give depth to the window wall **1, 3**, he designed an unusually deep reveal of 12" wood members to either side of the glassline. He carefully visualized all stages of progression from the street level up through the interior of the house, or, for the guest, the winding flagstone approach along the exterior to the front door. He played tight spaces against open spaces—the claustrophobic tower stairs **5, 6** against the huge central space and uses his



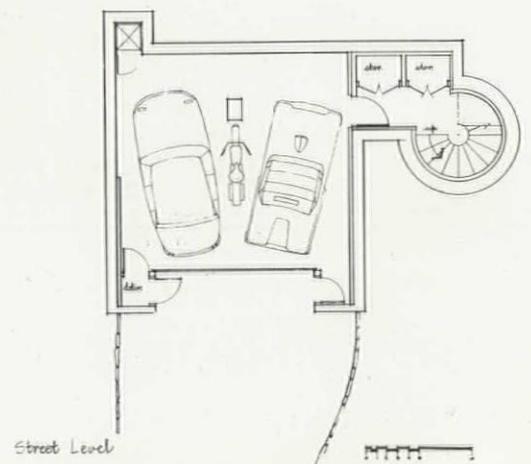
Fourth Level



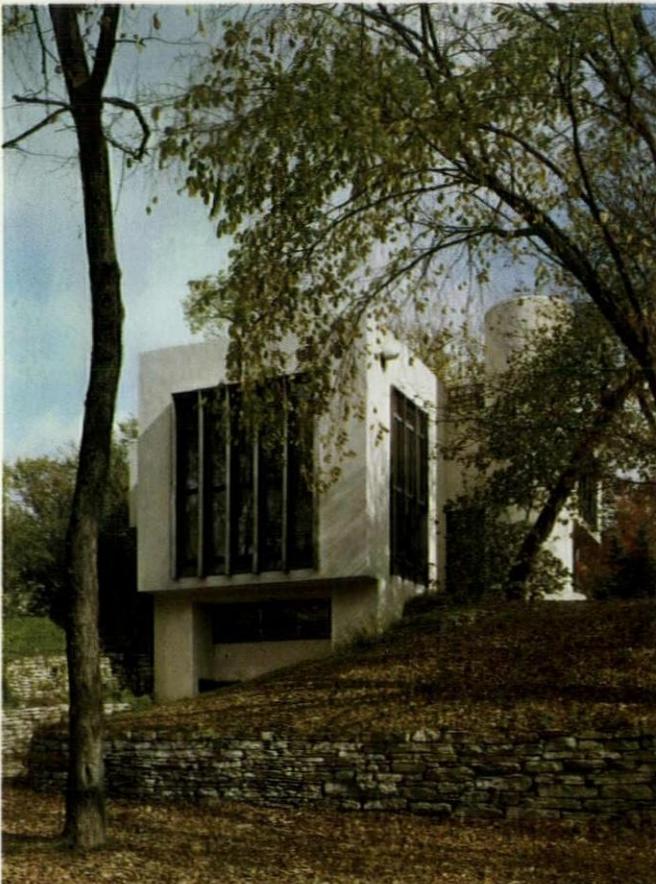
Third Level (Entrance)



Second Level



Street Level





2



3

4





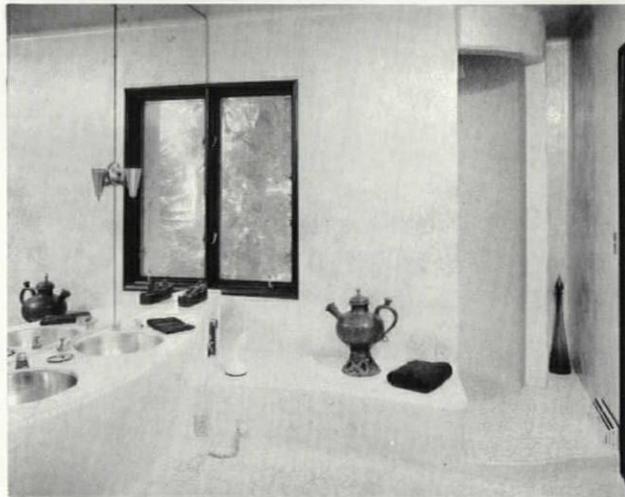


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“terminal areas” such as this central space as an important punctuation in his spatial sequence. And finally, he created a stage 4 for actual performances, which at normal times serves as a dining platform.

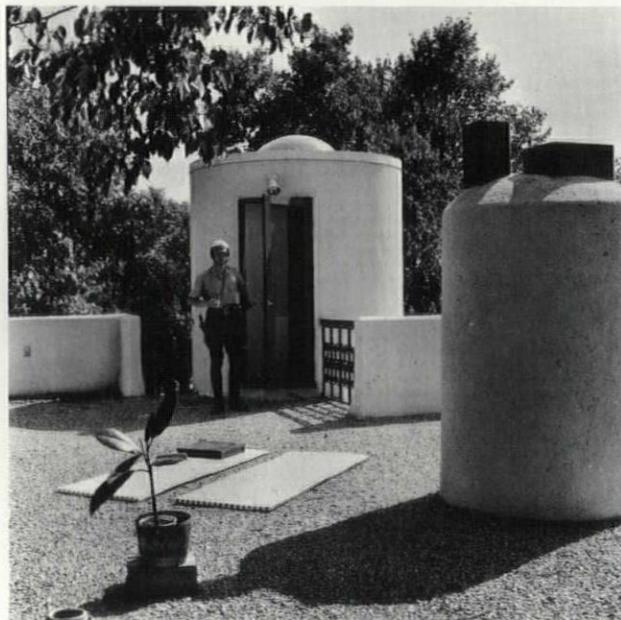
For the fun of it, he treats his “master bathroom” 7 as a cozy living room with tiled seating, books, art objects, a telephone, and even a secret window which gives onto a fireplace on the upstairs gallery and from which he can survey most of the activities throughout the house. A powder room on the main level is lined with lead while a special closet on another level displays beautifully polished riding boots. And finally he built himself a roof terrace 8 ready-made for a game of cops and robbers.

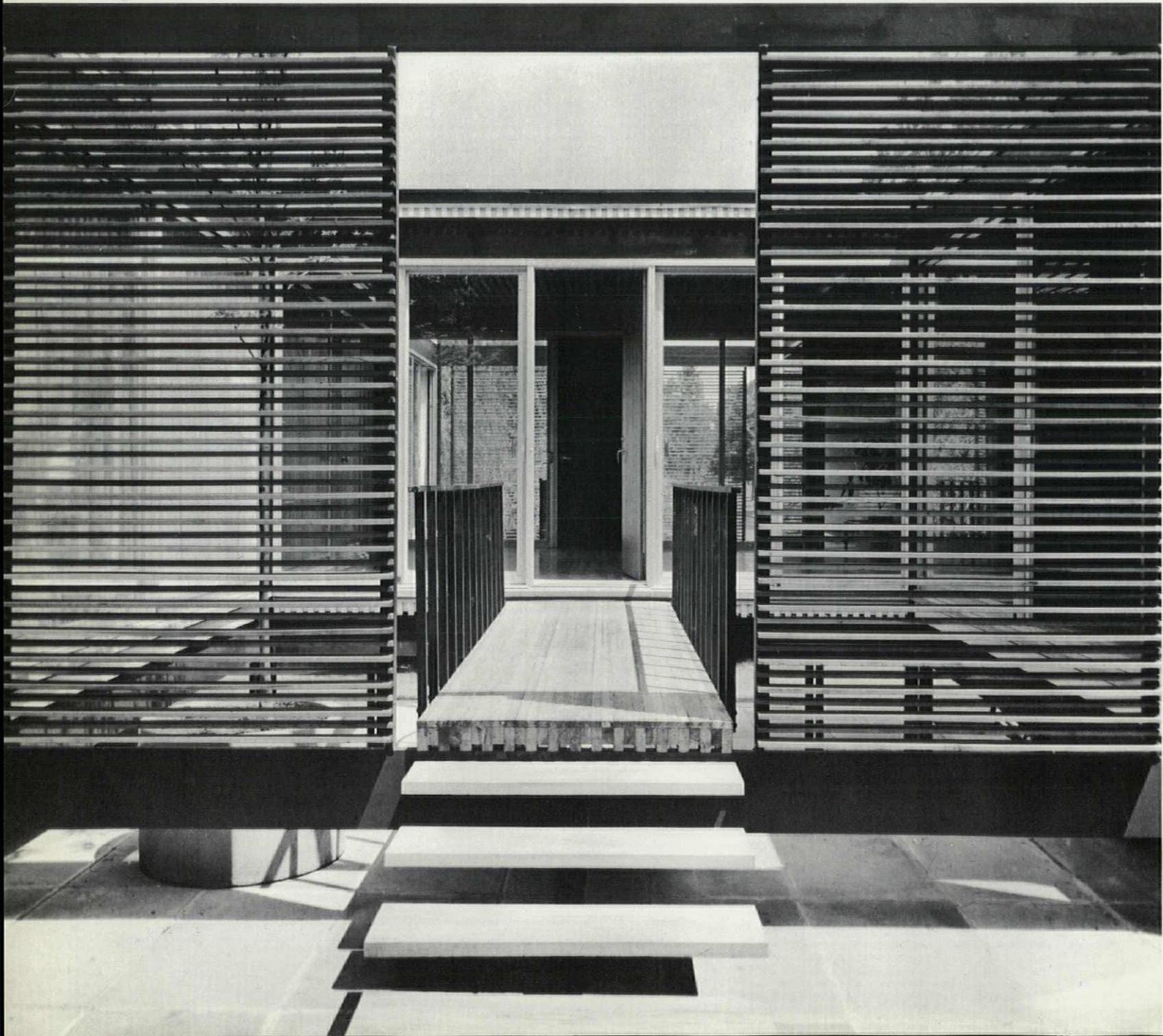
That the end result is more of a stage-set than a house, in the commonly accepted sense of the word, is not surprising. But where else could the architect have made such unhampered use of his talents than in his own house?

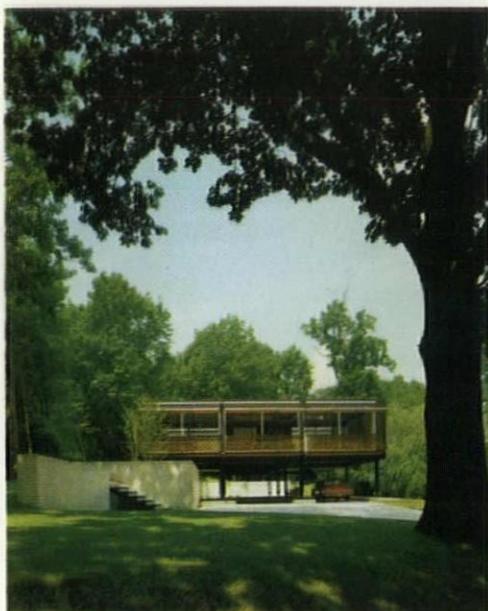


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8







2

Davis, Brody & Wisniewski, Architects

## STRUCTURAL SYLLOGISM

*Site: West Orange, New Jersey. Property is narrow and deep, divided longitudinally into high and low levels; upper level is heavily wooded, lower level open but with row of willows along property line; elevation is high, with view of Manhattan skyline; road to the east. Program: House for a family with young children; major rooms to be oriented toward dramatic view to the east; privacy from road and close-by neighboring houses. Structural system: Steel frame and prefabricated laminated wood deck for floor and ceilings. Mechanical systems: Warm air heating through plenum formed by floor deck, sleepers, and sheathing. Major materials: Concrete block foundations; oriental stucco for exterior wall surfaces; interior stud partitions, plastered, sand-finished; teak parquet flooring; incense cedar planks for ceilings; built-up roofing with marble chips. Associates: Wiesenfeld, Hayward & Leon, Structural Engineers; Marvin M. Serot, Mechanical Engineers. Photos: Alexandre Georges.*

During the course of P/A's annual Design Awards judgments, the work of Davis, Brody & Wisniewski habitually rises to the top. The five-member jury, differing from year to year, invariably comments on the outstanding clarity of the work, the craftsman-like presentations, and, particularly, the ingenuity and originality of the structural systems. This house was one of the few premiated designs, selected from more than 500 submissions, of the 1958 Design Awards Program. It is gratifying to note that the original scheme was executed exactly as planned.

Most of the success of this partnership is due to fine teamwork, which in this case also included the client as general contractor. Client and architect were well attuned to each other even prior to their partnership on this house, since they had worked together closely on several previous occasions. Without mutual understanding, this unconventional structure could not have been completed with such assurance and consistency.

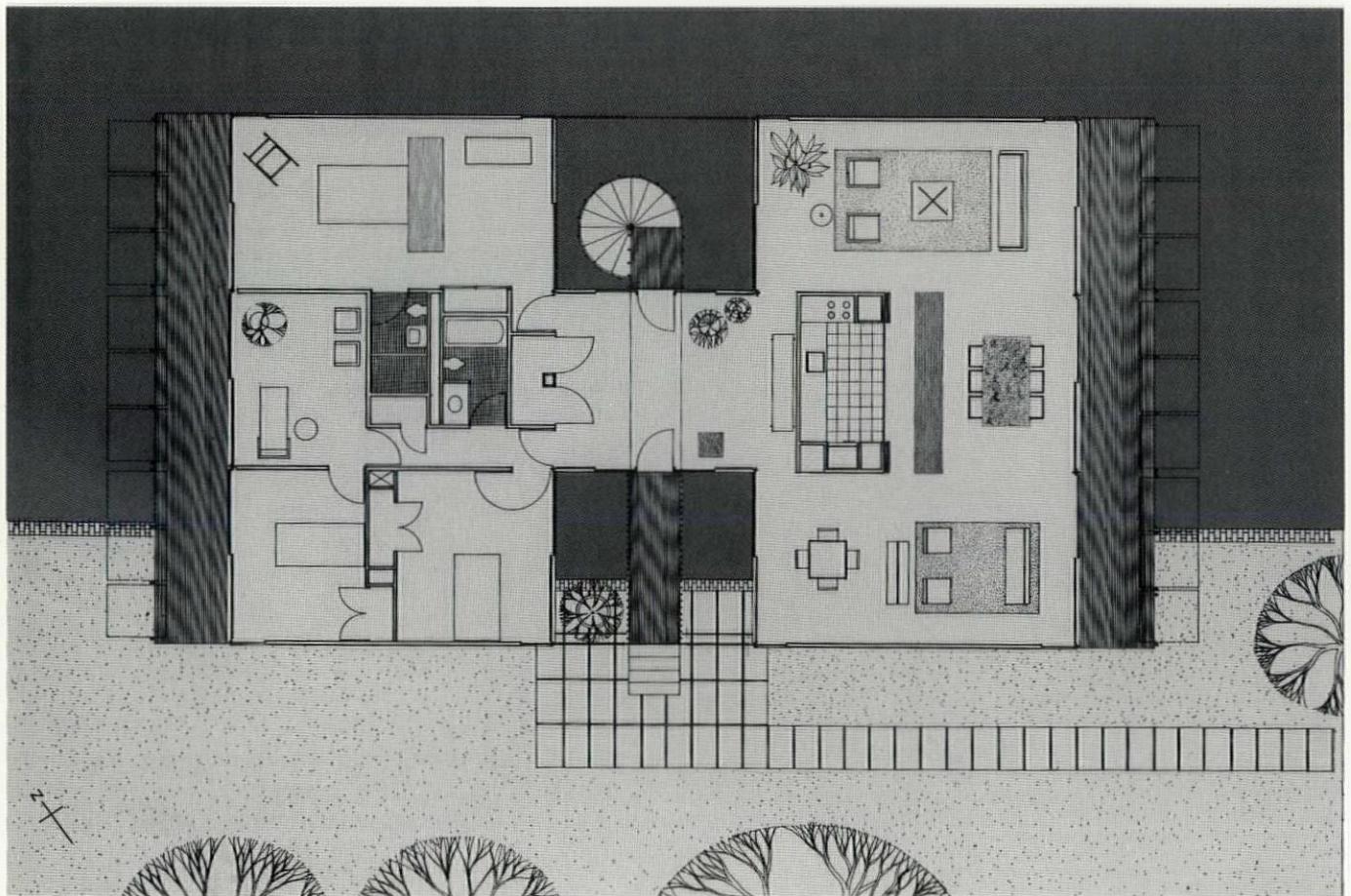
The plan is a simple rectangle containing all of the major living functions on one floor. The floor level has been raised above a retaining wall, which was necessary to adjust for the sharp split in contours 2. Except for a small storage and heater room behind the retaining wall, the lower level is open for parking and play. One approaches the living area by either of two means: via a small bridge 1 that crosses the retaining wall and connects the high portion of the site with the house, or by a circular stairway 3 from the carport. The

two entry courts, together with the enclosed entry hall, serve to divide the plan into two distinct parts—the living areas to the east and the view; the bedrooms to the west.

To provide privacy for the large glass areas and the outdoor decks, redwood grilles 4 have been installed. These are top-hung and pivoted so that they can be opened or closed and adjusted to the proper degree of view, privacy, or sun desired.

The structural frame 5, 6 employs cross-shaped columns made up of four 2" x 2" x 1/2" steel angles, spaced 2 in. apart. The beams are built-up steel tubes, consisting of 1/2-in. steel plates with continuous 1" x 1 1/2" bar separators. These tubes are slipped between the angle columns.

The structural decking is fabricated of alternate 2 x 4's



and 2 x 5's that have been glued together. On the interior, this decking has been left exposed, where it becomes an important design element contrasting with panels of smooth plaster and highly polished wood and metal surfaces.

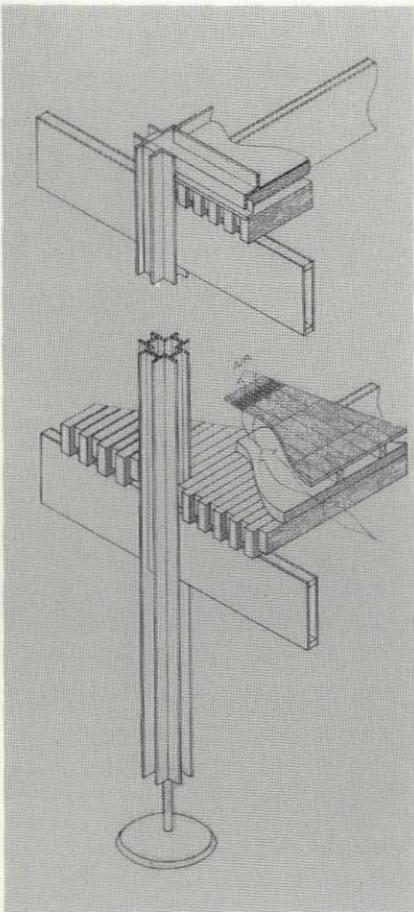
In all interior details, the guiding hand of the architects is evident: in the exceptionally fine arrangement and execution of the kitchen, in such furnishings as the dining room table and the glass and steel book divider, in the selection and placement of furniture, and even in the choice of works of art. All of these are an integral part of the architecture.

In contrast to several other, more informal schemes, this solution is frankly "constructivist." It is a highly studied and calculated solution, a syllogism of architecture—the reckoning of all elements in unison.

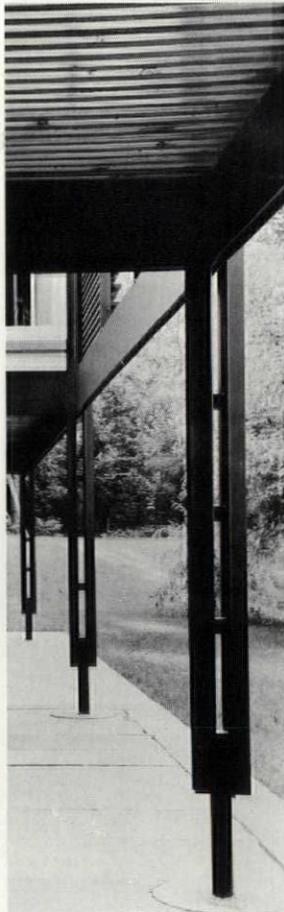


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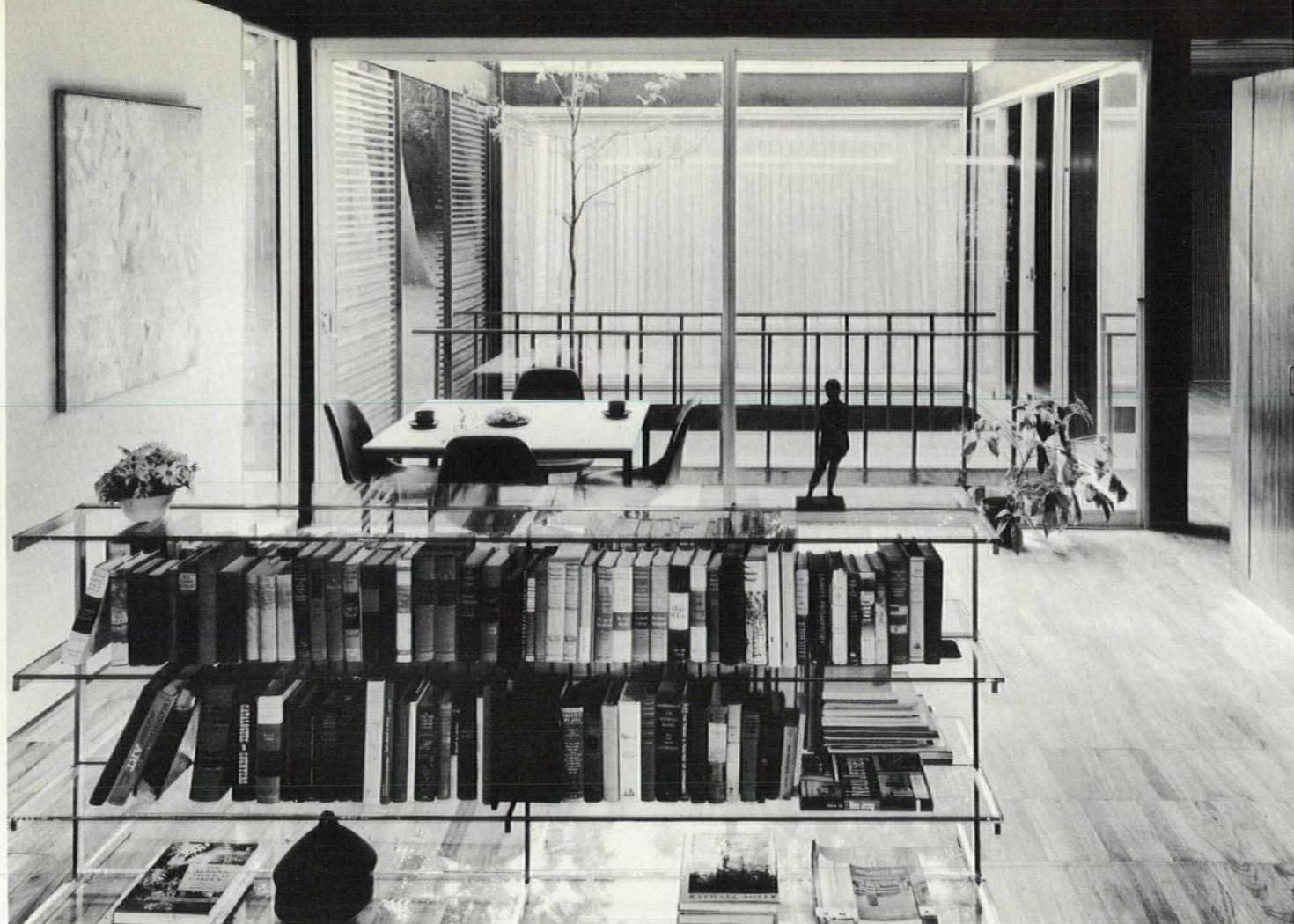


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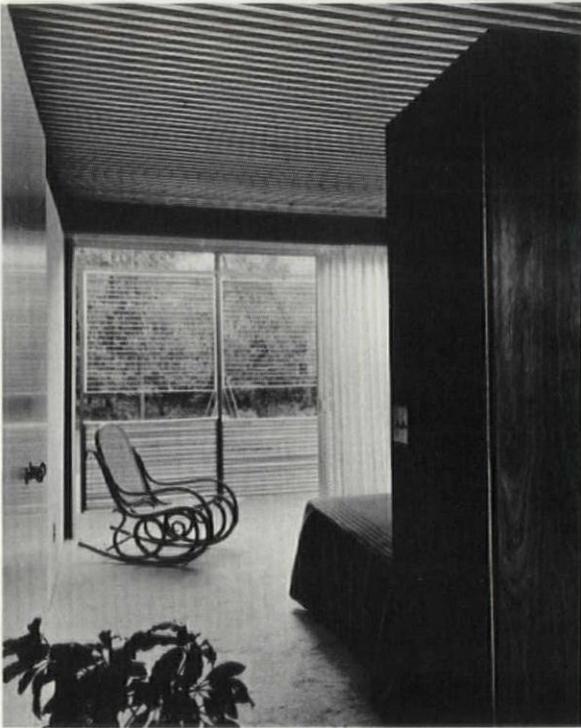


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The kitchen 10, an island in the center of the living area, serves to define various uses: family room 7; dining area 8, 10; living room 11. Skylighted kitchen can be closed off from view by means of folding doors. Bedrooms 9 are at opposite end of building. Tapestry 8 by Samuel G. Wiener; painting 10, 11, by José Guerrero.



