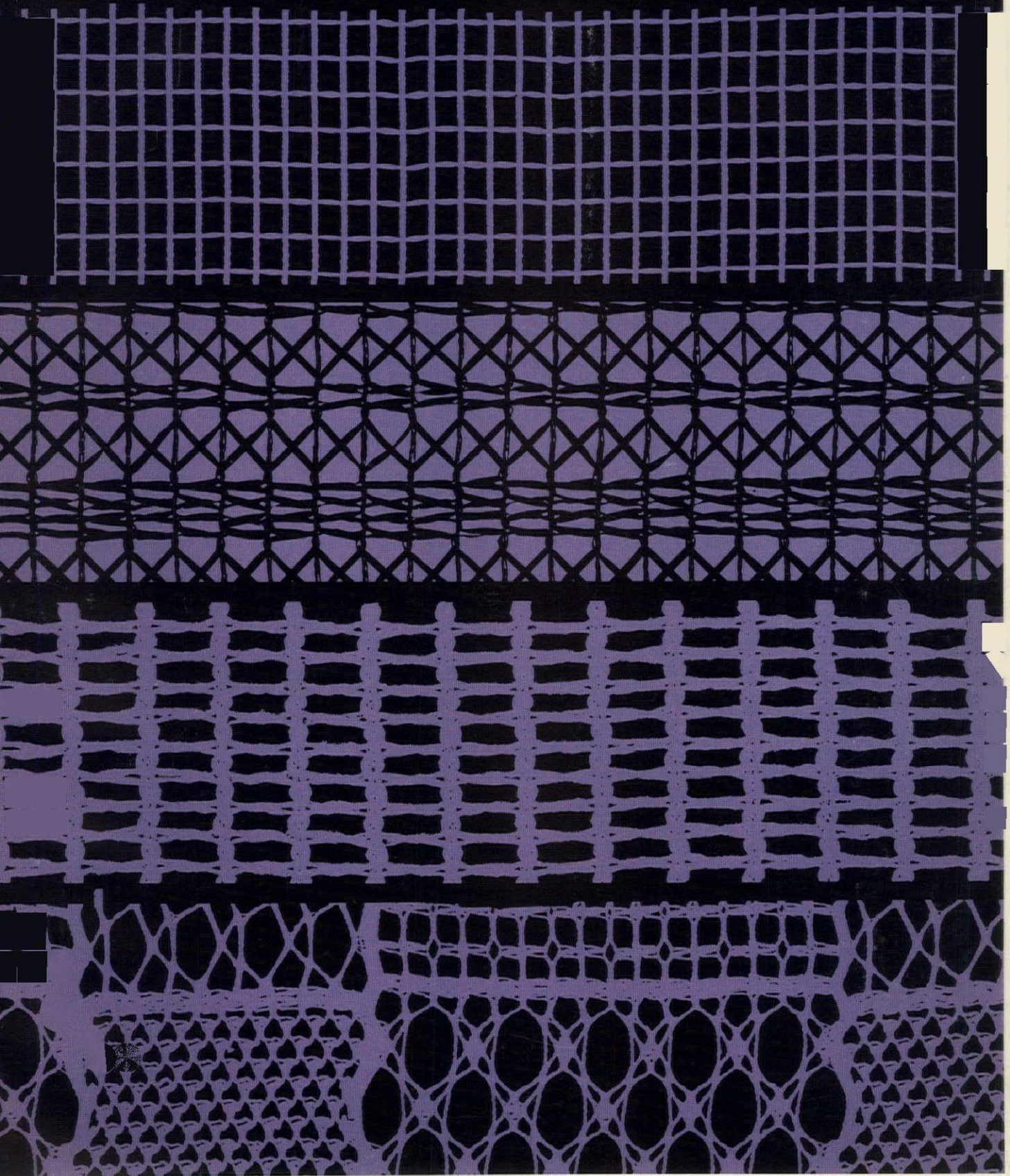


ANA JOURNAL



OCTOBER 1968





Rosewood Marlite gives walls a hand-rubbed look.