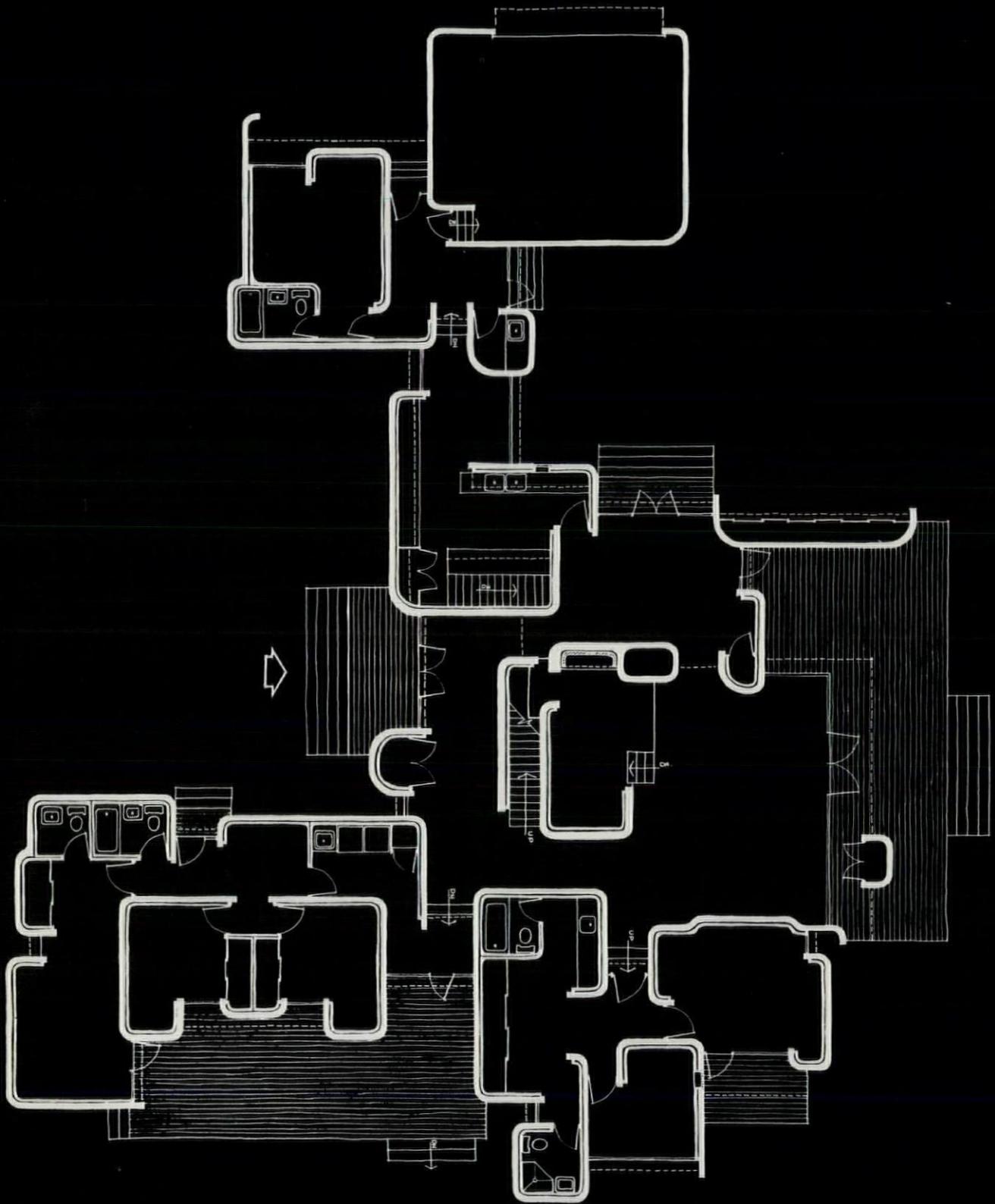
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10

11





LABYRINTHIAN ENVIRONS

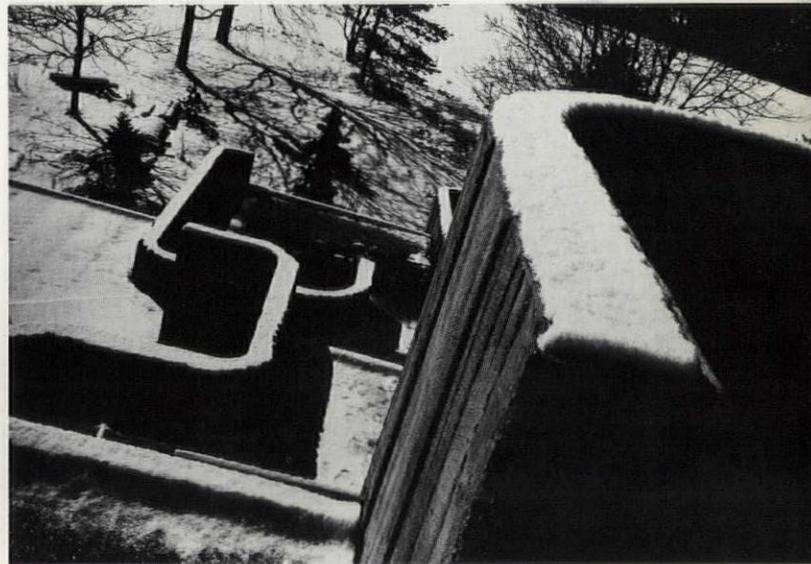
**Site:** Westport, Connecticut; four acres on Long Island Sound with exposure to water on east, south, and west; private beach; massive concrete breakwater; flat property with trees and rough grass; long approach road through allée of tall hemlocks. **Program:** House for three generations: main house for grandparents, guest house for children and grandchildren; main house to provide usual living quarters plus studies for client, a doctor, and his wife; owners wanted rustic, informal, "unmodernistic" building of strong protective masonry. **Structural system:** Masonry walls originally intended to be of fieldstone, later changed to concrete for economy; walls 8 in. thick, cast in place; floors wood framed, suspended above grade between walls for protection against unusually high tides. **Mechanical system:** Oil-fired, forced warm air heating system. **Major materials:** Rough, striated concrete; sand plaster ceilings; teak wood floor in central area, cork elsewhere; dark-stained wood trim and doors; Italian glass mosaic tile on bathroom walls; marble countertops. **Associates:** Werner-Jensen & Korst, Consulting Engineers; James Fanning, Landscape Architect; David G. Whitcomb, Interior Designer. **Photos:** David Hirsch.

"For the local, conventional eye," comments Johansen, "this building is hardly a house, yet we believe it is the *essence of house*. . . Mine was an intuitive effort to unify or reconcile form and human life within, which in nature is complete as one organism." He likens this house to the marine phenomenon of the sea shell, in which the outer side is coarse and strong to withstand the elements, whereas the inner side, the part which comes in contact with the organism, is smooth, shiny, or soft. In this building, the curved walls may be considered the shells which enclose organisms, the shape of the shells being determined by the organism and its function. "It was my intention," he says, "to have the forms not only fit the functions, but to suggest, on sight, how these spaces are used."

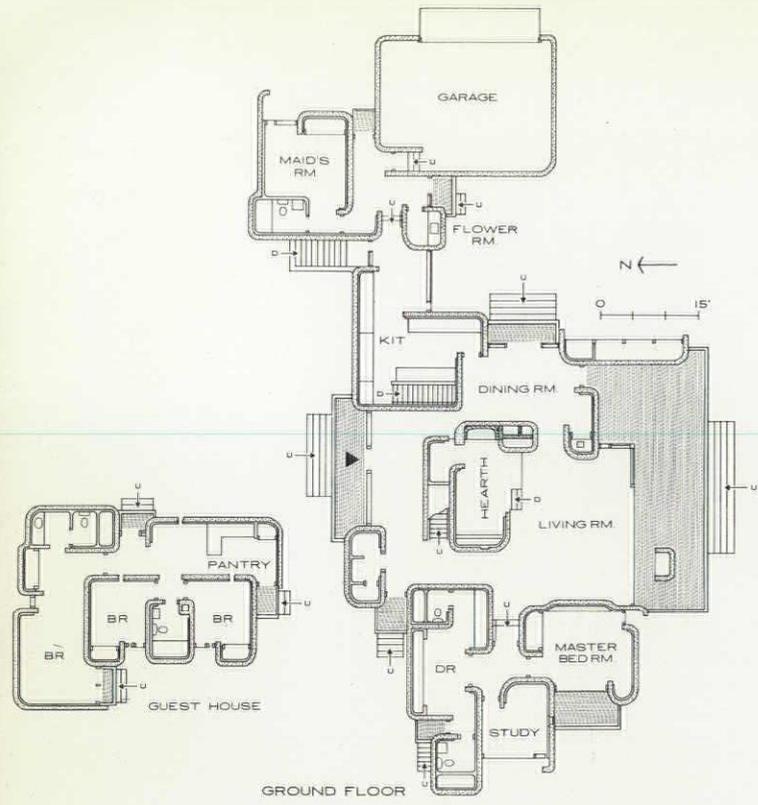
Several favorable circumstances assisted the architect in realizing his exceptional design idea. Johansen was fortunate in having a client who stated his needs clearly, one who consistently supported the architectural idea. And as setting for his design, the architect had at his disposal an almost ideal site. Neighboring houses were far enough away not to compete with the architecture of the new house. Most importantly, however, the site provided the necessary horizontality in the form of vast horizons of water and grassy planes to set off the imbricate forms of the shells. Against this calm and infinite background, the house is seen as a giant sculpture. It is a structure of immense strength and almost awesome power, curiously reminiscent of some of the shelters of medieval and even prehistoric time. Johansen's design suggests a return to the very basic idea of the human shelter—the protective enclosure, the bulwark against exterior elements.

The building is composed of four dominant shell groups. The innermost one surrounds the hearth and extends upward to enclose the tower room. Another comprises the master's quarters, which includes bed chamber, study, dressing room, and baths. The third is the service element, with kitchen, breakfast room, rear hall, servants quarters, and garage. Contained between these groups are the general use areas—living room, dining room, hall. The fourth group, which in the final plan is a separate structure, contains guest facilities. "The curved walls," explains the architect, "grew directly from a diagram of function, disposition, and circulation paths. The final plan (*following page*) remains the 'conceptual sketch' (*opposite*), merely more disciplined and perfected."

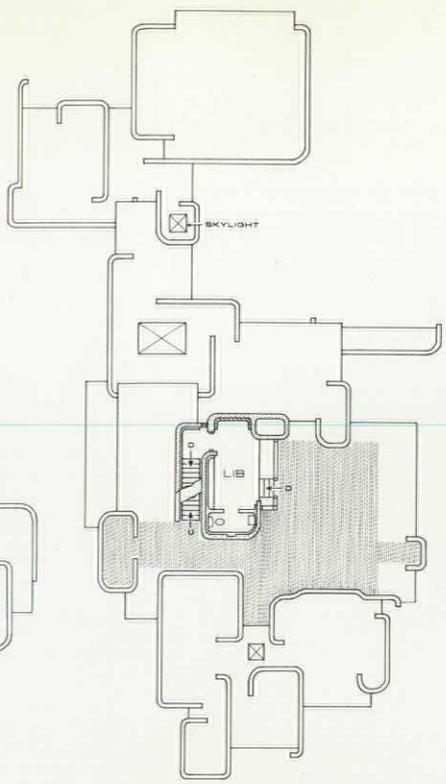
It is on the roof **I** where the shell groups are most clearly



1



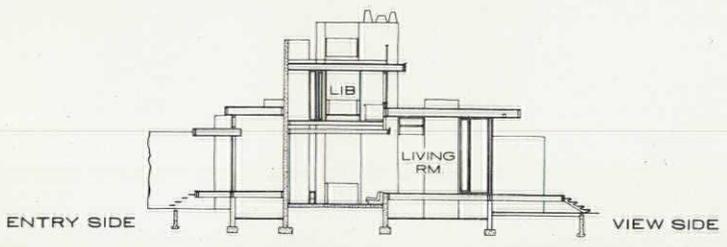
GROUND FLOOR



ROOF & LIBRARY PLAN

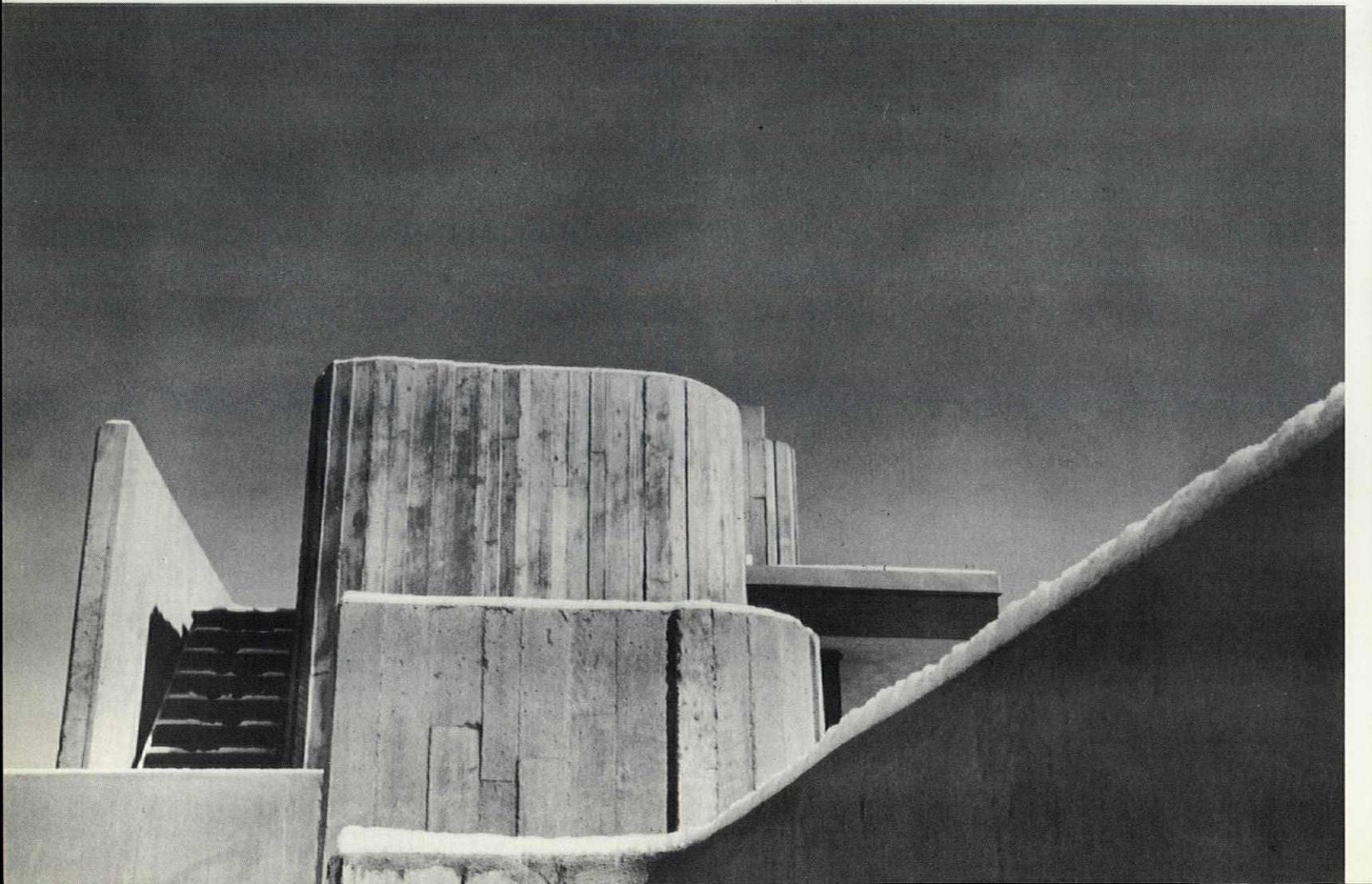


LIBRARY ROOF PLAN



ENTRY SIDE

VIEW SIDE

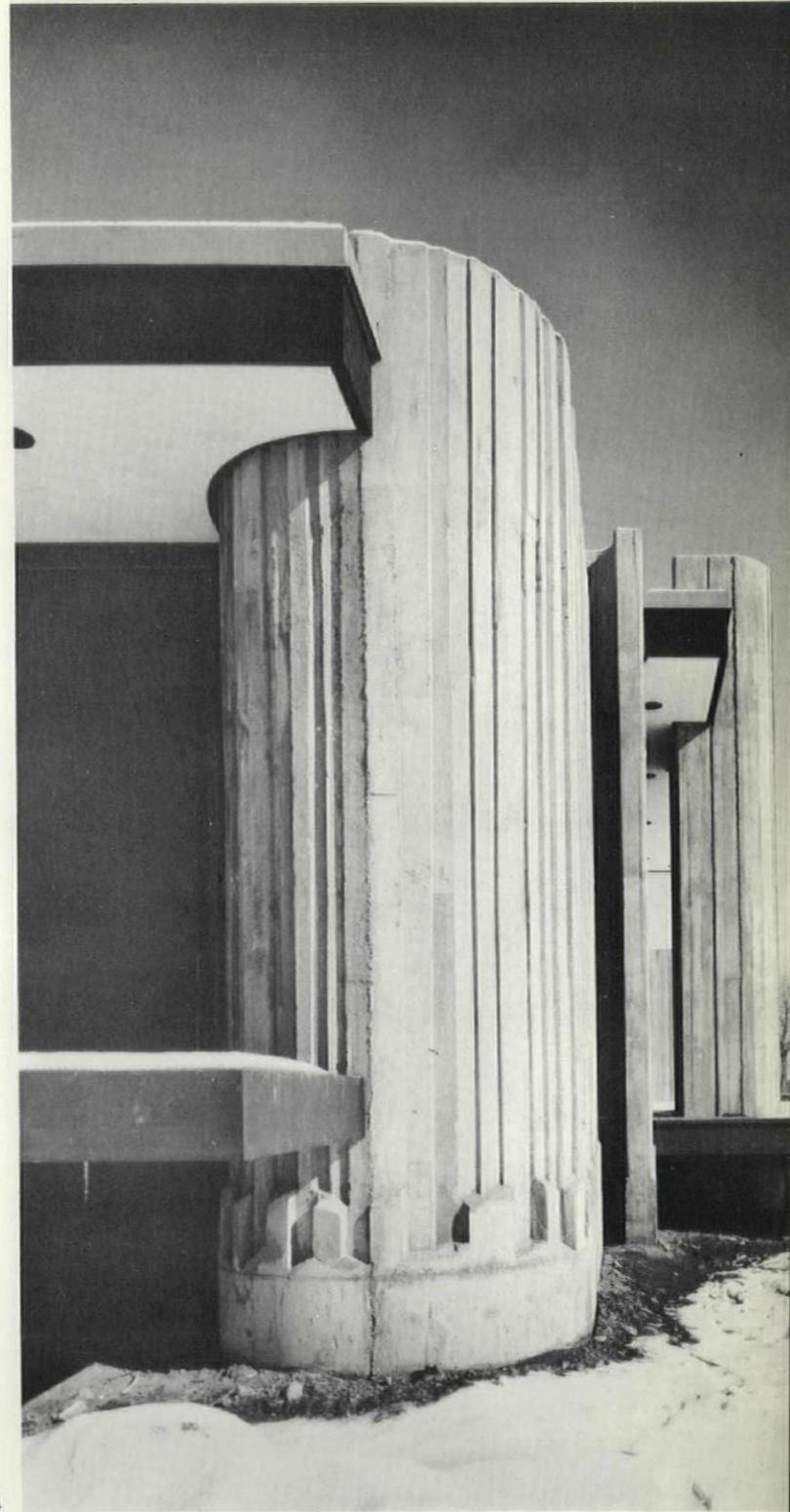


read. There, the complete house plan, "the labyrinthian environment," as Johansen calls it, is recognizable. The parapet walls, which are the upper termination of the shells, form wind-protected areas for sitting, sunbathing, or wandering and viewing in many directions. A stair to the side of the tower room 2 leads to still another, even higher, look-out terrace with its own fireplace.

Seen from the exterior, the shell walls and their rough vertical striations recall the weather-beaten surface of a sea shell. Rough-cut, random-width oak boards were used in the form work 3 to produce this effect. The vertical boards terminate above grade to form an irregular base and a transition 4 between ground and wall.

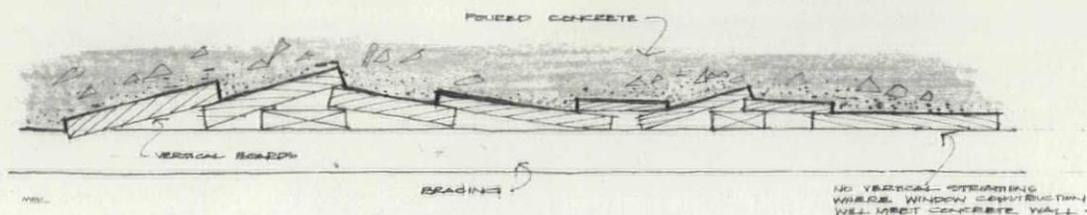
Although the shell walls do suggest a definite protective enclosure, the atmosphere inside is by no means foreboding or claustrophobic, but intimate and vital. Here, tight spaces open into great spaces, rough textures alternate with soft wall surfaces, beams of sunlight penetrate the shells from unsuspected sources, outlooks open in surprising sequence, and colors are strong and bright, though held under control by the neutral concrete walls. The ambiance is lively, as skillfully realized in a sculptural sense as the exterior.

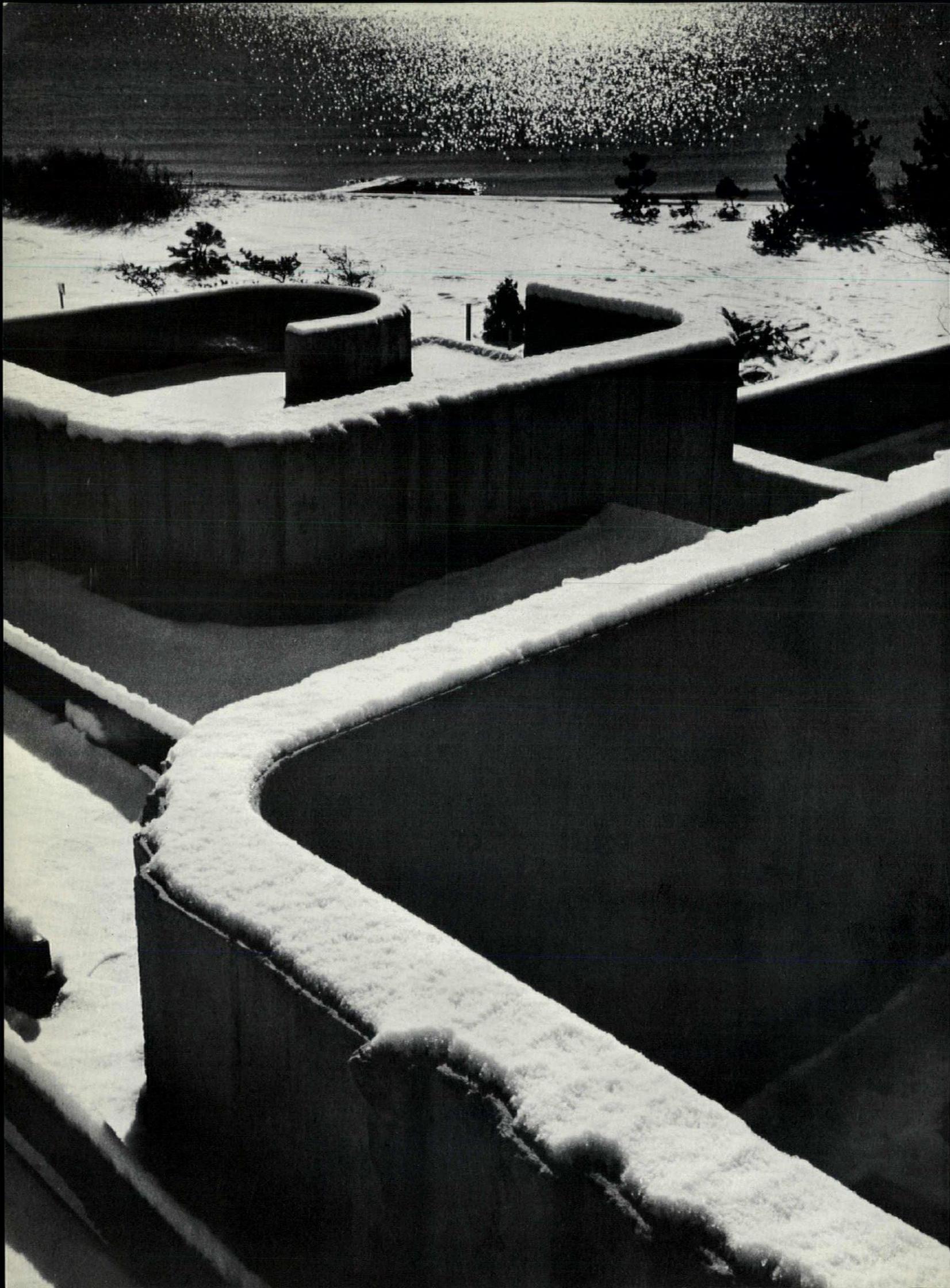
In the opinion of this critic, Johansen's powerful statement of the "enclosing wall system" of the "labyrinthian environment" will play a most significant role in the evolution of today's architectural philosophy. This is yet another strong argument in favor of *specific* and *defined space* as opposed to *universal space*, and consequently an argument in favor of a more personal architecture.

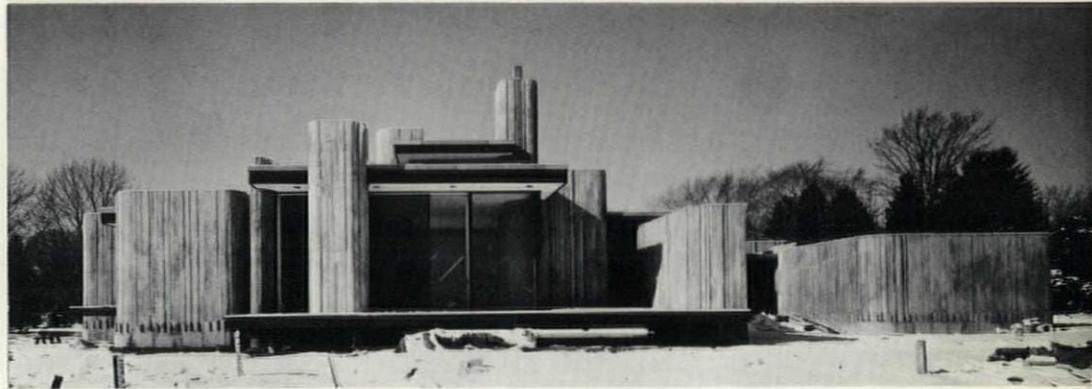


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3







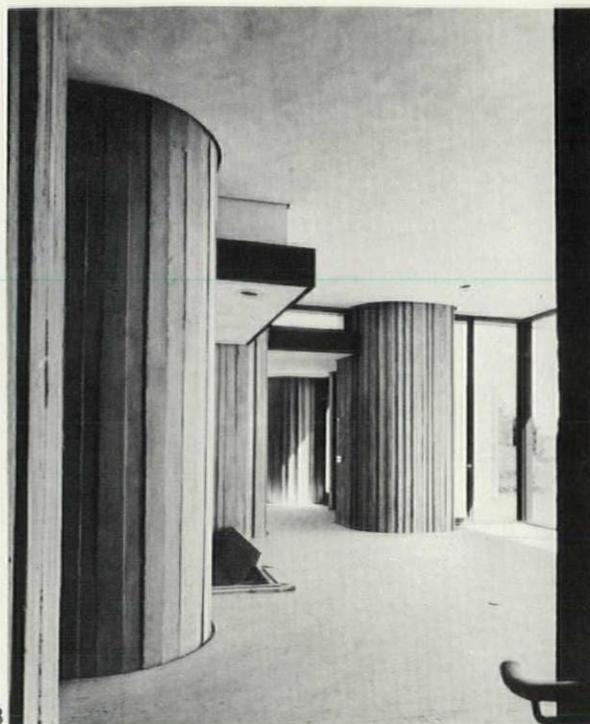
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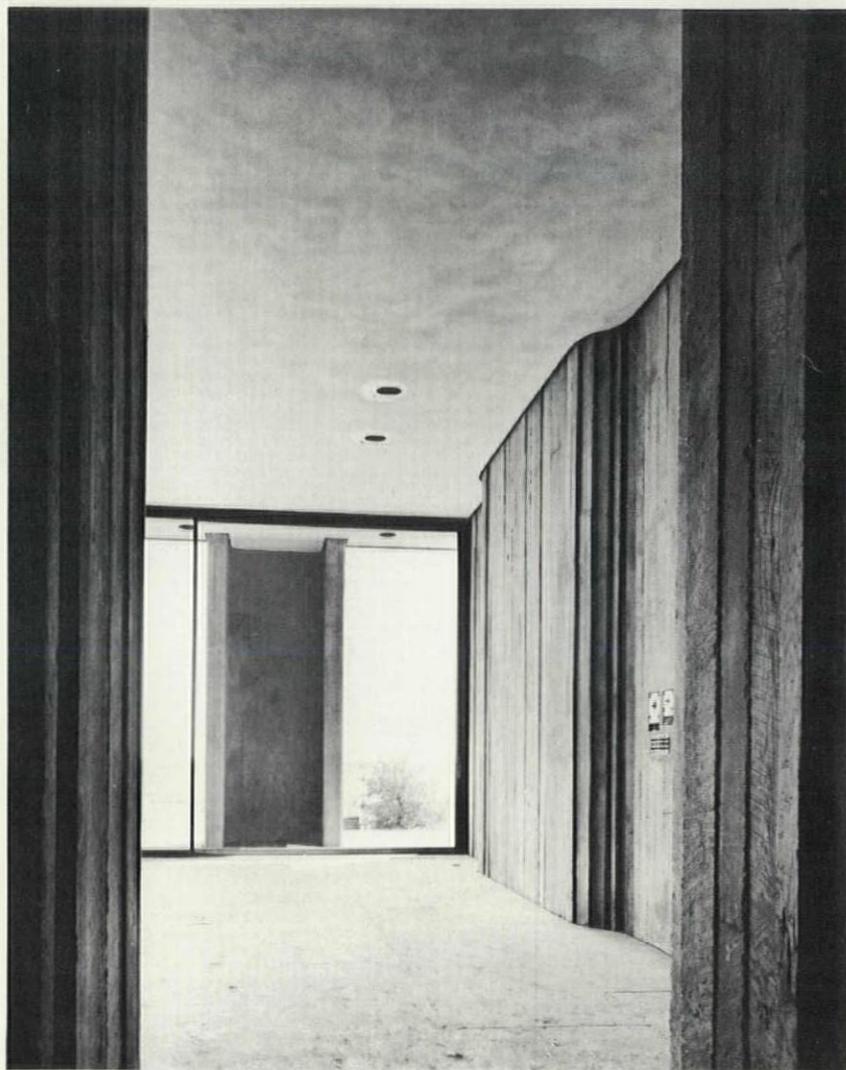


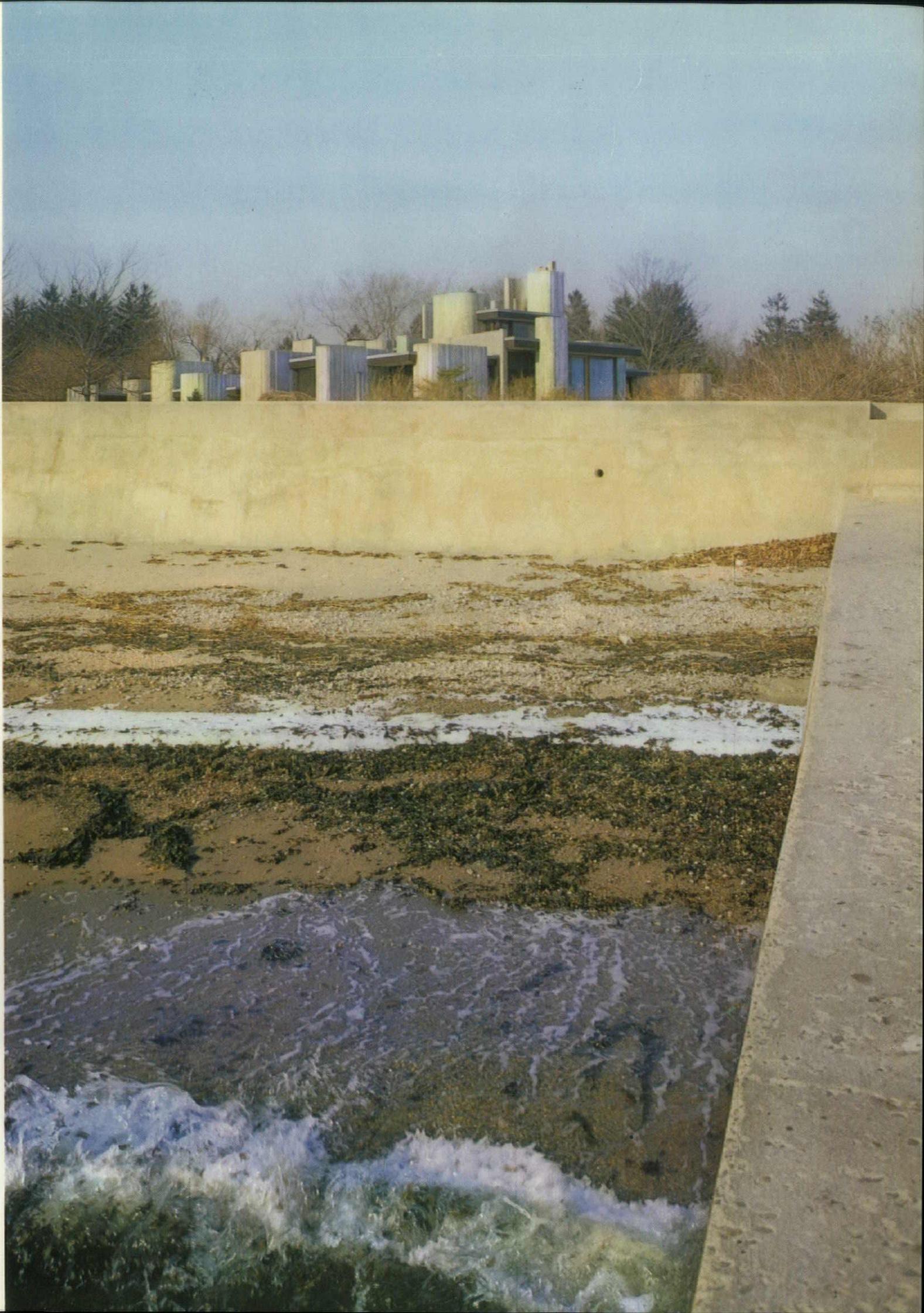
*In Johansen's design, the walls are the dominant elements—structurally, functionally, and sculpturally. These curved walls are composed much as a sculpture in the round, to be seen from all sides. Two aspects are shown here: the view toward the house from the approach road 5, and the elevation facing Long Island Sound 6.*

*Some walls of the living room 7, 8, still unfinished, will have an "inner lining" that starts at the glass line and includes furring, insulation, and smooth white plaster; the plaster will be painted in colors or covered with soft fabric to provide a marked contrast to the brutal concrete texture that also appears in the interior. To give the visual impression that these walls carry through from grade to parapet, the floor and ceiling surfaces are held away by a recessed black plastic strip, scribed to the irregular concrete walls.*



7







## Infrared Heating-Lighting

BY WILLIAM J. McGUINNESS

*Infrared lamps are being used with increasing frequency in structures having high ceilings. A college gymnasium installation which utilizes these lamps for both heat and light output is described by the Chairman, Department of Structural Design, School of Architecture, Pratt Institute.*

Heating by radiant energy is a fascinating subject. A long history of occasional use culminated a few decades ago in England with the introduction of *panel warming*. Large areas (entire floors or ceilings) heated by imbedded pipes carrying warm water proved popular as low-temperature heat sources. Radiant heating of this type spread in popularity to the United States. It has many valuable and interesting characteristics. On the debit side, however, it has a slow response when alternating with the natural heat sources of human occupancy or the sun. This has been overcome in buildings such as offices and hospitals by the use of a fast-responding metal ceiling, above which pipes are attached.

For a long time, interest has centered on the scheme of beaming radiant energy at occupants, sometimes in cold surroundings, from a remote source such as high-temperature tubular quartz infrared lamps. Bodily heat loss is retarded to assure physical comfort, yet a minimum of energy is wasted heating the air through which the radiant transmission occurs. Because the lamps, even with 90-degree directional spread, must be reasonably distant to blanket the area and relieve the discomfort of possible heat concentrations, this method has not found its first application in residences where ceilings are conventionally low. Used frequently in outdoor locations, such as the soffits of theater marquees, it is now finding an especially appropriate use in warming the occupants of large, high-ceilinged halls of institutional, commercial, and industrial buildings.

An installation, the first of its kind, in the Greenville College Gymnasium Building near St. Louis (*shown*), has proven highly successful through two full winters



of operation. The advantages are numerous. Operating in a cool environment (the gym is maintained at low temperatures during its long empty periods), it provides instantaneous control to offset the effects of cool air and cool walls and ceilings. Spectators and players are warmed from many angles. A person at any location receives warmth from numerous lamps having 45 to 90-degree reflector spreads. When partially or fully turned off, a cooler environment is at once afforded. The system, with a total of 50 quartz lamps, supplies light as well as heat. When operating with the incandescent lighting system, it aids in producing 150 ft-c at the level of the playing floor. Either system alone can adequately illuminate normal activities for which 50 ft-c is usually considered sufficient. Though controls at Greenville are largely manual, it is possible to have the incandescents increase in intensity automatically as the infrared lamps are diminished in output during lesser heating demands. In summer, of course, the incandescent system operates alone. Flexibility is provided by the possibility of warming the spectators but not the players, and of warming either half of the hall when only one of the two transverse practice courts is in use.

During the first heating season, operating costs were less than \$2000, or about \$600 less than those initially estimated.

They were also equal to, or less than, estimated costs for other methods of heating that might have been used. Four months of free lighting, worth approximately \$500, were gained. With 190 kw for heating, the system qualified for the high-use rate of the Illinois Power Company. The average watt-density is 18 w per sq ft of floor area, which is adequate for this type of construction. The lamps burn at 4100 F and give about 6 to 8 lm of light per watt when burned at full voltage. About 87 per cent of input wattage is converted to radiant heat. Because of the special nature of infrared heating, conventional heat-loss calculations are not used. This room, which is maintained 10 to 15 degrees cooler in air temperature, even during occupancy with heat turned on, will obviously have a smaller heat loss rate than a conventionally heated room with a higher air temperature. Economy results.

The soft glow of the quartz lamps and their incandescent supplement contribute to high-quality lighting. Fixtures are shielded to minimize glare when viewed directly.

The architect was D. Clarence Wilson. Engineering and installation were by Guarantee Electrical Company of St. Louis. Assistance was given by Illinois Power Company, Greenville's local utility company. Products of Luminator Inc. were used.

## WHO LOOKS AT THE ROOF?



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## Product Approval Standards

BY HAROLD J. ROSEN

*A proposed substitution for the "or equal" clause is presented by the Chief Specifications Writer of Kelly & Gruzen, Architects-Engineers. The author is also Chairman of a CSI subcommittee on "Trade Names and 'Or Equal' Clauses." Next month, he will discuss the merits of this method of specifying materials and how to administer it.*

In the JULY 1961 P/A, readers of this column were asked to submit their methods of specifying materials and equipment whereby they were able to retain ultimate control over the materials and equipment used in their projects. On the basis of replies received, the author of this column, who is the Chairman of a CSI subcommittee on "Trade Names and 'Or Equal' Clauses," together with his committee, arrived at a solution that they have presented to the Institute as a tentative proposal.

This method is known as the "Product Approval Standards." Under this method, products are clearly defined by using specifications standards where possible, by using specific product names, by specifying more than one product where possible, and by listing basic criteria where desirable. Bids are based on using any product that meets the established standards (such as ASTM) or the products specified. However, upon application, bidders are permitted to request approval of products during the bidding period, within established limits. If the specifying agency *does* approve the product, it is listed in an addendum and may be used by the prime contract bidder and in construction.

The following text of conditions for consideration of products, materials, and equipment are recommended for insertion in the General Conditions:

### PRODUCT APPROVAL STANDARDS

(a) Wherever the word "product" appears herein it shall mean material, equipment, assembly, manufacturers, brands, trade name, items or similar

description as applicable.

(b) Where the words "equal to," "approved by," or other synonymous terms are used, it is expressly understood that they shall mean that the approval of any such submission is vested in the architect/engineer, whose decision shall be final and binding upon all concerned. All submissions are subject to this type of approval.

(c) The intent of this article is to encourage and permit competition on qualified products by reputable and all qualified contractors, suppliers, and manufacturers, whose products, reputation and performance warrant approval for the conditions, intent of design, and performance considerations.

(d) Whenever any product is specified in accordance with a Federal Specification, an ASTM Standard, an American Standard Specification, or other association standard, the contractor shall present an affidavit from the manufacturer certifying that the product complies with the particular standard specification. Where necessary and requested, or specified, supporting test data shall be submitted to substantiate compliance.

(e) Whenever any product is specified or shown by describing proprietary items, model numbers, catalog numbers, manufacturer, trade names, or similar reference, the bidder obligates himself to submit proposals and accept awards of contracts based upon the use of such products. Use of such reference is intended to establish the measure of quality which the architect/engineer has determined as requisite and necessary for the project. Where two or more products are shown or specified, the bidder has his option of which to use, provided the product used meets all requirements of specifications and design criteria. The right is reserved to approve or disapprove proposed deviations of design, function, construction, or similar differences which will affect the design intent.

(f) For approval of products other than those specified, bidders shall sub-

mit a request in writing at least \_\_\_\_\_ days (note: 7 days recommended as a minimum) prior to bid date and hour. Requests received after this time will not be reviewed or considered regardless of cause. Requests shall clearly define and describe the product for which approval is requested. Requests shall be accompanied by manufacturer's literature, specifications, drawings, cuts, performance data, list of references or other information necessary to completely describe the item. Approval by the architect/engineer will be in the form of an addendum to the specifications issued to all prospective prime contract bidders on record, which will indicate the additional products which are approved for this project.

(g) Substitution or approval of products will be considered after bids are opened only under the following conditions:

(1) The contractor shall place orders for specified materials and equipment promptly upon award of contract. No excuse or proposed substitution will be considered for materials and equipment due to unavailability, unless proof is submitted that firm orders were placed 10 days after approval by the architect of the item listed in the specifications.

(2) The reason for the unavailability is beyond the control of the contractor. Unavailability will be construed as being due to strikes, lockouts, bankruptcy, discontinuance of the manufacture of a product, or Acts of God.

(3) Requests for such substitution shall be made in writing to the architect after the award of a contract and within 10 days of the date that the contractor ascertains he cannot obtain the material or equipment specified.

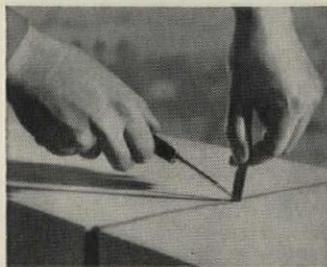
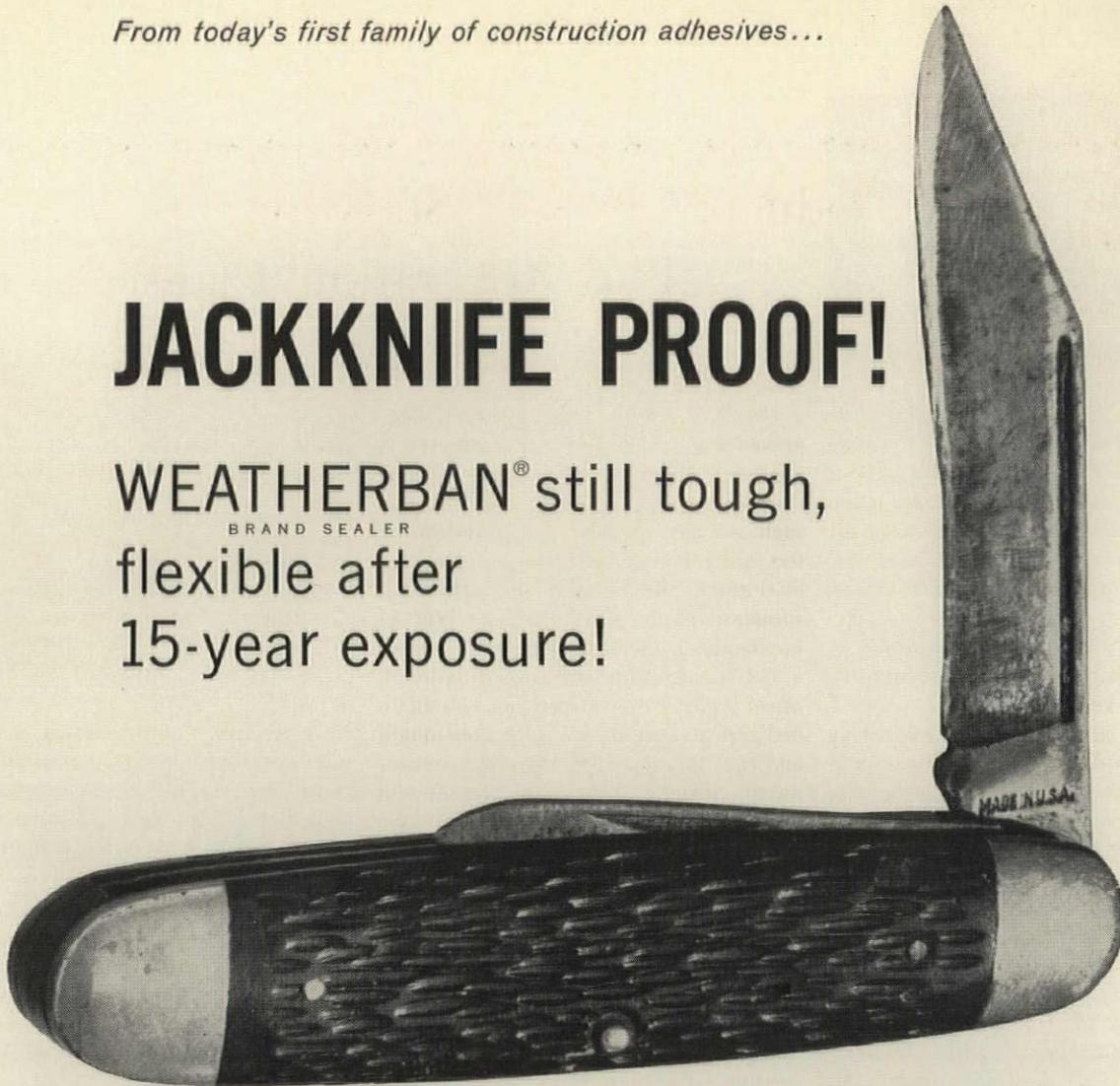
(4) Requests shall be accompanied by a complete description of the material or equipment which the contractor wishes to use as a substitute.

(5) Substitutions must be recommended by the architect/engineer to the owner, who will approve them in writing.

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BY JUDGE BERNARD TOMSON AND  
NORMAN COPLAN

*P/A's legal team discusses a recent decision that calls attention to the need for precise wording of the construction contract, particularly its arbitration clause.*

Does an arbitration clause contained in a construction contract apply to the disputed claim of a contractor for "extras"? This question was recently considered by an Appellate Court of New York in a case of interest to the profession. In this case, a contractor contended that there was an unpaid balance due him under a construction contract and that he was entitled to additional compensation for extra services which had been furnished. The contractor sought, by legal action, to compel the owner to submit these issues to arbitration. The issue for determination by the Court was whether a claim for "extras" was arbitrable under the terms of the construction contract in question (*Perrin & Darby v. Stempinski Realty Corporation*, 222 N.Y.S. 2d 151).

Prior to the legal action in question, the contractor had filed a mechanic's lien against the owner's property which incorporated the contractor's claim for the final installment due under the construction contract and his claim for certain extras. The owner initially demanded arbitration of the contractor's claims as reflected in the mechanic's lien. Before the arbitration was conducted, the contractor sought the permission of the Court to amend his lien to include additional extras, and this permission was granted. The owner then withdrew his demand for arbitration, except in respect to the contractor's claim for the final installment of the contract. As a consequence, the contractor instituted a legal action to compel the owner to arbitrate all of the issues involved, including his claim for extra compensation.

Under the law of New York, a party cannot be compelled to arbitrate a dispute unless he has entered into a contract

which so provides, and that contract is in writing, signed by the party against whom arbitration is sought. The construction contract in this case provided for the arbitration of "all questions that may arise under this contract and in the performance of the work thereunder." The contractor contended that his right to extra compensation was a question which arose under the contract and related to the performance of his work thereunder, and that this question, therefore, as well as the dispute concerning the unpaid balance of the contract price, was appropriately subject to arbitration.

The owner, on the other hand, contended that a claim for extra work arises independently of the construction contract itself; and if it were assumed that any extra work was performed, it was done pursuant to a separate verbal contract which included no agreement requiring arbitration.

The Appellate Division of the Supreme Court of New York, in considering this issue, did not accept the contention of either of the parties. The Court pointed out that this particular construction contract provided that there could be no recovery for "extras" unless the same are ordered in writing, and since it was conceded that the extras claimed by the contractor had not been so ordered, there was no arbitrable issue. The Court said:

"[Contractors] claimed in their petition, however, that the extras were 'outside the terms and conditions of the aforesaid agreement in that the extras were not included in the contract price.' If this means that the work done was not work performed under the agreement, there was no agreement to arbitrate in regard to it. If it was work done under the contract, it is met by the objection that there are no writings as provided for by contract.

"If the latter is the true construction, the question remains whether this absence of writings is a bar to arbitration. No dispute exists where, under the contract, there is no arbitrable issue, and in such instances the literal language of the agreement to arbitrate

is not controlling. . . . Here the arbitrators will be asked to award compensation for extra work when the contract provides: 'The Contractors shall not be entitled to payment for any extra work unless the Owners have agreed in writing to pay for such extra work.' No recovery can be had for such work. . . . [Contractors] have therefore not shown that there is an issue to be submitted to the arbitrators, and hence cannot proceed. . . ."

Despite the Court's finding that there was no arbitrable issue relative to the claim for extras, it nevertheless concluded that the owner, by initially seeking arbitration in respect to the contractor's mechanic's lien, which included a claim for some extras, had waived the issue of arbitrability in respect to those extras listed in the original mechanic's lien. The Court said:

"The earlier application of appellants [Owners] is, however, a concession that the issues which they sought to have arbitrated are arbitrable. And this includes. . . those items of extra work for which claim had been made in the mechanic's lien, as originally filed. . . ."

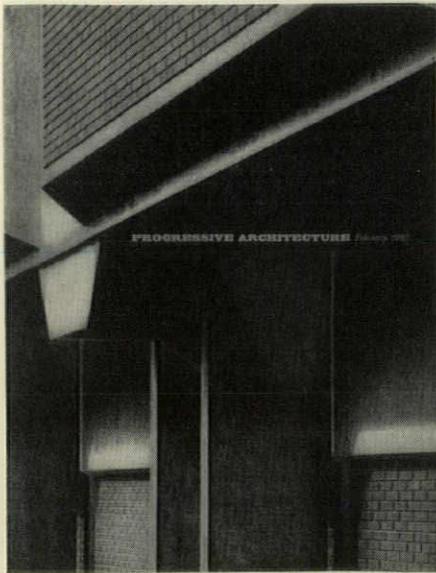
The determination of the Appellate Court that no arbitrable issue was presented to it, but at the same time requiring arbitration on the ground of waiver on the part of the owner, may appear to be inconsistent. The Court may have felt that facts might be presented to an arbitrator, which had not been presented to it, which could support the contractor's claim for extra compensation. However, this reasoning would appear equally applicable even if there were no waiver involved. In any event, this decision illustrates the importance of: (1) careful draftsmanship in the preparation of the construction contract, with special attention to the arbitration clause; (2) the hazard of disregarding the conditions of the contract; and (3) the danger of precipitate action which may result in a waiver of legal rights.

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**Theater Issue Praised**

Dear Editor: I would like to express my appreciation to you for your superb issue on the theater [FEBRUARY 1962 P/A].

To be able to refer the graduate students in my Theater Management course (in which we include study and discussion of theater/auditorium facilities) to a single source that summarizes succinctly but thoroughly today's thoughts and trends on theater architecture has not been possible before. This you have provided in your effectively organized and illustrated issue.

MELVIN R. WHITE  
Department of Speech and Theater  
Brooklyn College, New York

Dear Editor: Vincent Kling has asked me to compliment you on the fine treatment of the Paul M. Pearson Theater at Swarthmore College. Your article makes it sound so good that we are beginning to think that perhaps we accomplished more than we thought we had.

WELD COXE  
Publications Director, Vincent G. Kling  
Philadelphia, Pa.

Dear Editor: I would like to congratulate you and your staff on the excellent theatrical presentations and symposium in the February issue. This is the first time that the theater world has been afforded a really comprehensive view of the trends and cross-currents in our field today.

Part of the credit is due, perhaps, to C. Ray Smith, who, in his introduction to the symposium, managed a perspective that was impartial and objective enough to "balance" viewpoints which,

taken together, must appear paradoxical, contradictory, and even foolish, but which, taken separately, represent to theater workers serious pilgrimages in one direction and another.

Also, in the selection of projects and actual buildings, there is a good balance of design approaches. I am most appreciative, of course, that our little Swarthmore project was thought worthy enough to be included. Such projects, small-scale though they be, are numerous throughout the country, and represent long and earnest efforts on the part of thinking people to better their facilities with independent rather than public financial resources.

I find myself reading this entire issue over and over again with increasing pleasure and learning. I have recommended it to all my friends, my clients, and to the architects with whom I come in contact. I think everyone who reads this material will realize that theater architecture is not only a matter of bringing actor and audience together, but that production style and architecture are directly related to one another. It indicates that a philosophy of production must be a vital part of programming.

JAMES HULL MILLER  
Shreveport, La.

Dear Editor: I read your Theater issue with great interest. Congratulations on a very good job.

MRS. GORDON LANGE  
Director of Dramatics, Swarthmore College  
Swarthmore, Pa.

Dear Editor: It took me an entire week end to get through that meaty volume, and I must say that I enjoyed every minute of it.

HARRY WEESE  
Chicago, Ill.

Dear Editor: Your article, "Rehousing the Drama," is wonderful, and will be a great help to our group in stimulating thought and discussion on design for a musical theater that we fondly hope to build in Washington.

CHARLES V. SWAN  
Chairman, The American Light Opera Co.  
Washington, D.C.

Dear Editor: Your issue on Theaters was certainly most timely, interesting, and informative.

Yet owing to its almost exclusive focus on the mechanics or practical aspects of theater design (however clever and ingenious some of these devices may be), its total content must have left many readers with a feeling of unfulfilled expectation—a feeling only partly relieved

by Hugh Stubbins' remarks in his book review.

After all, theaters—with the exception of training stages—are, I believe, built for the public, which gains the maximum enjoyment as a result of a multitude of different impressions and conditions. Certainly one of the most important factors—in my opinion, anyhow—is the theatergoer's environment: that is, the shape and proportion, the color, texture, and lighting, and the detail treatment of the auditorium as well as of the public's anterooms.

It seems to me, therefore, that a follow-up to your February issue on the aesthetic aspects of the theater would be most welcome.

RUDOLF FRANKEL  
School of Fine Arts/Department of Architecture  
Miami University  
Oxford, Ohio

**Urges More Mature Criticism**

Dear Editor: Regarding the New York World's Fair: your constant derogatory statements concerning pavilions at the fair is immature behavior. This constant harrasment lowers esteem and respect for your magazine.

A mature approach seems to point to an opinion based upon serious study of each project on its own merits. Pointless caption-type witticisms are not opinions.

Kindly report fairly and intelligently hereafter.

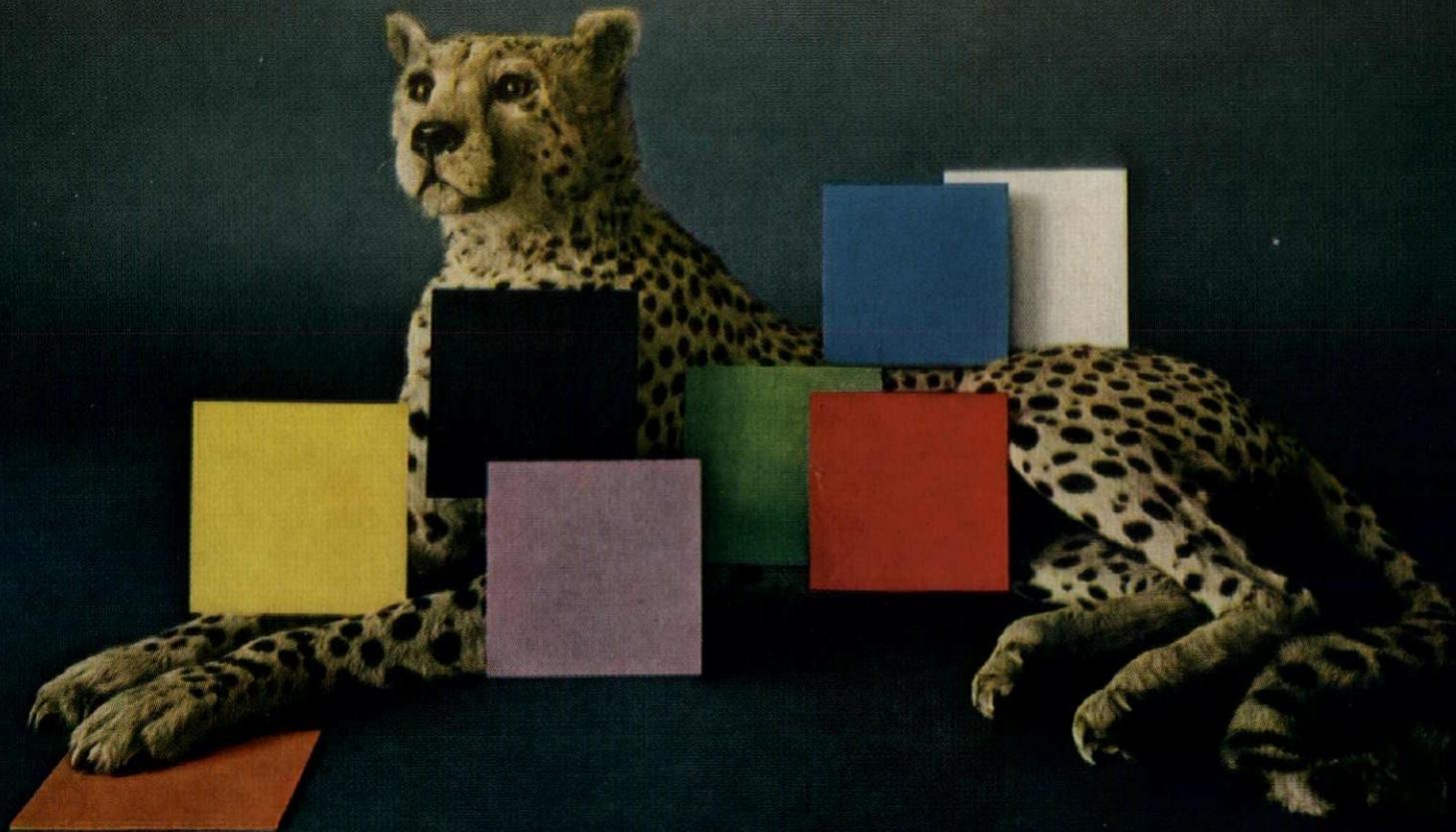
HAROLD HOROWITZ  
Richmond, Va.

**Shoulder-to-Shoulder  
With Robert Moses**

Dear Editor: We do not mean to be ungrateful for the space you gave our work in the FEBRUARY 1962 P/A, even if you were just a bit unkind. Perhaps we should be thankful to be placed in the same negative category as you placed Robert Moses.

At any rate, the "New York-like" solution we have had built for Standard Oil of California at Seattle [page 46, NEWS REPORT] was entirely designed by the very able staff of our San Francisco office, headed by Gene Tepper. We had the excellent consultant services of Patri, Patri, and Patri for architecture, and of Frederick Elsessor for structure. The client, who buys an enormous amount of design and architecture, is sensitive and discriminating and is more than pleased by our efforts. The exhibit space frame is now complete, and Conderback, Inc., who built it, is now concentrating on the interior exhibit we are now finishing.

On page 50 of the NEWS REPORT, al-



## Has Flintkote gone wild?



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though I was placed in the dubious position of being associated with a cat burglar, hard on the heels, no less, of the AIA proposal for a midtown mall, I'd like to call your attention to the fact that a couple of years ago our firm proposed a well-thought-out and broadly backed proposal for improving Manhattan's midtown retail facilities with a Fifth Avenue Mall (as reported in *The New York Herald Tribune* of August 30, 1959). It was backed up by an extensive cost analysis and method of amortization—not merely pie in the sky. Our 90-man staff, with headquarters in New York, Chicago, Los Angeles, San Francisco, and New Orleans, prides itself on down-to-earth thinking based on sensible imagination.

LAWRENCE LERNER  
President, Michael Saphier Associates, Inc.  
New York, N. Y.

*[In a topsy-turvy world, it's gratifying to know that an architect is at least considered a qualified "consultant" to an industrial design firm engaged in building design, and that sensitive clients buy "architecture" as well as "design" in such cases.—ED.]*

### Zuk's Simple Models

Dear Editor: Professor Zuk's report brings to the fore a subject which unfortunately has not received adequate attention on the academic level. The subject of "Experimental Stress Analysis," to our knowledge, has not been emphasized at an undergraduate level in any school. An approach to the investigation of structural behavior on the basis of model studies should precede rather than follow the advanced methods of mathematical analysis. We are pleased that Professor Zuk's report illustrates the advantages of model analysis and are hopeful that these techniques will be further appreciated.

In the preliminary design phase of an elaborate or complex structure, a certain amount of intuition is needed by the designer before he can arrive at a workable solution to the problem. In this respect, Professor Zuk's discussion of nonquantitative model analysis draws our interest. In our opinion, simple scale models can be of valuable assistance in the development of the elements necessary for the strength and safety of the structure.

Going one step further, by recording observations of the behavior of the test model, it may be possible to make certain simplifications and idealizations in the mathematical analysis of the structure.

In effect, if both methods are employed simultaneously, a very powerful and useful technique can be evolved.

G. E. BROOKS  
New York, N. Y.

Dear Editor: The real value of Professor Zuk's article [MARCH 1962 P/A], I feel, lies in the assurances set forth in the first few paragraphs that imaginative design need not be discarded for the apparent lack of a precise and conventional method of determining its structural feasibility, and that there are these simple means of further exploration.

I feel, however, that "just anybody" might be misled by the simplicity of some of the processes outlined, and that the results obtained in some cases could be subject to misinterpretation unless the designing engineer has a certain level of technical knowledge and experience.

JAMES D. COWAN  
Yakima, Wash.

### P/A Design Awards Judging: A Compromise?

Dear Editor: A young friend of mine, a German architect visiting this country for the first time, recently admonished me with the advice frequently given to architectural students: "Don't try to keep up with the 'latest results' published in the architectural magazines of your country."

I believe, however, that what is superficial in these magazines will not unduly influence a mature architect—no more so than many other negative and unfortunate aspects of contemporary society. Yet I believe it is the responsibility of the architect, in his capacity as teacher and within that framework of society to which he hopes to make a worthwhile contribution, to do battle against such superficiality.

A recent example of this may be found, I believe, in the several Citations of the ninth annual P/A Design Awards [JANUARY 1962 P/A].

To quote from the jury reactions to one of these citations (page 128): "However, all the jurors seriously questioned the honesty of the structure . . . 'This makes this a non-serious building,' remarked one of the jurors." Further on, "The citation was given on the basis of . . . its stature as an architectural symbol."

To quote jury reaction to another citation (page 148): "The plan has more to do with painting and graphic design than with architecture . . . but it is an interesting idea."

Surely these summations of projects receiving citations reflect a rather large compromise on the part of the jury. One might begin to suspect that the ninth annual P/A Design Awards Program is more a means of promoting and publicizing the magazine than a device to encourage the development of a more profound American architecture. I believe that the JANUARY 1962 P/A does a great disservice to the profession.

THEODORE R. MATOFF  
Sausalito, Calif.

*[Editors seem to be damned if they do (criticize) and damned if they don't. No work of architecture is perfect in every respect, and one of the important aspects of the Design Awards Program, we feel, is the publication of the jury's critical as well as favorable comments about the projects selected. Our correspondent has quoted the questions that arose in the minds of the jury members, but substituted ellipsis marks (. . .) for the favorable final decisions.—ED.]*

### Form and Essence

Dear Editor: I have read with interest the article "Form in Churches" by Peter Collins in the DECEMBER 1961 P/A. Mr. Collins' four points in attempting to describe what makes form significant are valid criteria but tend to place emphasis on architectural egoism. A form, to be made significant by manipulation of these four criteria, would, I fear, neglect the spiritual essence of a church.

This essence lies in identifying the needs of man. The courage employed in shaping the structure and its symbols are ineffective if prayer and meditation are not encouraged by the architectural result. And I submit that a church design should not be all things to all people; it will not indicate this by the congregation that seeks it out as its place of worship. By recognizing the needs of man's spiritual being, and surrounding him with space and light that are conducive to his self-realization, significant form will have been delivered.

The three examples of churches shown in the article subscribe vigorously to Mr. Collins' fourth point. In the face of a religious supermarket, it is no wonder that basic church doctrines are being reinterpreted for a unified stand. The design of churches should not add confusion of form at this point by appealing to the pages of architectural journals; they should instead achieve significance by aiding man's search for truth.

ERNEST J. KUMP  
Kump Associates  
Palo Alto, Calif.

## **A. G. ODELL, JR. & ASSOCIATES**

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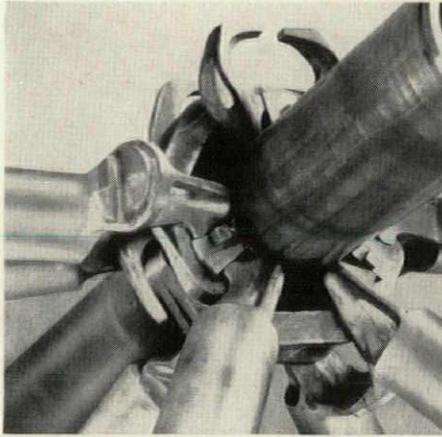


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R. J. Reynolds Tobacco Company cigarette factory, located at Winston-Salem, North Carolina. **Consulting Architects for the exterior and lobby:** A. G. Odell, Jr. & Associates, Charlotte, North Carolina. **Design, Engineering and Construction:** R. J. Reynolds Engineering Department. **Concrete Panel Manufacturer:** "Mo-Sai" by The Mabie-Bell Co., Greensboro, North Carolina.



## The Hub of the Matter

BY SERGE CHERMAYEFF, FRIBA  
THE TURNING POINT OF BUILDING:  
STRUCTURE AND DESIGN, by Konrad  
Wachsmann. Published by Reinhold Pub-  
lishing Corp., 430 Park Ave., New York  
22, N.Y. (1961, 239 pp., illus., \$15). Re-  
viewer is Professor of Architecture at  
the Harvard Graduate School of Design.

In a general way, it is true that the vast construction industry in advanced industrial societies, concerned with the provision of shelter for proliferating humanity, is currently undergoing as drastic a change as are health services, transportation, and communication systems, merely to select a few obviously related areas.

It is equally true that the revolution in science and technology, which appears so dramatic today, was begun quite a while ago; and most historians of the modern movements in the art and science of architecture, et al, have documented

these antecedents repeatedly.

The reader of Konrad Wachsmann's *The Turning Point of Building: Structure and Design* will find its contents perhaps narrower than the title suggests. It is an essay on a very special aspect of building construction, although the title suggests a more liberal or catholic view of modern structural technology.

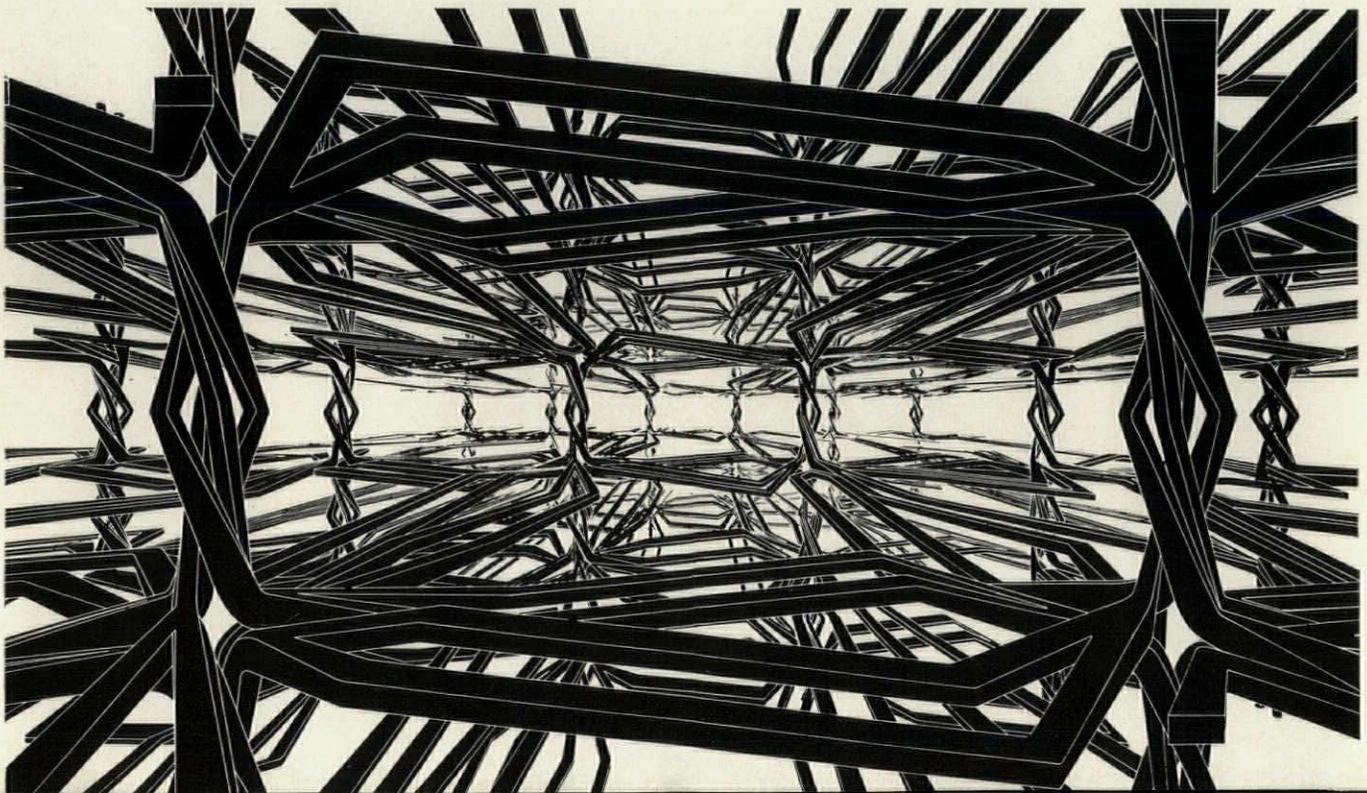
Wachsmann is historically conscientious and starts with an introduction in which we meet a number of old friends. Paxton and his Crystal Palace, the cast iron and steel bridge builders are all there, and Alexander Graham Bell and his—the first—space-frame experiments. We must be grateful for inclusion of Bell's experiments—particularly since they were so conspicuously neglected in such authoritative treatises as Giedion's *Space Time and Architecture* and Buckminster Fuller's writings generally. Eventually we meet with Fuller's geodesic dome, contemporaneous and ap-

parently similar to Wachsmann's own large enclosure designs. The profound differences, however, soon become apparent.

The reader will look in vain here for the thin shells, the prestressed reinforced concrete elements, the laminates, the membranes, and the potentials of synthetics generally that have immeasurably enriched the contemporary vocabulary of form. Except for a cursory glance at one of Frei Otto's small tents, conspicuous by their absence are Freyssinet, Cotencin, Maillart, Torroja, Nervi, Candela, Arup, and Le Ricolais, to mention the well-known.

Wachsmann's world is a hard, shiny, metallic one in which sometimes panels and mostly linear members are hooked, spliced, slipped, bolted, and riveted together. In Wachsmann's own designs, the parts are apparently never intended to be fixed together into permanent

*Continued on page 202*



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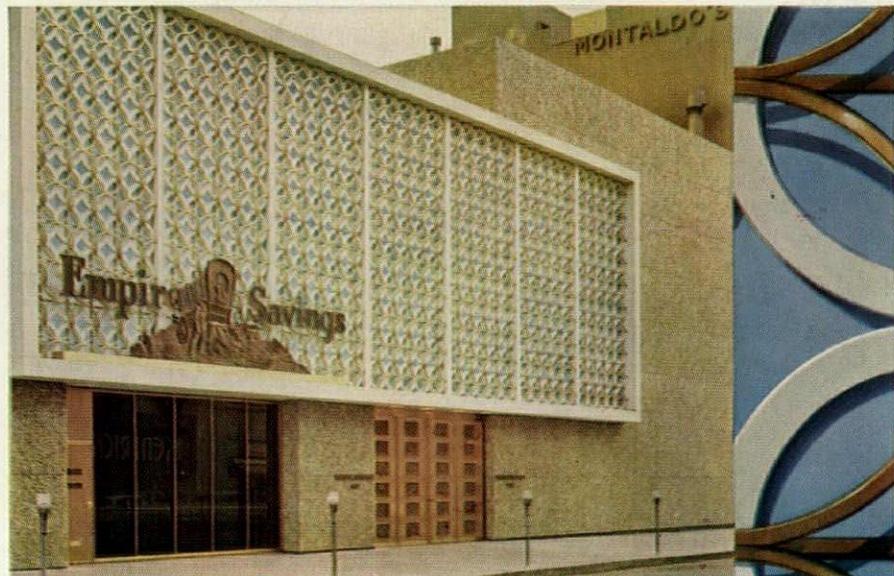
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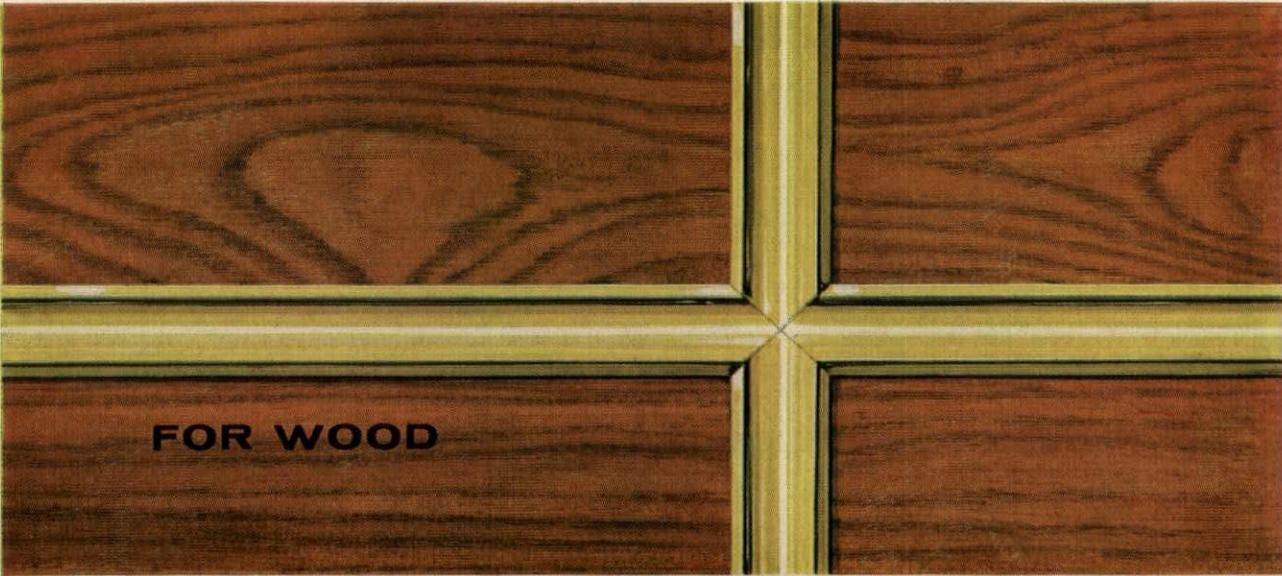
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Continued from page 198

structures; the separate parts must be presumed to be of such complete excellence in themselves that they will never become obsolete. They are simply awaiting disassembly and regrouping: deathless, perfect, absolute, stable; a man-made element good from here to eternity, free from fear of fission or fusion.

In the first part of the book, after a quick look at a selection of structural invention, mentioned above, that he finds fascinating, the author turns to the production process of dry prefabricated

parts in highly industrialized factories where precision, standardization, and quantity are the guiding principles. This leads him quite logically to a discussion of various structural, mechanical, and functional modules and modular planning systems that can facilitate the translation of mechanization and standardization into buildings.

This is followed by a survey of some assembly systems presently employed, and introduces his real theme, which is concerned with construction.

The second part of the book is a very

complete documentation of various projects of Wachsmann's design, developed, detailed graphically, and constructed in meticulous model form with the assistance of architectural students in various schools (ranging from the Institute of Design in Chicago, to which Wachsmann was invited by the present reviewer in 1950, to Japan in the late '50s). This traces a peripatetic professorial path previously beaten by prototyper Buckminster Fuller. But here the similarity ends. Fuller developed a unique structural principle; Wachsmann is concerned exclusively with construction method, and no new structural systems or principles are involved in any of his projects.

It is in this section that the author's strengths and weaknesses are revealed. Some of the pictorial material scattered throughout the book illustrates, perhaps unconsciously, Wachsmann's favorite adage: "In the beginning there is the joint." A quick turning of the pages produces a cinematic effect of hub assemblies turning and twisting in all directions. The mechanical conjunction of linear elements, the articulate joint, is the hero of the movie from beginning to end.

Wachsmann, on his own admission, not only sets himself tasks of great complexity, but he arrives at brilliantly designed devices and details for dry assembly of prefabricated building components. If one accepts the author's premise that this is the only rational building method, one will be fascinated by the inventiveness and artistic imagination displayed, and will not be irritated by the errors in the basic logic. The performance has a touch of genius.

Everything dissected and displayed before us remains unbuilt at the time of writing, if we except a few sample houses for the General Panels Corporation built before the company went into bankruptcy. Perhaps, as was the case with Fuller once upon a time, incompleteness is simply a temporary historic necessity, and Wachsmann's projects will indeed be constructed in the fullness of time. It is legitimate to speculate, however, now that this rather complete catalog of Wachsmann's work is before us, on possible reasons for failure. Is there perhaps a pervading weakness in the basic premise that Wachsmann advances for every project, irrespective of purpose and scale?

A clue to the reason why none of these projects has been constructed may be found in the book itself in the omission of the simple notion of efficiency

Continued on page 208



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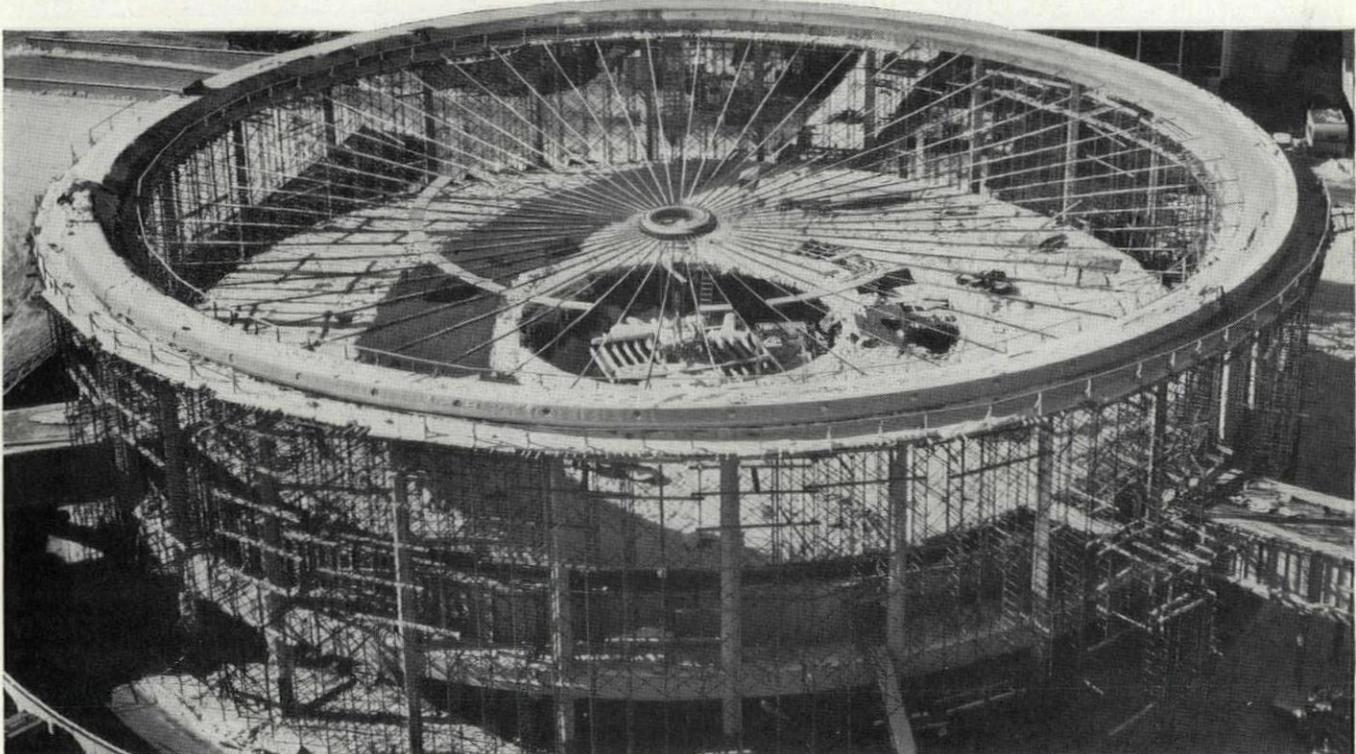
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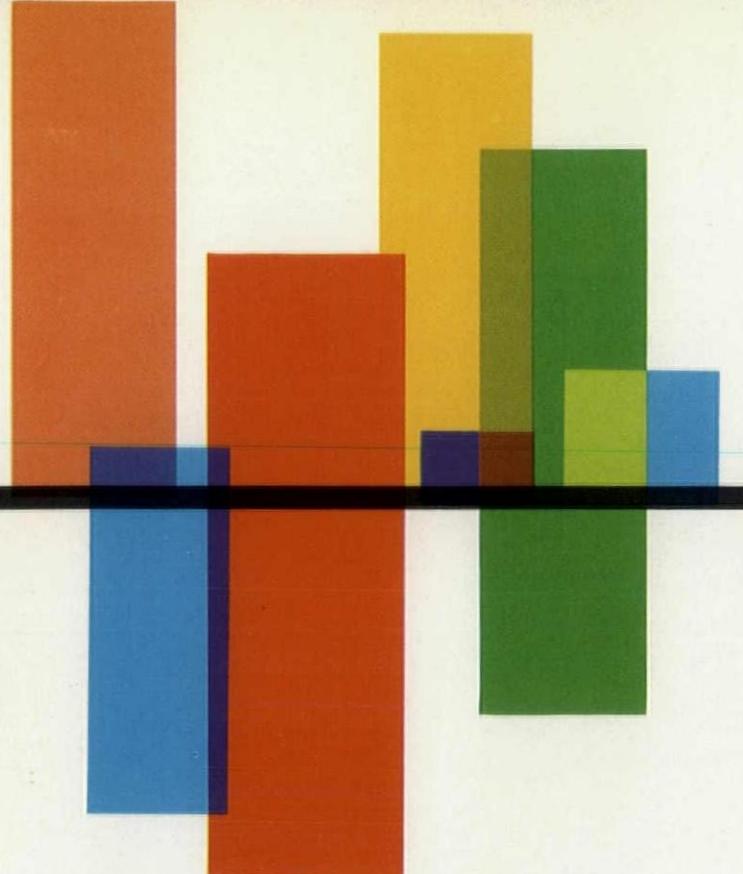
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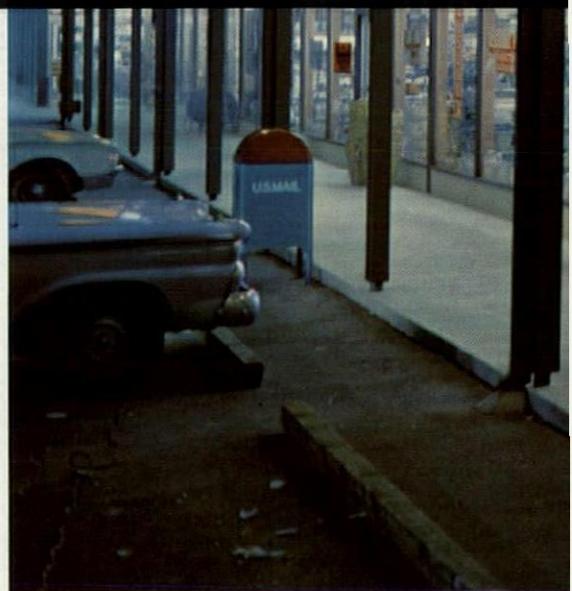
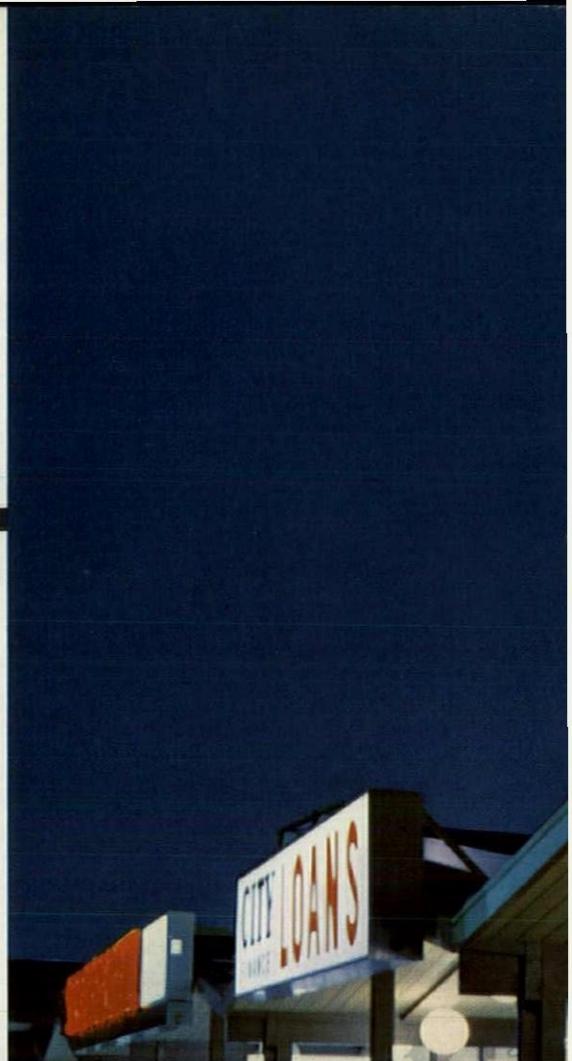
Located in the Oregon coastal community of Reedsport, this well planned center attracted such a demand for space that the owners started expansion plans before the structure was completed. Situated on a four-acre site, shopping center has a floor area of 28,000 square feet with additional 12,000 planned. The parking area accommodates 180 automobiles.

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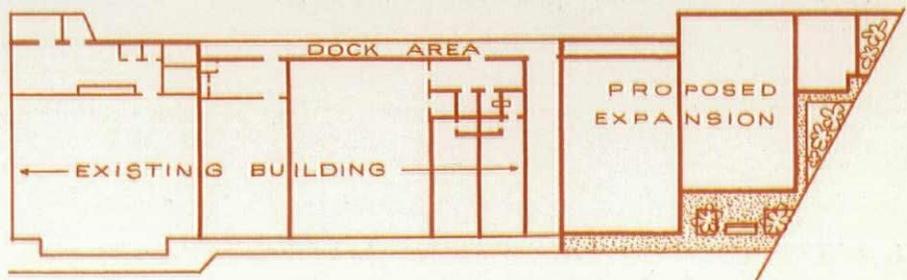
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Continued from page 202

appropriate to a specific construction purpose. Any one detail in any one project is invariably conceived as an ideal joint for any situation of any scale and involving availability of special skill. The author's designer's equation, which is predicated on mass-production of standard parts, and which presupposes vast facilities for these purposes, omits entirely the essential ingredient of steady mass-consumption. The mechanical logic has no concomitant economic or structural logic. Some functional results, such as the provision of small houses, can obviously be obtained with less mechanical ingenuity and com-

plexity, with more appropriate, and not less highly sophisticated—if technically different—means. Good acoustic conditions, an integral part of dwelling problems, for instance, are more easily provided by exploiting mass rather than thin panels. A precise jointing system of limited tolerance is appropriate to a highly industrialized production process in the factory and under controlled conditions, but is this precision a proper prerequisite for all situations in assembly?

Every project of Wachsmann's has a "universal" implication, and each solution may be considered universally applicable. This constant search for uni-

versality in each joint between elements leads inevitably to a redundant complexity in situations crying out for simplicity. The universality principle, as one looks at the various projects, begins to assume the dimensions and character of obsession: an obsession which ignores the diversity of forces and purposes involved in the larger spectrum of building needs and potentials. The beloved joints proliferate, proving their mechanical "turning" point every time at the expense of other, perhaps more cogent, issues favoring a different constructional attack (such as flexible and powerful adhesives).

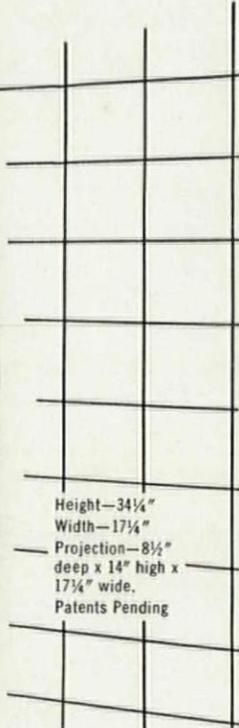
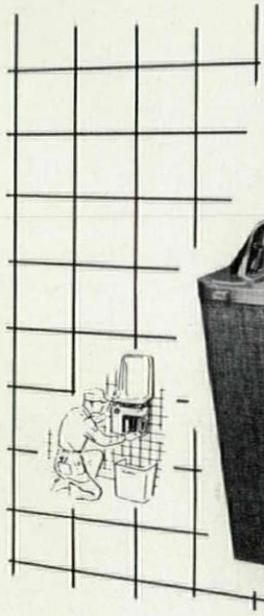
This obsessive striving to design a single, universal, metal, mechanical joint principle for every situation becomes merely capricious in all too many of Wachsmann's projects. In the case of the General Panel house, the six-directional assembly point is really redundant. The design of a good roofing system, qua roof, might have been more successful than the assembly of standard panels for floors, walls, partitions, and roof alike, insisted upon by the designer. In later pavilion projects, included in the book, space-frames of modest size are assembled for both floors and roof, and these can, of course, be so constructed. But whereas in the earlier enormous hangar projects of Wachsmann's this system is one of few which can actually provide the advantage of the desired giant clear span, in the case of the pavilions the modest spans required may perhaps with greater advantage be obtained by any one of a large number of less complex—and more economic—structural means.

Perhaps the economy of structures assembled out of thousands of separate parts, irrespective of the purpose and dimension, has been established—assuming, of course, the appropriate reduction in cost of fabrication of the parts by making these into mass-produced staples. But isn't this assumption questionable? Today's trend in reduction of the cost of parts through material processing by growing automation is accompanied by the disproportional increase in the cost of distribution and in the cost of skilled labor for assembly on site. Such considerations must affect the choice of constructional systems for many building types.

One cannot, of course, resist the desire to see at least some space-frames constructed by the affluent society for the sake of their beauty alone, and without regard for economics. The pro-

Continued on page 212

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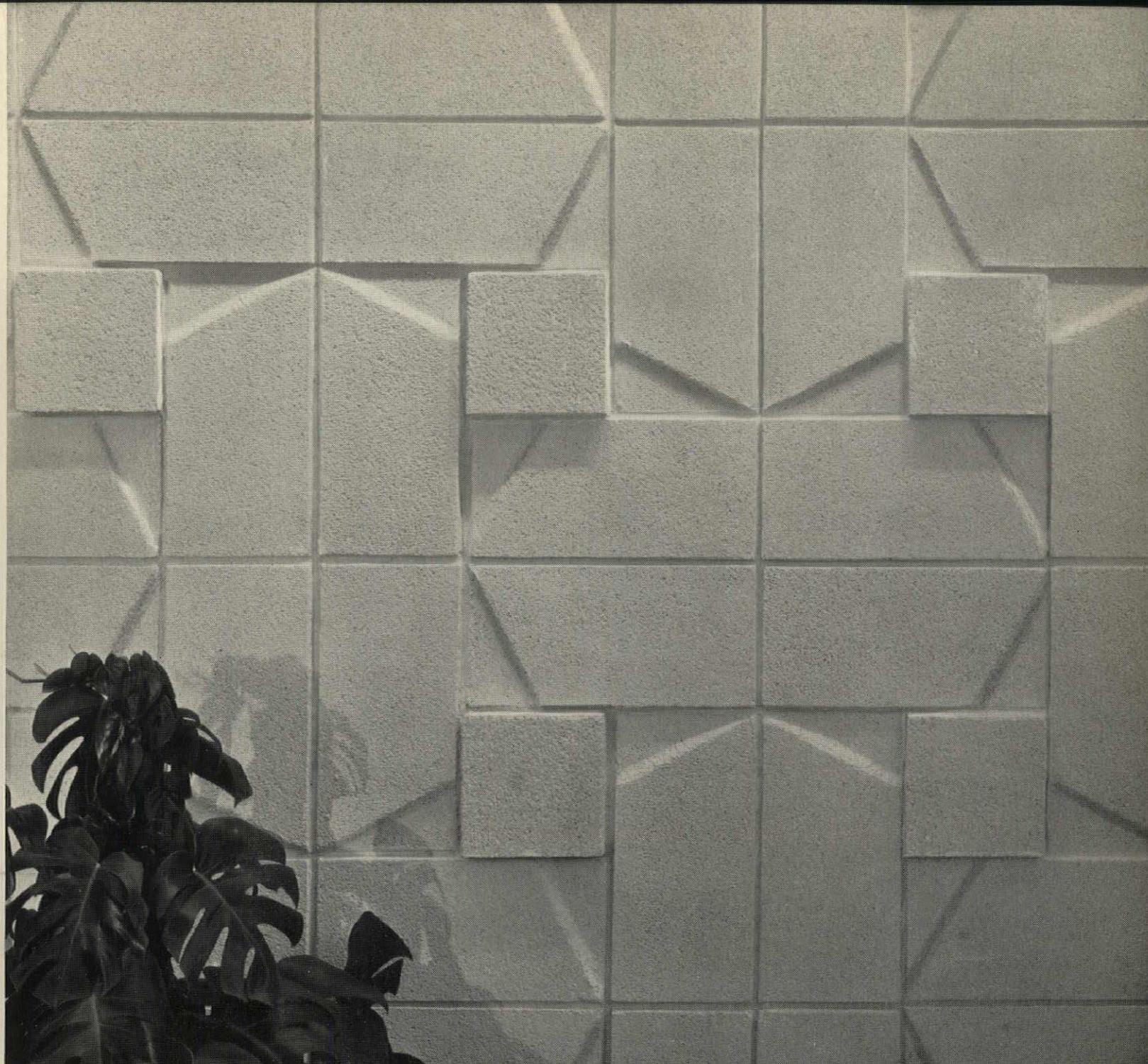
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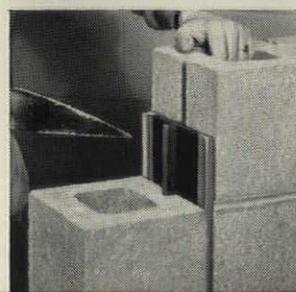
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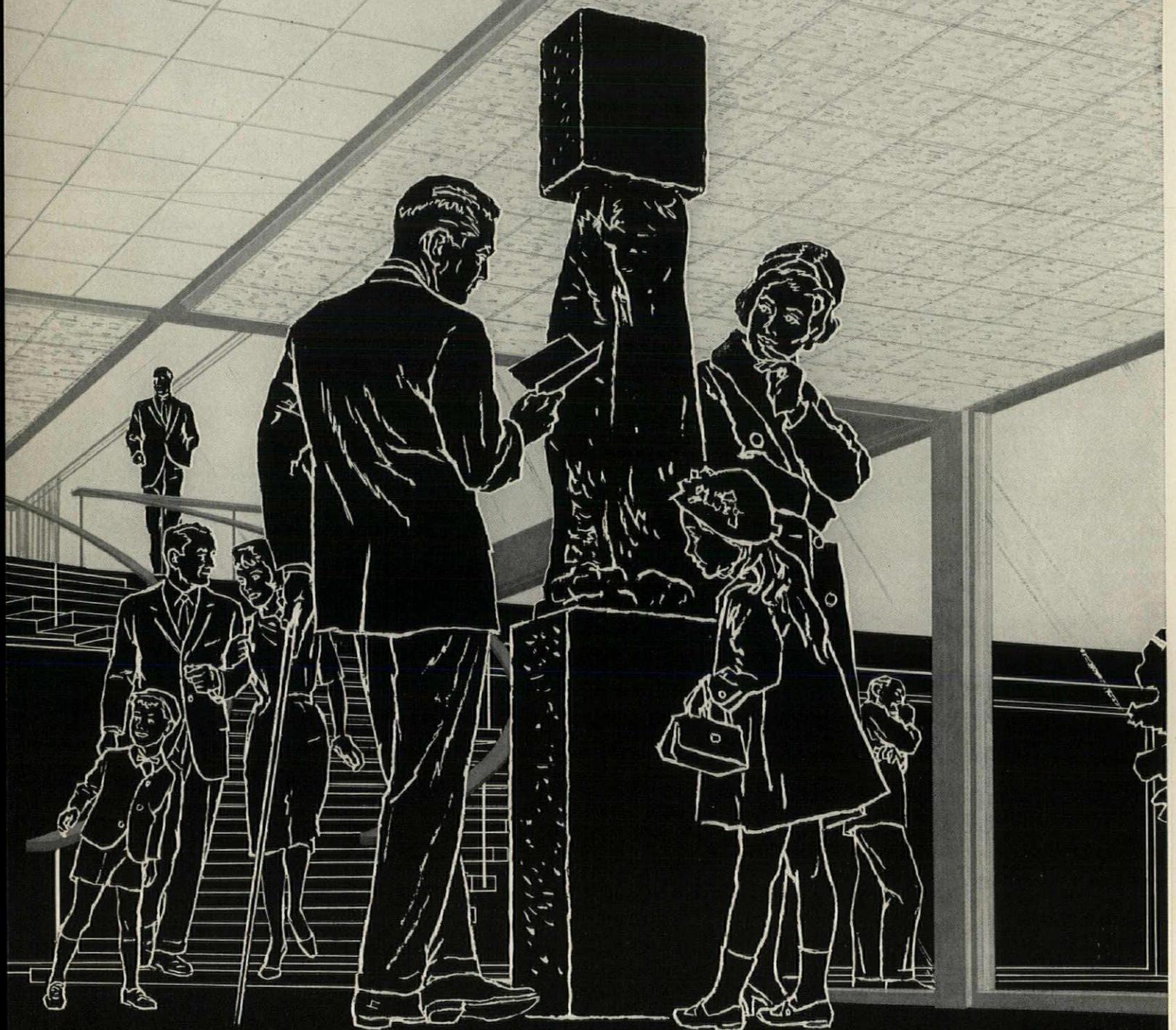
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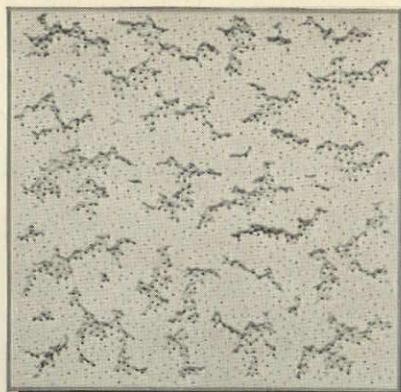
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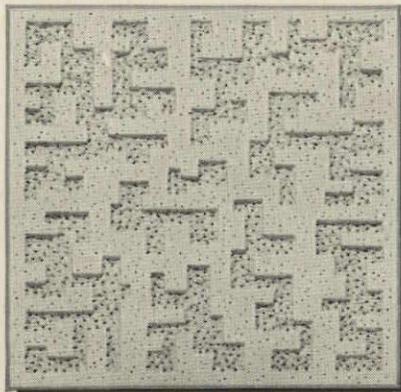
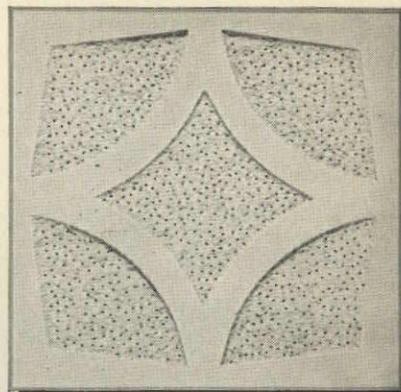


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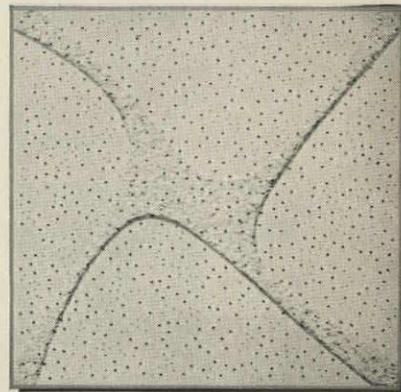
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Continued from page 208

totypes already erected by Fuller suggest that such structures may indeed become the "Gothic Cathedrals" of our new era, serving magnificently the growing demand of mass-culture for ever larger enclosures.

One cannot deny that within the very narrow segment of the total structural spectrum now becoming visible, in which Wachsmann's interests lie, his designs are remarkable.

The presentation alone, in exquisite drawings and scale models of extremely complex three-dimensional "events,"

should be carefully studied by all students of the art and science of architecture. The presentation of "a dynamic structure" is particularly striking in its graphic clarity and virtuosity. It is a tour de force. The structure itself happens to be extremely stable, and conventionally braced. It is only the twisted form of the members which suggests movement. True dynamic structures on the membrane principle have indeed been projected, but not by Wachsmann.

This reviewer, writing as a teacher, has many reservations about the usefulness of employing hundreds of student

hours on the construction of a complete scale model of a giant space-frame, involving repetitive and not very instructive work. It may be argued, of course, that today, as in the past, some of the most impressive works of man had to rely on slave labor. In any case, it is quite obvious that much of the enthusiasm, energy, ingenuity, precision, and high skill of Wachsmann rubs off on the slaves.

The interest of the book lies in the thoroughness, completeness, and skill which go into each project. Wachsmann's one-track approach to the revolution in building has produced, over the years—precisely because of the self-imposed limitation—a display of artistic and technical virtuosity in detailing which must command the utmost respect from the architectural profession and the construction industry alike.

### From a Leading Exponent

PRESTRESSED CONCRETE, by Y. Guyon. Published by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N.Y. (1960, 2 vols., 1300 pp., illus. \$33)

When the first of these two volumes was originally published, eight years ago, it was quickly accepted as a standard work on the simply supported prestressed-concrete beam. Now, in Volume II, Guyon applies the same erudition, thoroughness, and mathematical skill to the subject of statically indeterminate structures.

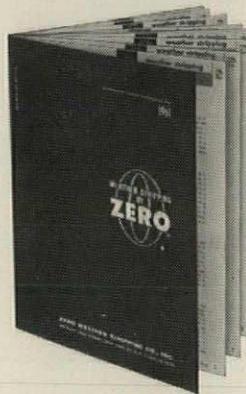
The new edition of Volume I is virtually a reprint of earlier editions, with the exception that 15 pages of supplementary matter has been added. Among the new material is a summary in tabular form of the many prestressing systems now in use; their number and variety contrast sharply with the three or four pioneering techniques available to the engineer only 10 years ago and indicate that prestressed concrete is achieving general acceptance and increasing sophistication.

Although Volume I remains essentially the same, certain topics—such as cracking, shear, and ultimate load conditions as they affect simply supported beams—are pursued further in Volume II, which is nominally confined to statically indeterminate structures. It is perhaps a formal weakness of the book that the discussion of parallel questions in Volumes I and II has not been better integrated.

Volume II is divided into two parts:

Continued on page 216

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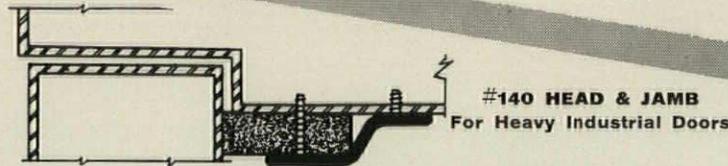


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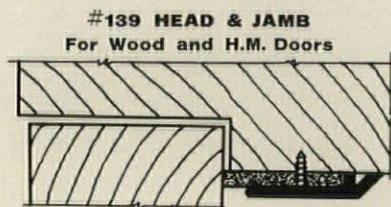
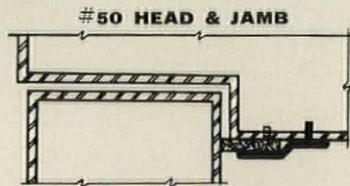
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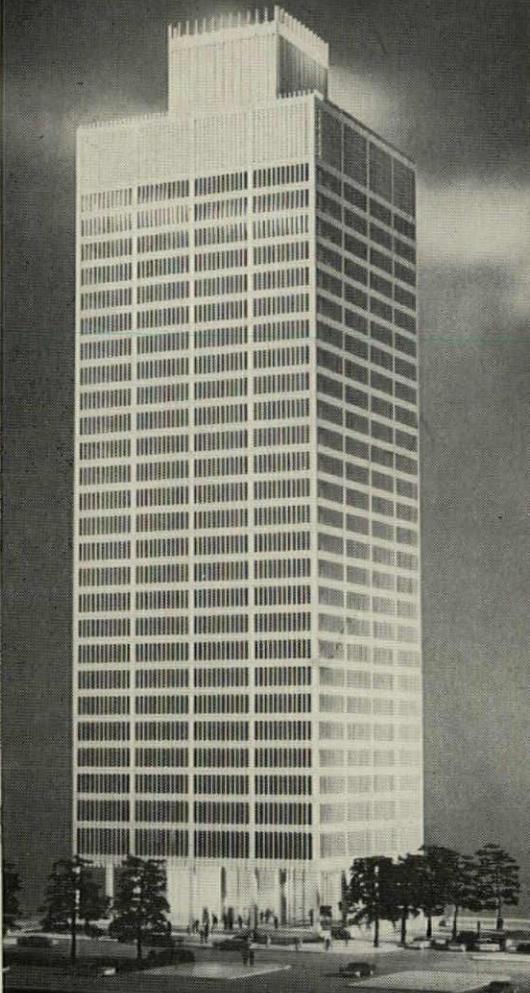
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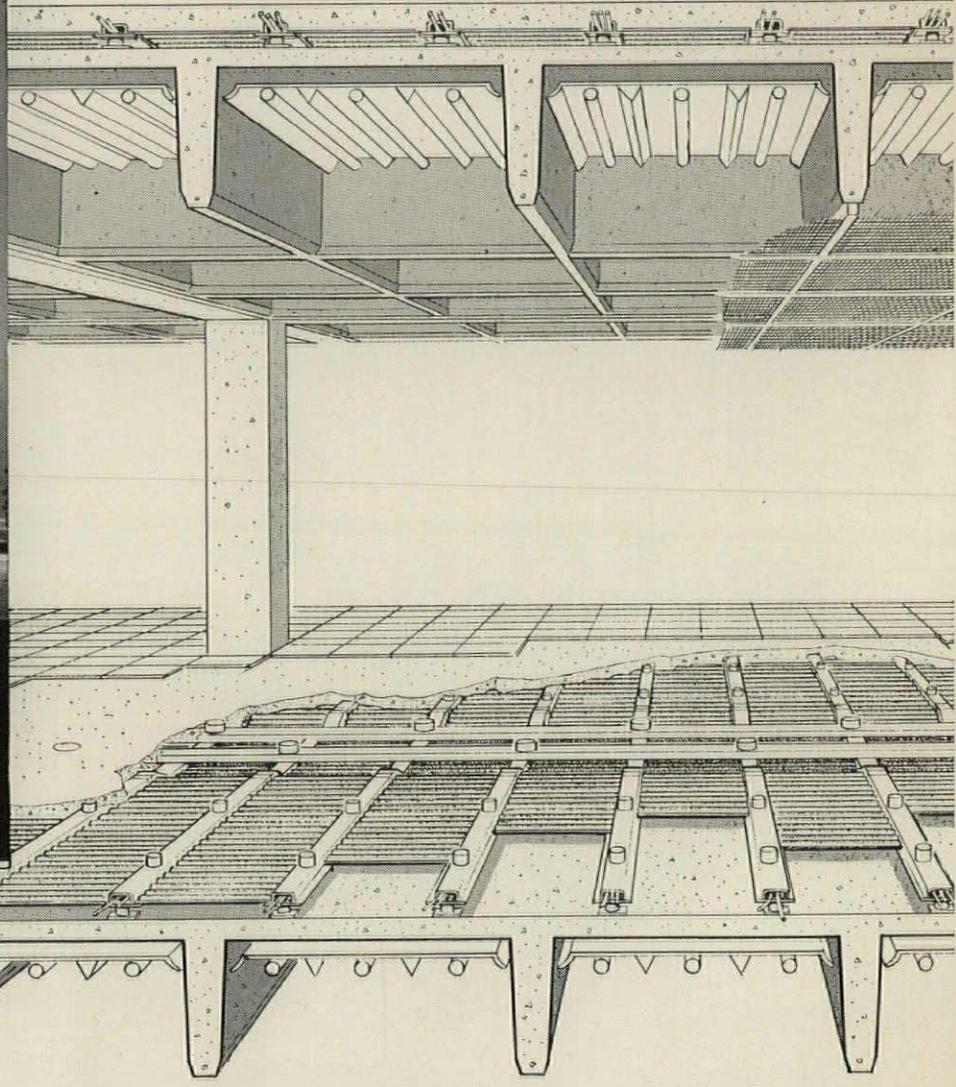
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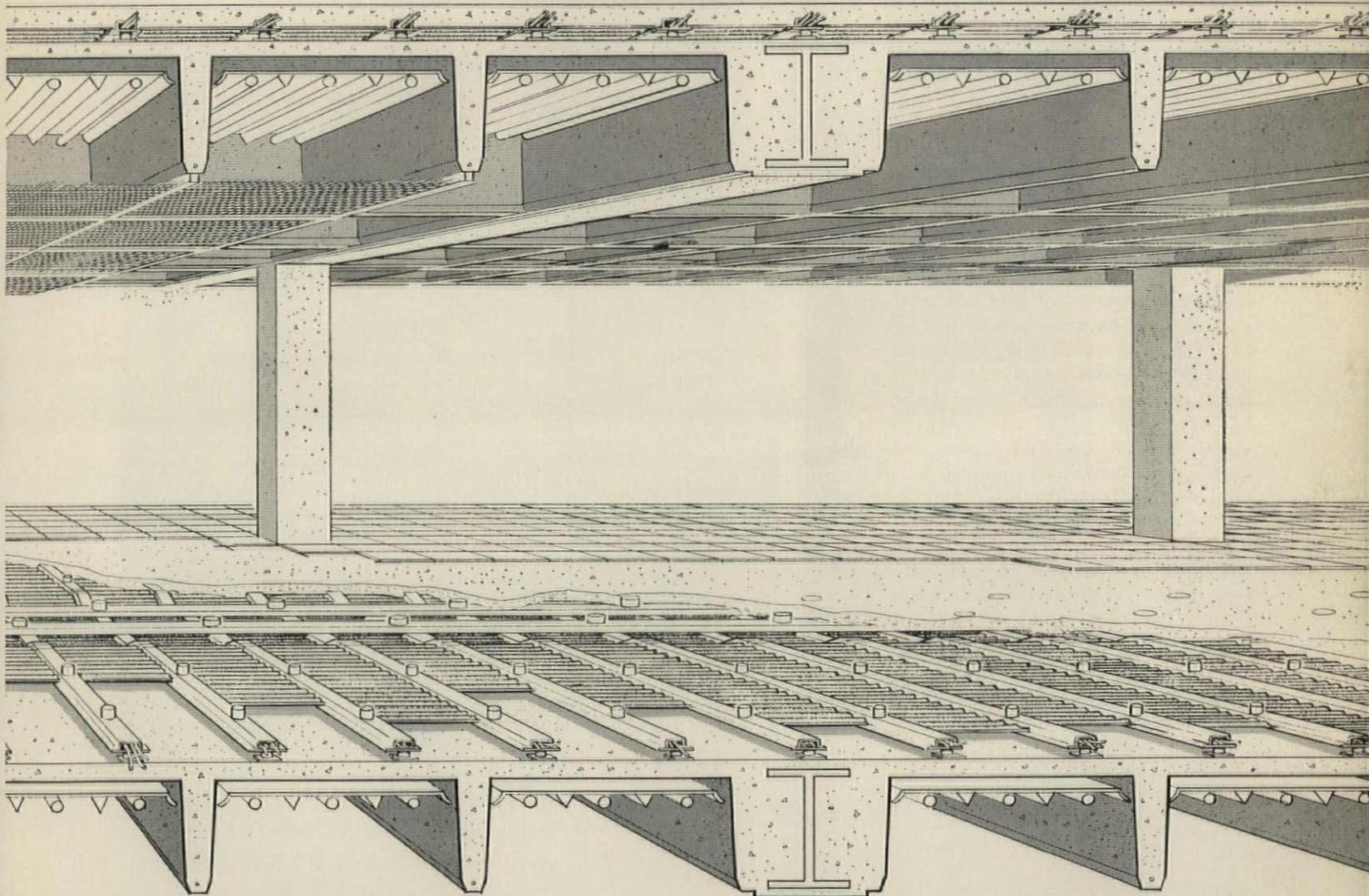
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Continued from page 212

(1) the elastic analysis of statically indeterminate systems, and (2) tests on statically indeterminate systems, adaptation, and failure, for a total of 741 pages. Nevertheless, the author does not deal with all types of statically indeterminate structures, but only with those subjected mainly to bending and composed of members of more or less constant cross section. Thus, shell roofs, domes, tanks, and circular prestressing in general are not discussed. On the other hand, the continuous beam and the rigid frame are treated in meticulous detail.

The author has some interesting comments to make on delayed cracking in prestressed concrete. In this connection, he proposes a criterion for distinguishing between harmful and acceptable cracking—namely, that cracks revealed by visual inspection are harmful, whereas micro-cracks that can be detected only by special means can safely be disregarded.

Statically indeterminate prestressed-concrete structures are not easy to design and all the answers have not yet been found. Guyon's book is therefore more an account of some of the developments at a growing point in engineering knowledge than a design handbook in the ordinary sense. This is reflected to some degree in its length and diffuseness and in the emphasis on the analysis of test results. Accordingly, it may appeal more directly to research workers and specialists in prestressed concrete than to the typical designer in search of a ready-made answer to a specific question.

This, of course, in no way detracts from the real value of the book which, ably translated by C. van Amerongen, makes available to the American reader the accumulated experience and thought of one of the world's leading exponents of prestressed concrete design.

T. E. BURTON  
Engineer  
New York, N.Y.

### Supper for Thirteen

SPACE FOR LIVING: LANDSCAPE ARCHITECTURE AND THE ALLIED ARTS AND PROFESSIONS, edited by Sylvia Crowe. Published by Djambatan, 41 Viottastraat, Amsterdam, The Netherlands. (1961, 140 pp., illus. \$10)

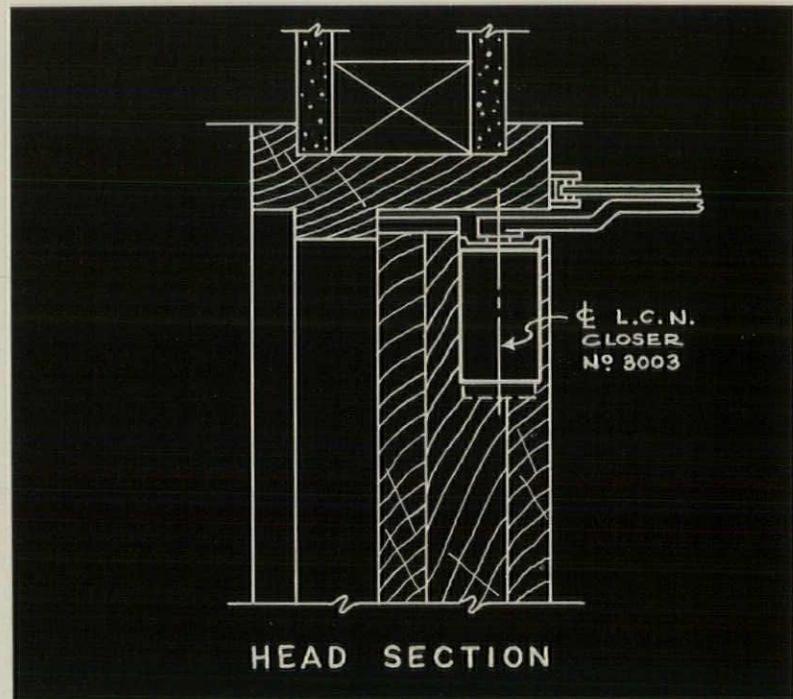
Conferences being what they are, it is a step away from barbarism to have their proceedings published: it makes it possible, without attending, to examine these reports at leisure. *Space for Living* is such a publication: it reports on a conference held by the International Federa-

tion of Landscape Architects in Amsterdam last year to discuss the "orchestration" of a planning team. It takes the form of contributions by 13 of its members, and 50 or so pages of photographs and diagrams that were part of its exhibit. Sylvia Crowe, as editor, and the Djambatan Press of Amsterdam, do a remarkable job of making this palatable.

G. A. Jellicoe, President of Honor of the IFLA, and possessor of an alphabet of other titles, keynotes the conference with a contribution called "A Table for Eight"—to which he invites "an ideal planning team." Meticulous host that he

is, Jellicoe tends to sputter a little in seating his guests properly and in selecting just the right size and shape of table for the occasion. He finally selects a square table, and seats his guests "anti-clockwise" (which I take to be a Britishism rather than a prophecy); philosopher is paired off with town planner, horticulturist with engineer, architect with landscape architect, and sculptor with painter. He is briefly disturbed by the horticulturist who regards himself as an artist, a "difficult problem," but regains his composure by way of a tribute

Continued on page 220



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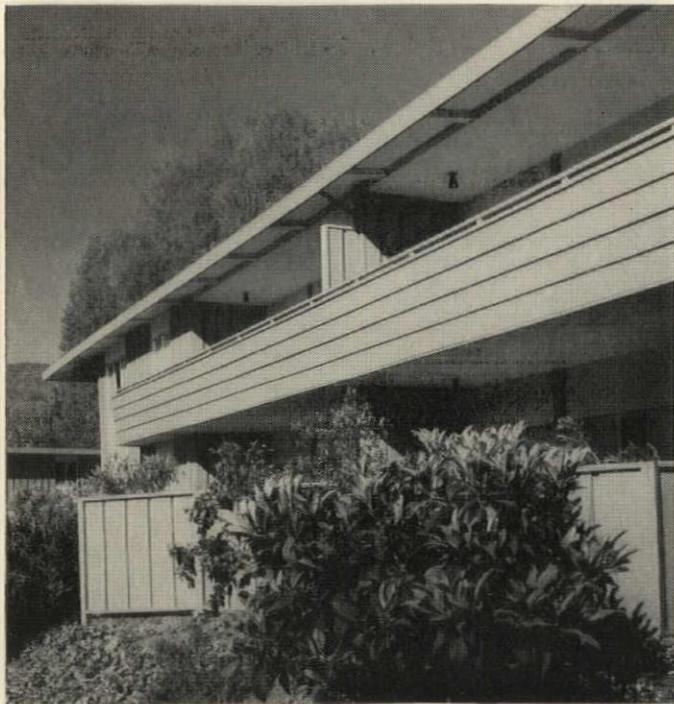
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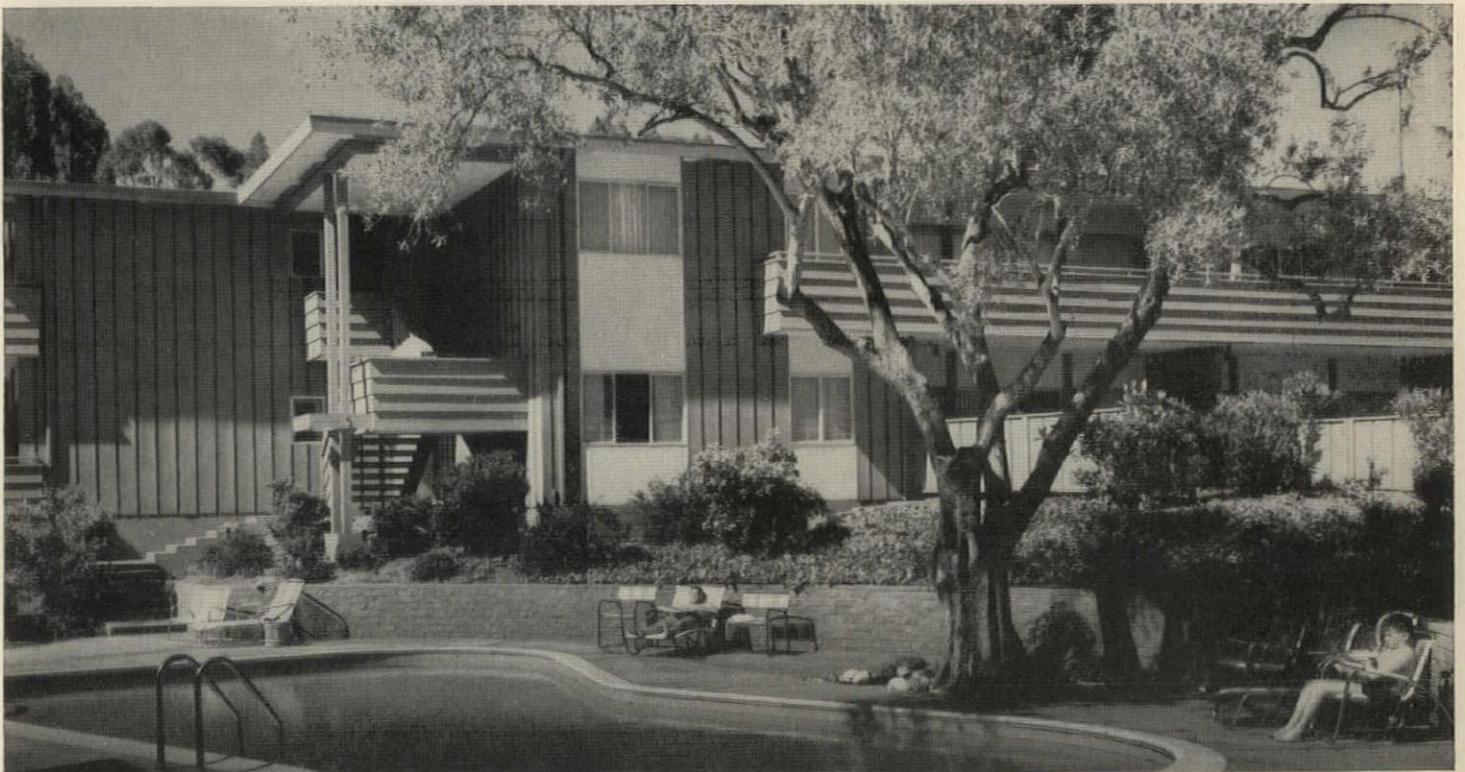
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Continued from page 216

to the *real* artists present (the sculptor and the painter) "... without whom," he says, "our art would be unmanured and barren."

Metaphors notwithstanding, "A Table for Eight" is an extremely tidy send-off, very British; and with just the slightest sacramental bulging of "the table," the conference that follows might well have been called *Supper for Thirteen* instead of *Space for Living*. The apostles, however, are by no means as uniformly ethereal as the master. Lewis Mumford, for instance, earthly expands the garden-

city philosophy to the hope of a "garden civilization," and is currently concerned with the "anaesthesia of locomotion" (our insane drive to get nowhere at higher and higher speeds). Heaven knows, although Detroit does not, that this is a universal problem today, but it is regrettable that Mumford's style has become so anaesthetic in describing it; as early as *The Culture of Cities* he pointed out that "instead of inventing the vacuum cleaner, we should have got rid of the rug." Since then, he seems to have been unable to get rid of the verbiage.

But verbiage is a fairly consistent ingredient of *Space for Living*, along with the conference-given right to bare the circumstances of one's salvation. One disciple of the new landscape vision advocates free, open planting for the roadsides of the world. Another, following the museum line, sees it all as an outgrowth of painting and sculpture. Still another has discovered that *light* is the main raw material of landscape, loves flowers, and wishes the post boxes, etc., would be made more uniform in England. And then there is the horticulturist who never quite gets through the language barrier, but speaks of "passionate plant lovers," and certainly is one. (Jellicoe is right. This is a "difficult problem.")

On the brighter side, Kuro Saneko of Japan and the home team from the Netherlands come off about the best. Saneko, although speaking in a foreign tongue, survives the language barrier best. I cannot tell whether he simply has more to say or whether it is that he draws his breath in such pain to tell his story, but what comes through is a polite, but deeply felt, resentment at Western license with Japanese design and refusal to understand the Japanese point of view. He stands, heartsick, amid the alien corn, and speaks to his fellow members in the clear agony of which poetry is made. Not so with the Netherlands' team; they are realists of the first order, and foil against their fellow members because they bring only bread and wine of local vintage to the supper. They have a problem—and a fascinating one—which they aim to solve. It is the age-old problem in the Netherlands of wresting land from the encroaching sea, and the story is told with all the realism and detail of an early Dutch painting. In this company, it stands out gaunt and sobering as a field-torn farmer among summer intellectuals; while the results so far may be less than "art," they represent a high plane of survival and determination which some Rembrandt may one day set free.

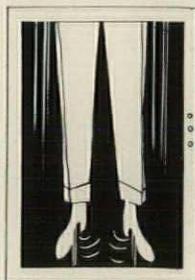
As for the exhibition phase of *Space for Living*, without going into painful detail, I can only say that the IFLA seems to be scraping for material that it has not yet learned how to select or present. Once again they drag out the old stand-bys (Villa d'Este, Versailles, Hampton Court), and show "projects" that have the uncertainty of purpose often found in student designs (although not so often as found here). With very few exceptions (notably the Netherlands, again), this report of the Federation's "living," graphically or verbally, is a

Continued on page 222

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Continued from page 220

gross exaggeration. Of course, you may not be as tired of warmed-over virtue as I am, but if you are determined to sit in on this supper for 13, I think you will find that Judas emerges as a more sympathetic character than generally supposed.

JAMES C. ROSE  
Landscape Architect  
New York, N.Y.

### A Notable Era

THE BOOK OF BOSTON: FEDERAL PERIOD  
by Marjorie Drake Ross, with photo-

graphs by Samuel Chamberlain. Published by Hastings House, 151 E. 50 St., New York 22, N.Y. (1961, 175 pp., illus., \$4.50; \$2.50 paperbound)

Mrs. Ross's second guide to Boston is most welcome in cataloging the buildings that are left from the period 1775-1837. There are many illustrations, either recent photographs by Samuel Chamberlain or reproductions of old views. Again, as in the previous volume on Colonial Boston, one of the most interesting parts of the book is an inventory, made in

1806, of the estate of a merchant, with complete listing of his house and store.

The period covered in this book was especially notable in Boston, with Charles Bulfinch's State House crowning Beacon Hill and his many fine residences for that fashionable region. There are significant houses and churches by Asher Benjamin. The great Quincy Market designed by Alexander Parris and the granite Custom House by Ammi B. Young also date from this era. The book concludes with "A Suggested Tour of Federal Boston for the hurried, intelligent traveler," a list of 25 important buildings or groups of houses. It is hoped that similar guides will be prepared for the many other historically rich American cities.

AGNES ADDISON GILCHRIST  
Past President  
Society of Architectural Historians  
Mt. Vernon, N.Y.

### The Nature of Good Design

WHAT IS DESIGN? by Paul Jacques Grillo. Published by Paul Theobald & Co., 5 N. Wabash Ave., Chicago 2, Ill. (1960, 238 pp., illus. \$14.75)

*What Is Design?* is a guide to the appreciation of good design. In this Renaissance-like performance, the author has done much more than simply preparing the text; he has used his own buildings, paintings, drawings, and maps (photographs and illustrations of these are also his own); he did the sculpture illustrated on the book jacket; and he prepared the over-all book design. His photographs and sketches of natural phenomena steal the show.

Grillo's text reads like a series of fiery sermons. The writing is both sincere and remarkably free from the clichés of current architectural literature. The material is essentially a very personal, and at times romantic, rehashing of the premise that great design is made manifest through the observation of nature.

The text is divided into three sections: archetypes, proportion, and composition. The first part deals with form—not pure form, which is abstract, but applied form, which is architectural—and how pure form kindled by climate and orientation becomes specifically architectural form. Materials, i.e., formal and structural selection of materials (and expression of material), concern both the pure and the applied designer. Here the author deals with fused (continuous) and articulated (discontinuous) forms, suggesting that fusion is essentially within the realm of

Continued on page 227

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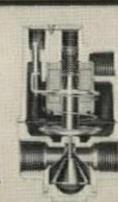
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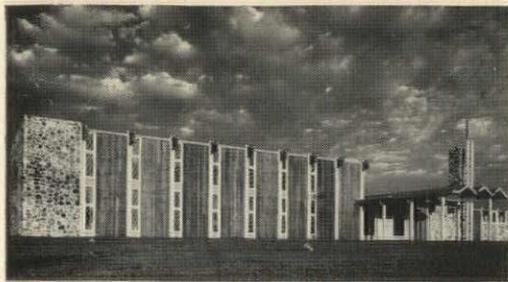
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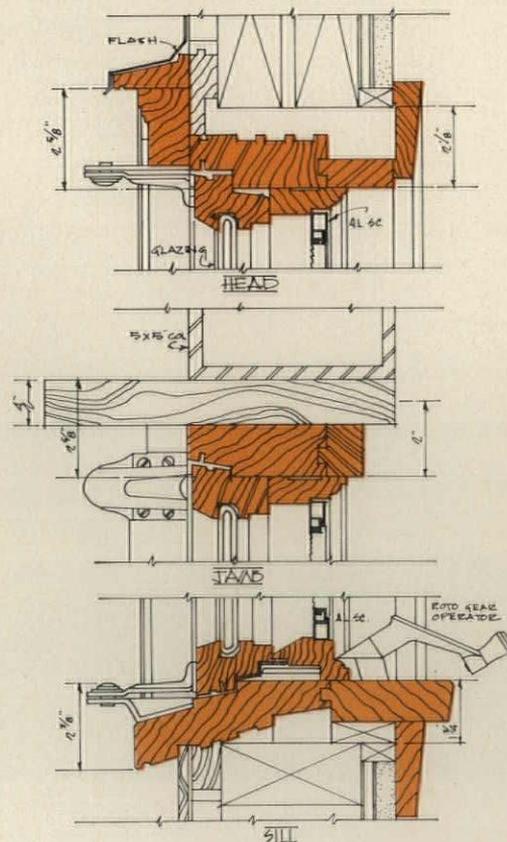
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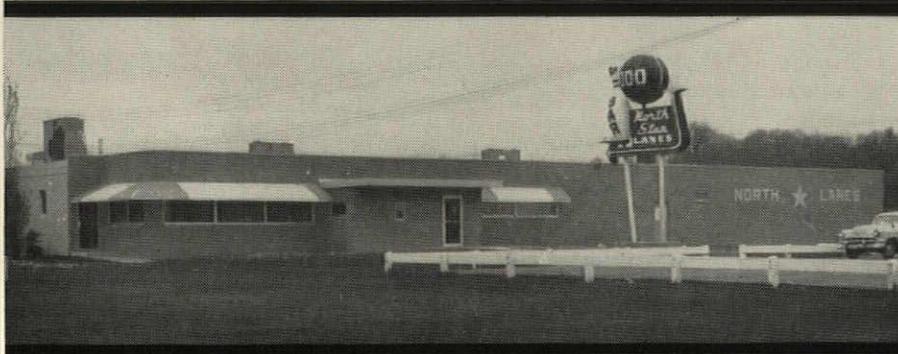
Mr. Pietruszewski, the lessee, had already contracted with twelve different bowling leagues at \$3,000 each. Failure to fulfill his obligations would mean loss of a major portion of his entire year's revenue.

For the owner, Mr. Drkula, whose income depended upon leasing the building at \$980 per week, the problem was to construct a new building in time for the Fall opening. Laminated wood trusses were considered for the main supports, but when calculations showed they would cost \$20,000 more than steel and require an additional month in construction, the decision went to steel.

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*Continued from page 222*

nature and that articulation lies within the selection of man. The other concerns of Grillo's presentation are handled with the same dedication to nature.

This volume certainly deserves a place on the bookshelf of the young, involved architectural student. It should also prove valuable to the client in helping him to understand the architect's calling; it should, indeed, have a wide appeal, since, as the author states, "Design is everybody's business: we live in it, we eat in it, we pray and play in it."

If the author had been more definite in deciding toward what type of audience he wished to aim his book, greater development and clarification of his ideas might have resulted. Instead, one senses a conflict in his level of presentation: on the one hand he directs his text to the potential receiver ("This book is addressed to the public... abused day in and day out by all the bad design we have to put up with and suffer from in our lives"); and on the other hand he concerns himself with the potential giver (the need for a "manual in the libraries where the student could find a comprehensive guide to help him solve in a contemporary language the many problems about design.")

Paul Grillo has made a thorough effort to clarify good design. But this reviewer suggests that he might next prepare a more provocative book on this subject that is not addressed to the student and to the public, but aimed dead center at the architect himself.

STANLEY SALZMAN, AIA  
Associate Professor of Architecture, Pratt Institute  
New York, N.Y.

## Two Opposing Tendencies

THE WORKS OF AFFONSO EDUARDO REIDY, by Klaus Franck. Introduction by Sigfried Giedion. Published by Frederick A. Praeger, Inc., 64 University Place, New York 3, N.Y. (1960, 144 pp., illus. \$11.50)

The collected works of an architect in mid-career, besides presenting to colleagues and public the extent of his professional contribution, necessarily offers a concrete image of the creative forces that entered into play while the architect was responding to the contingencies of program, the offerings of a site, and the demands of a particular social aggregate. In such collections, out of a miscellany of projects and buildings following a mere chronological sequence, a spontaneous synthesis is bound to take place. Then there becomes evident the

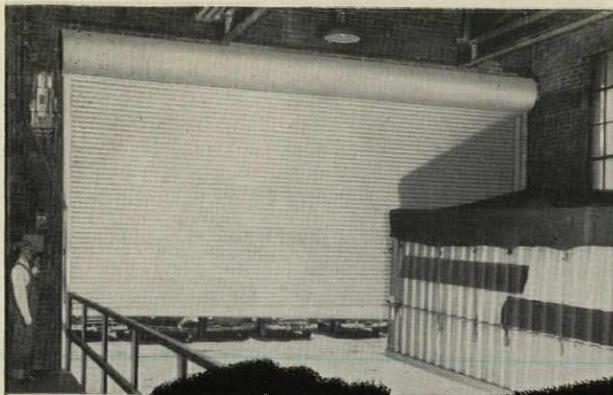
ways in which the architect organizes data so as to give them spatial significance, the dimensions of his imagery, and the nature of his intellectual climate.

From this panoramic view of Reidy's work, we are able to see that he occupies two poles, not simultaneously as in a Hegelian synthesis of the opposites, but consecutively and in a sequence that is not easily understandable. For Reidy, lyricism and material determinism do not take a dialectic form; they coexist, alternating on the pages of the book with the glow of a poetic outburst or with a Cartesian sense of causality.

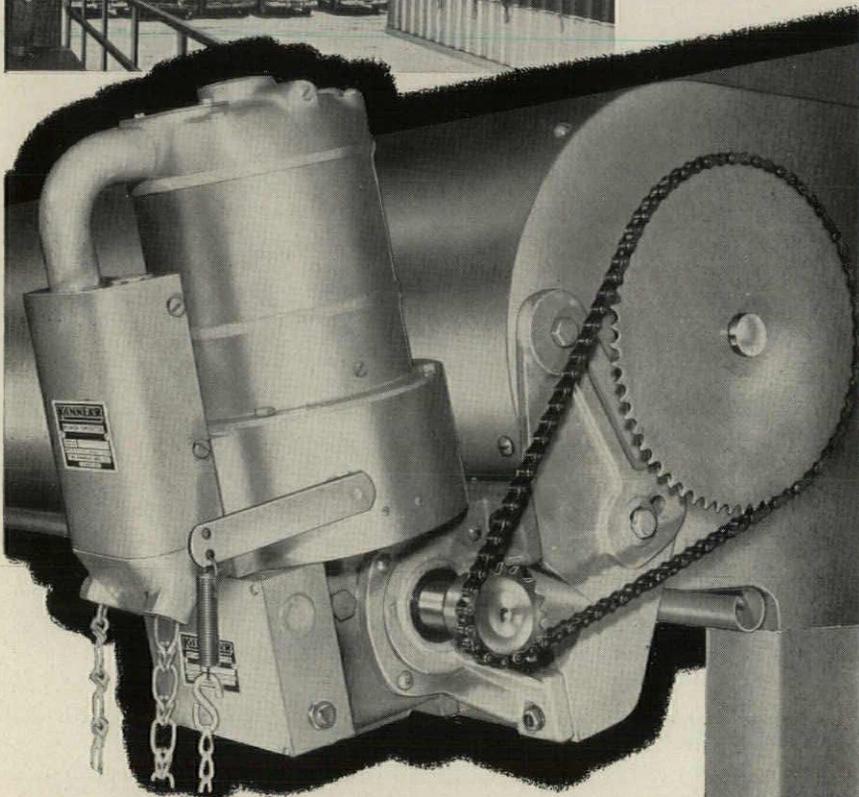
These two opposing tendencies are most clearly illustrated in two building complexes designed seven years apart, which, incidentally, had not been completed at the time of this book's publication. Both are in the city of Rio de Janeiro: the Pedregulho housing block (1947) and the Museum of Modern Art (1954). The former, an enormous building 823 ft long—with the relatively small number of 272 dwelling units—undulates with the contours of the hill, contracts and expands in a multiplicity of views; its enormous mass, however, never oppresses, since the total building can only be seen from the air. Here one may look in vain for a happy and unique convergence of privileged circumstances; even the site, a depressed and squalid section of the city, did not offer a particular appeal, and its potential scenic advantages had to be discovered. Contributing to a timeless and deeply moving architecture are the subtle use of many scales for the dweller, the pedestrian, the driver on the Avenida Brasil, or the air traveler; the modest interplay of humble materials such as cement and clay products that allow a pronounced light and shadow effect; the elementary content of the dwelling units destined for the lowest echelon of municipal labor; and a minimum of "mechanization" with only plumbing and electric lighting. Site, content, and means (164 ft difference in levels, minimal units, cheapest possible construction, but requiring a minimum of maintenance)—these form the basis of a very expressive vocabulary that Reidy used with a pronounced mastery.

The Museum of Modern Art, situated on reclaimed land with an artificial shore line (the rigidity of which is closer to the contours of Bedloe's Island than to the voluptuous natural bays of Rio), illustrates a mechanistic approach to architecture. Here, functional differentiation produces an Albert Kahn complex with administration building in front and as-

*Continued on page 228*



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*Continued from page 227*

sembly plant in rear (in this instance, an exhibition hall), and one wonders why separate entrances for white and blue collar workers are not provided. The administration building is, conventionally, a brick building; the plant is of glass and reinforced concrete instead of glass and steel. As is essential in such schemes, extension is provided for the plant on one axis, for the administration building on two axes. Consequently, the shape of the buildings do not appear to be fixed but suggest growth or flux.

The proximity of a vast assembly hall in the museum complex (seemingly convenient for corporate and sales conventions but with a full stage added at a later date making possible a complete presentation of *Aida*) does not help to clarify the scheme. The massing of three autonomous buildings may be explained by the presence or absence of programmatic data; for example, if integration of the arts should be achieved through organization, then the most important building would be the one which houses filing cabinets and computing machinery — the nerve center of the complex. It may also be that the architect was called upon to drape an activity, or activities, which have not finite forms, but it was hoped that a form could be achieved through addition. There is also the recent influence of gigantism in art manifestations, the Biennales of various locations, where, in a way resembling Chicago's cattle arena, thousands of art "pieces" are assembled, processed, channeled, and appropriate certificates and prizes are distributed on the basis of points and merits. (One cannot help thinking of the small, humble museum of Le Havre — the result of collaboration between its curator, the painter Reynold Arnould, and the two young architects Audigier and Lagneau — which is not a landmark, where it is not possible to use bulldozers and derricks for the installation of exhibits, and where a single visitor could venture inside without the intimidating feeling that he is part of an endless mass routed to predestined paths.) Is the triggering of "group dynamics" the only role of a museum of modern art; if so, what could the contribution of its architect be? The designer of the Pedregulho block was denied here the premises upon which he could stand and meditate, and a "functional" solution became inevitable.

It seems that the state of grace in which Reidy worked while designing the Pedregulho block does not often recur. More easily attainable are schemes

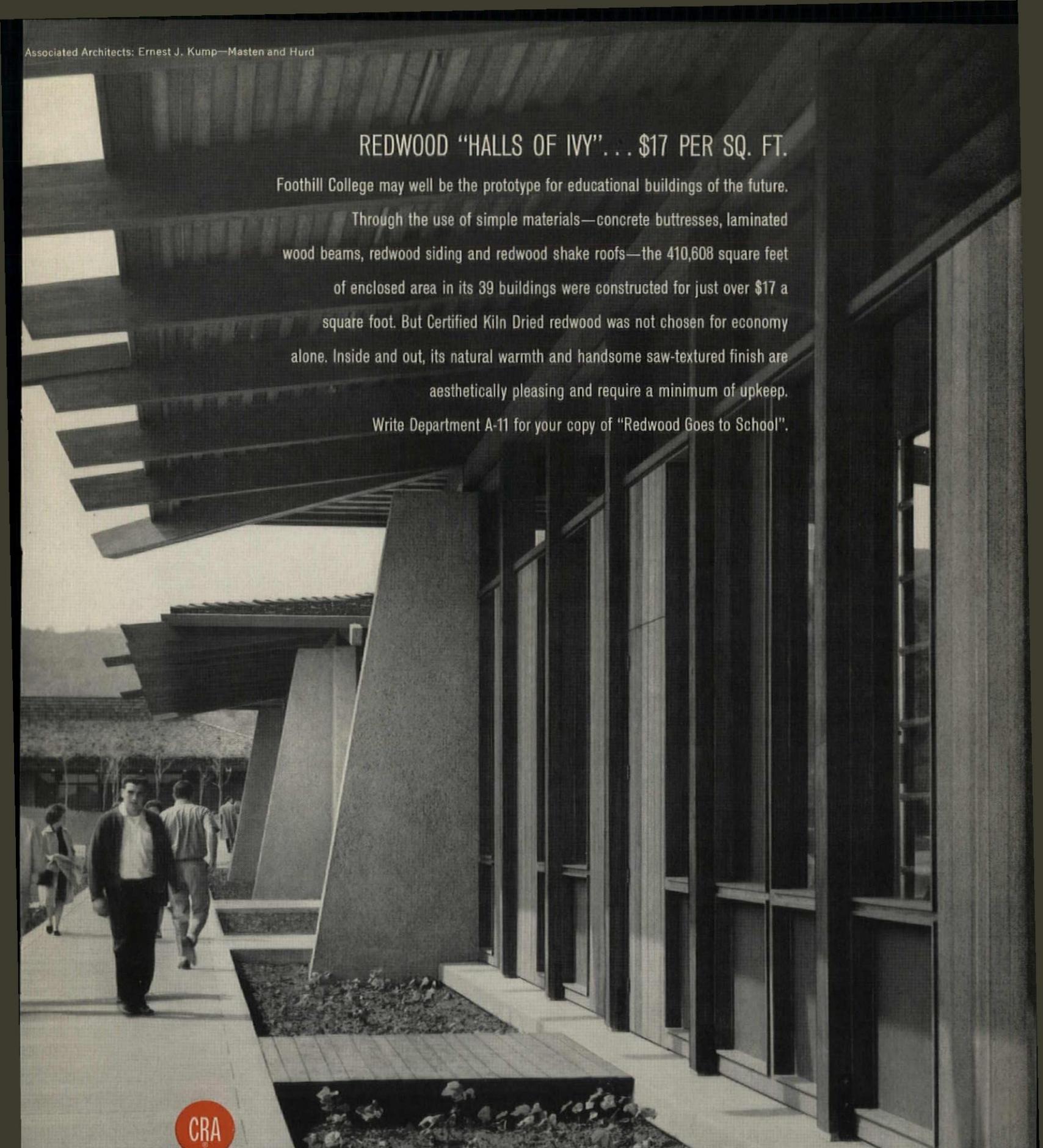
*Continued on page 230*

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Continued from page 228

answering the immediately useful, the here-and-now expedients, based on abstract chains of causality without beginnings or ends—that is to say, without form—and situated outside of man's condition. Reidy has proved beyond doubt that he is capable of inventing a building; he has to accept the fact that project data, in order to be useful, must also be invented by the architect.

STAMO PAPADAKI  
Washington, Conn.

### Swedish Review

KONTUR. Published by Svenska Slöjdföreningen, Stockholm. Distributed by Swedish-American News Exchange, 8 E. 69 St., New York 21, N.Y. (1961, 112 pp., illus., \$2)

Issue 10 of *Kontur*, the Swedish design annual, is just off the press, and the English language edition is well worth the \$2 price tag. In it, all of the design arts are reviewed; the interesting, well-written, quality-illustrated articles are brimful of inspiration for American architects, planners, and designers.

There is, for example, a description of

the Lappland town of Kiruna, 100 miles above the Arctic Circle, remote from civilization yet possessing fine modern office buildings, swimming pools, schools, churches, housing—art and sculpture, too.

Regarding urban problems, Edward Maze takes us on a tour of Stockholm—the vistas, the music, the smells, the people—all of which should be remembered in planning endeavors. An article on Orrefors, as elegant as its world-famous crystal yet as idyllic as a forest community, might well be studied for its relevance to American plants and research laboratories.

On architecture itself, an article on office buildings describes the striking individualism now apparent in Sweden. Another chapter, "Cell with a View," presents the world's most beautiful women's prison—a redesigned castle where the aesthetic milieu is important as a corrective factor.

On art, new drapery techniques are explained; furniture and philosophies of Carl Malmsten and Bruno Mathsson are reviewed. Of great interest to this reviewer is Rebecka Tarschys' "Prelude to Art," about the unique museum in

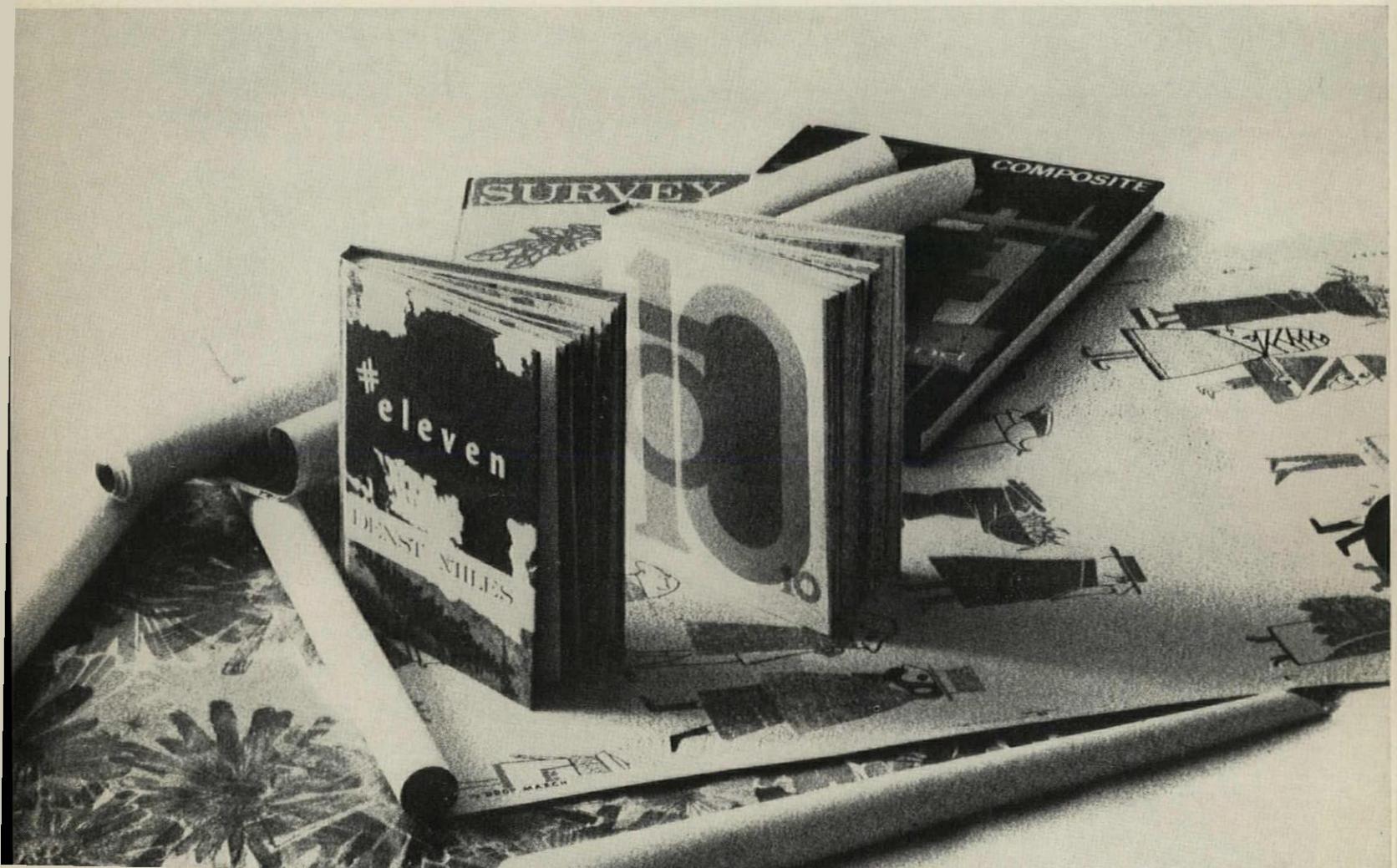
Lund which exhibits only *unfinished* art. Rough drafts, sketches, studies, cartoons, fresco samples, plaster figures—everything which is antecedent to the final work of art is entitled to a place here. "One does not get to know works of art when they are complete; one must try to capture them while they are being created in order to gain understanding of them." Would it not be revealing if our journals published the architect's preliminary sketches in addition to the final result? Or if there were a museum like this in the United States where artists, sculptors, and architects could test each other's thoughts and skills in the inventive stages?

JEFFREY ELLIS ARONIN, AIA  
New York, N.Y.

### Designs for Dining

INTERIORS BOOK OF RESTAURANTS, by William Wilson Atkin and Joan Adler. Published by Whitney Library of Design, 18 E. 50th St., New York 22, N.Y. (1960, 215 pp., illus. \$15)

The startling opening of this book—"20,000 new restaurants open each year and 10,000 of them close"—may well be



good reason for both restaurateur and designer to study its contents from cover to cover. An excellent format, clear statements, and amusing revelation of the "tricks of the trade" contribute to the usefulness of the book. In a few brief chapters, both restaurateur and designer get a fairly comprehensive view of the problems involved in restaurant operation and design.

For the sake of covering one subject well, the authors have wisely confined their discussion to public dining places—festive restaurants, luncheonettes, and cafeterias. They have divided the book into three sections. "Basic Discussions" covers site selection; type of restaurant; financing; staff organization; services; suburban, urban, and highway situations; and the relation of design to a successful operation. The section on "Design Decisions" discusses the process of setting up a design program, the role of designer and architect, traditional vs. modern, dining room and bar, heating and air conditioning, lighting, color, workrooms, and kitchens. The third section is given over to a portfolio of examples from the files of *Interiors* magazine, considered by the authors to be "the best restaurant

designs executed in the past 10 years," and includes works from Europe and the Caribbean as well as the United States.

It is difficult to feel that these examples represent the best in design. If the criterion is design, whether traditional or contemporary, the majority of them are, in fact, very bad. It is unfortunate that the portfolio does not show some of the better examples of creatively satisfying design. A low blow is struck to the midsection of contemporary design, in the discussion of tradition vs. modern, when the authors state: "A glance through the portfolio demonstrates quite clearly how well the traditionalist has met the challenge of restaurant design. The modernist does not show up too well. People tend to prefer comfort to novelty; comfort arises most surely from familiarity, and the familiar to most people is traditional. It is here that some modern designers could afford to take a few lessons from the traditionalist." And further: "By adapting historical concepts to contemporary, he can rid his designs of the sterility and coldness of which they are often accused."

A more appropriate rationalization for the above might be the suggestion once

made by a client to this reviewer: "Ninety per cent of the people have bad taste. Don't be afraid to use some in my project."

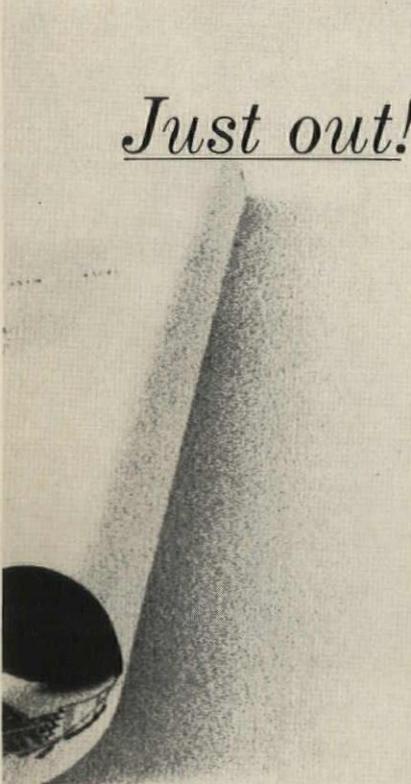
I would also take issue with parts of the discussion on architects and designers. The authors do not seem to understand the role and talents of the creative architect in the field of design today—particularly the fact that interiors are within his scope. The architect is apparently reduced to the role of the expert, called in only when technical aspects of building, remodeling, or face-lifting of exteriors are involved: the book further infers that the industrial designer has all the technical talents of the architect.

The book makes a strong point in stating that restaurant design is very closely related to "theater." In no other phase of architecture does "atmosphere" so frequently take precedence over a more pure architecture as it does in restaurant work.

A more up-to-date portfolio with more creative work would certainly enhance this volume, and it is hoped that later editions might include these. Despite

*Continued on page 232*

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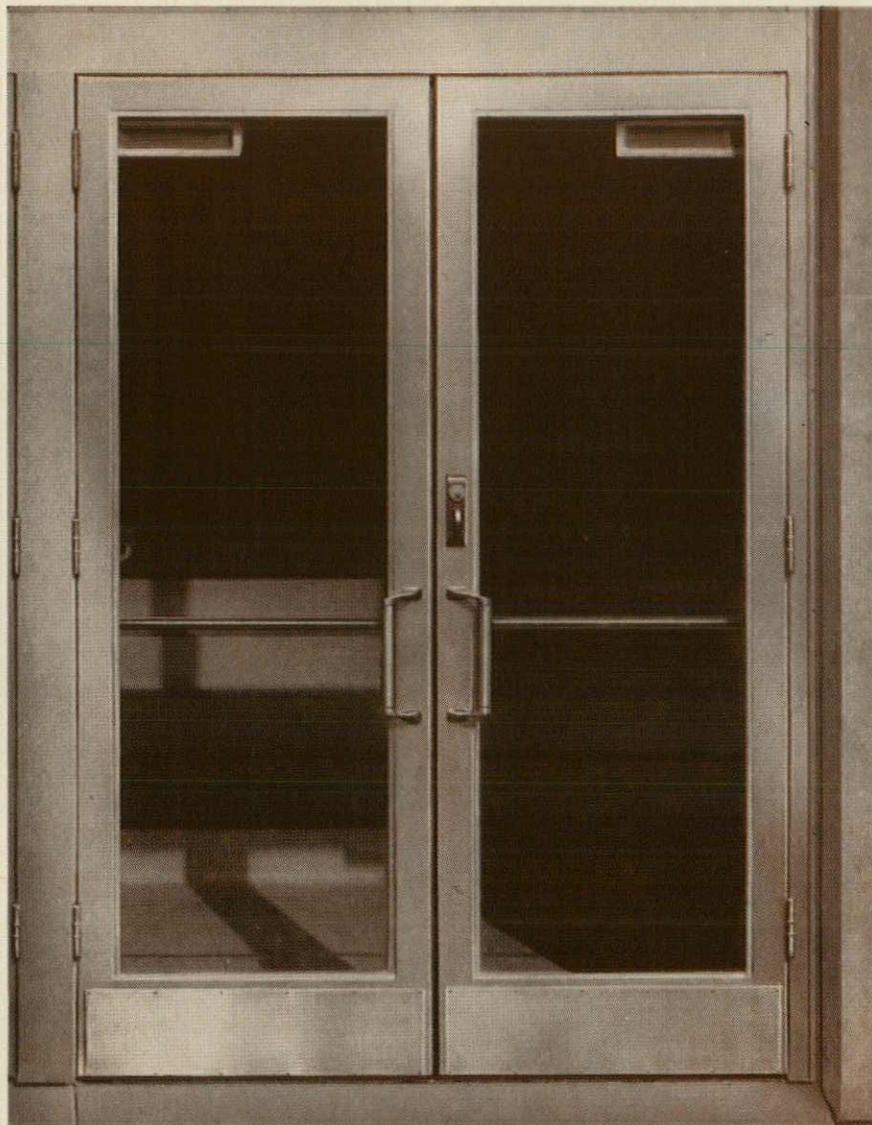
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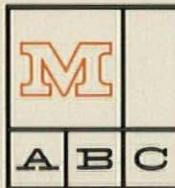
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Continued from page 231

these misgivings, however, this book is surely the most comprehensive ever written concerning management and design. It is a must for every designer, restaurateur, and architect.

WORLEY K. WONG, FAIA  
San Francisco, Calif.

## OTHER BOOKS TO BE NOTED

**Agricultural Landscape Design: A Pilot Project.** Dept. of landscape Architecture, School of Design, North Carolina State College, Raleigh, N.C., 1962. 36 pp., illus. \$6 (spiral bound)

*A student research study that explores the social, economic, and physical ordering of agricultural land. In its approach, the study is primarily concerned with the responsibility and contribution to agriculture by the landscape-design profession. The design solutions, it is felt, represent basic landscape-design criteria applicable to similar problems in agriculture planning.*

**The Citizen's Guide to Planning.** Herbert H. Smith. Chandler-Davis Publishing Co., Box 36, West Trenton, N.J., 1961. 106 pp. \$2 (paperbound)

*A succinct discussion by an experienced professional planner on the principles and problems of planning in a democratic society.*

**Concerning Some Legal Responsibilities in the Practice of Architecture and Engineering and Some Recent Changes in the Contract Documents.** John R. Clark, Engineers Joint Council, 345 E 47 St., New York 17, N.Y., 1961. 26 pp. \$1

*Problems of liability in the practice of the design professions discussed by an attorney from Philadelphia. Discussion is based on report developed by the EJC AIA Liaison Committee.*

**Handbook of Heavy Construction.** Edited by Frank W. Stubbs, Jr., McGraw-Hill Book Co., Inc., 330 W. 42 St., New York 36, N.Y., 1962. 1040 pp., illus. \$22.50

*Job-tested data on methods, equipment, and materials in all branches of heavy construction—excavating and hauling, concrete, steel, heavy timber, highways, pipelines, foundations.*

**Italian Gardens.** Georgina Masson. Harry N. Abrams Inc., 6 W. 57 St., New York 19, N.Y., 1962. 300 pp., illus. \$17.50

*To be reviewed.*

**Liturgy and Architecture.** Peter Hammond. Columbia University Press, 2960 Broadway, New York 27, N.Y., 1962. 191 pp., illus. \$6

*To be reviewed.*

**New Buildings in the Commonwealth.** Edited by J. M. Richards. Frederick A. Praeger, Inc., 64 University Place, New York 3, N.Y., 1962. 240 pp., illus. \$14.50

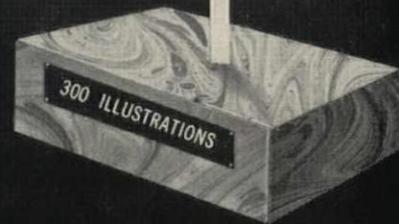
*To be reviewed.*

**This Is Japan 1962.** Asahi Shimbun, Yurakucho, Chiyoda-ku, Tokyo, 1961. 404 pp., illus. \$7.95 (\$9.95 in wooden box)

*Latest edition of this handsome annual has its usual magnificent color photography. Articles of special interest are on new Japanese architecture, ancient Buddhas carved into mountains, and folk houses.*

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Other valuable references: **Reinhold Color Atlas**, 200 pp., 1,266 color swatches. \$10. **The Art of Color** by Johannes Itten, 160 pp., 158 color illus. \$30. **Typography** by Aaron Burns, 112 pp., 130 illus., 16 color. \$10.



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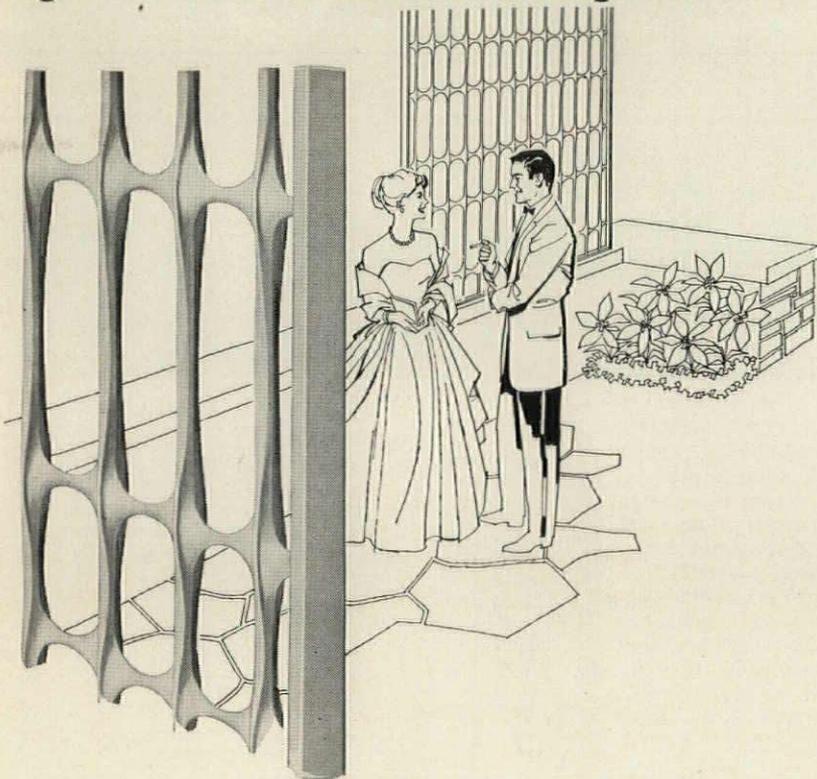
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WID OMAR NEIBERT, JR., made Senior Associate in firm of FLAMBERT AND FLAMBERT, Food Service Consultants and Designers, San Francisco, Calif.

EDMUND R. PURVES, appointed Associate in firm of CHATELAIN, GAUGER AND NOLAN, Architects and Engineers, Washington, D.C.

HERBERT WETTSTEIN, named Associate in firm of ALFRED EASTON POOR, Architects, New York City and Washington, D.C.

### *Name Changes*

ADAMS-WANSLAW-DRIMMEL, Architects, 2101 South "H" St., Fort Smith, Ark. Formerly HAROLD ADAMS, Architect.

LARSEN-WULFF & ASSOCIATES, INC., Architects, 901 W. Hillgrove Ave., La Grange, Ill. Formerly ARNOLD L. LARSEN, Architect.

### *Elections, Appointments*

ROBERT C. BRADY, named Director of Project Development in firm of PRAECER-KAVANAGH-WATERBURY, Architects and Engineers.

WILLIAM R. EWALD, JR., elected Senior Vice-President and Treasurer in firm of DOXIADIS ASSOCIATES, INC., Consultants in Urban and Area Development, Washington, D.C.

WILLIAM ERIC LINDSTROM, joined the Store Planning Division in firm of BURKE, KOBER & NICOLAIS, Architects and Engineers, Los Angeles, Calif.

ROBERT J. GIOMBETTI, named Treasurer;

JAMES T. SKIBINSKI, elected Vice-President, in firm of GILBOY COMPANY, Engineering Consultants, Clark Summit, Pa.  
 LEWIS H. WEST, appointed President; IRVING E. INGRAHAM, appointed Board Chairman, in firm of THE HINCHMAN COMPANY, Consulting Engineers, Detroit, Mich.

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CHESTER WENZEL, named President of the TILE COUNCIL OF AMERICA for 1962.

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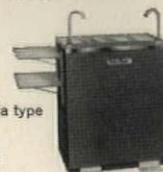
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**ARCHITECTURAL DESIGNER**—B. Arch. Columbia. Various awards. Part registration completed New York. 7 years experience all phases of architectural and structural work both sides of Atlantic. American, age 28, married. Client relations, design, carrying job to completion. Presently in Europe, returning soon. Speaks Russian, Yugoslav,

German. Box #389, PROGRESSIVE ARCHITECTURE.

**GRADUATE ARCHITECT**—5-1/2 years comprehensive experience; 31; married; family; graduate—University of Illinois. Capable of handling all phases of architectural practice. Experience includes positions of Chief Designer and Chief of Production. Desire responsible position in progressive, ethical firm doing contemporary work. Resume on request. Box #390, PROGRESSIVE ARCHITECTURE.

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Thomas H. Lighter

P.S.

The "Shelter" Program poses difficult problems for architects. I have been discussing this question with a number of members of the profession who are concerned with its implications, and we have agreed on the following position:

No architect is interested in designing and building for destruction; his purpose is to construct for the future. However, as the shelter question becomes more and more publicized, clients turn to architects for advice and, in some cases, specific recommendations. No "architectural" advice is possible.

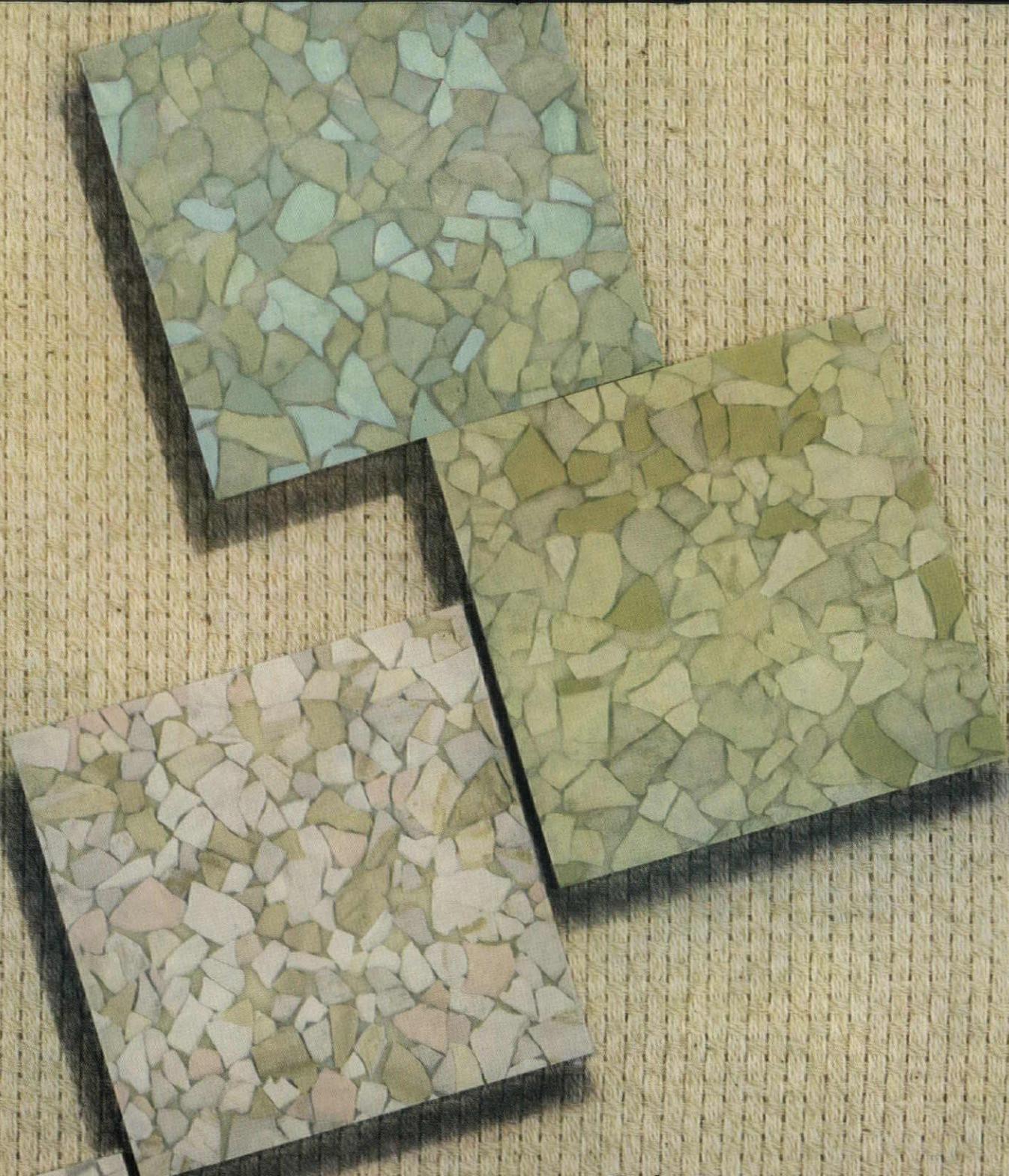
In the first place, the technical data available is contradictory, to say the least. That point from which an architect always begins planning—the program—is nonexistent. If one were to try to design a shelter with a certain desired effectiveness, various assumptions would have to be made: distance from an assumed blast; size of the bomb assumed to be dropped; whether it would be assumed to explode in the air or on the ground; the assumed likelihood or not of a tidal wave or a firestorm which would render any shelter useless; and so on. And even to make these programmatic assumptions and set up design data, an architect would face conflicting technical testimony, from the blithe generalities published by both official and proprietary sources to the conclusion of Gerald Piel, publisher of *Scientific American*, that in the case of a 20-megaton bomb burst in the air "there is no local fall-out," since the square mileage destroyed by fire would approximate that covered by intense fall-out.

The "technical" aspects of the architectural problem thus become impossible assumptions, and the question of *how* to design a fall-out shelter is one with no real answer.

But even more important to architects is the question of *why* we should even seriously consider fall-out shelters on architectural terms. The planning of shelters is preparation, on psychological and physical terms, for war. It is anti-architecture. The purpose of architecture is the creation of environments in which civilizations can develop. War destroys what civilizations have built; therefore war is the antithesis of architecture. Planning for war prevents the fulfillment of what has been designed; therefore war is the antithesis of planning to build. All war is destructive; atomic war can be totally destructive. Planning for destruction is an architectural contradiction; and planning for atomic destruction is an architectural absurdity.

At this stage in man's development, when so many areas of the world desperately need original planning and building, and so many others need replanning and rebuilding, the spending of billions of dollars for anti-architecture instead of architecture, for the hope of mere survival in an impossible world instead of the prospect of improving man's environment in a developing world, is an attitude that we, as architects, cannot endorse.

This is a problem on which each responsible person must make up his own mind. AIA has no official position, although President Phil Will has been quoted as saying that "the architects of the nation should be prepared to participate vigorously" in a shelter program. I have talked to very few professionals who agree. What opinions do our readers have?



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