Textured Tapestry Marlite—beauty you can feel.



Travertine or real Marlite? You be the judge.



Textured Oak Marlite has everything but acorns.

Most people don't know real Marlite paneling when they see it.

Don't jump to conclusions when you see a beautiful wall. It may look like hand-rubbed rosewood, imported tapestry, Italian travertine or natural oak planks.

But it could be the real thing: Marlite prefinished hardboard paneling.

Marlite is the one paneling that doesn't limit your imagination. It gives you more than 70 different ways to create exciting

interiors. Deep-embossed textures, authentic woodgrains, rich or pastel colors, original patterns and designs.

And Marlite protects your reputation. Its soilproof, baked-on finish seals out heat, moisture, stains and dents—stays like new for years with practically no maintenance.

You can see the complete Marlite line

Circle 212 on information card

at your building materials dealer's or in Sweet's File. But beware of imitations. Marlite Division of Masonite Corporation, Dept. 1060, Dover, Ohio 44622.

 **Marlite**[®]
MASONITE CORPORATION plastic-finished paneling

But not architects! They've been putting it up through the ages. And marble stays up where other materials fail. This fireplace facing, for example, is 95 years old and is in perfect condition. Marble's durability always has appealed to architects—from the ancient Greeks up to the present. Architects like their buildings to last. The old timers had another good reason for using marble. They wanted their buildings to stay clean. Marble resists dirt and pollutants. And the aesthetic architects, of old, as now, saw in marble a tantalizing beauty. The pros knew a great building material when they saw it. They still do. For a technical report on the durability of marble, look in your Yellow Pages for an MIA certified member near you or write to MIA. MARBLE INSTITUTE OF AMERICA, PENNSYLVANIA BUILDING, WASHINGTON, D.C. 20004.



**Some
people
try
to
put
marble
down**





Dover Elevators..

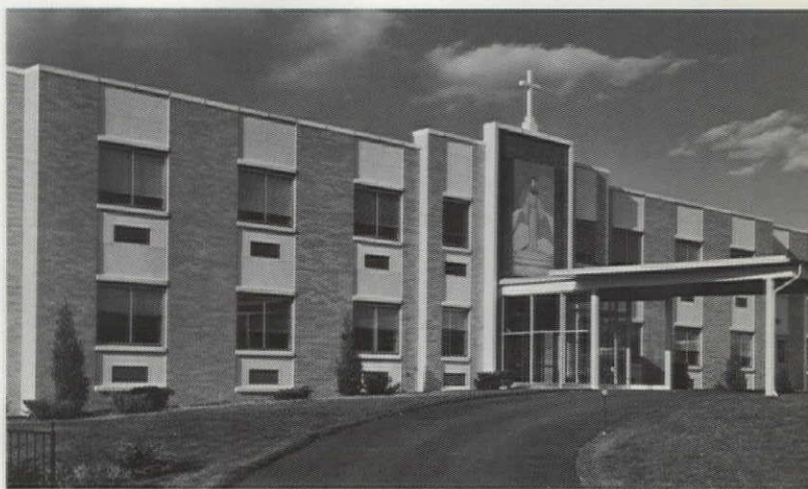
Engineered for all types of buildings

You design the building; let Dover design the elevator system. Dover leads the industry in elevator capability in low-rise buildings with our Oildraulic® system which is unequalled for dependability and smooth operation. In the high-rise field we have geared and gearless traction equipment incorporating the most advanced machine design for dependable high-speed service. Exclusive Computamatic control provides maximum utilization of the elevator equipment for optimum service. See Sweet's Files or write for catalogs. Dover Corporation, Elevator Division, Dept. E-5, P. O. Box 2177, Memphis, Tenn. 38102

Left: ITT TELECOMMUNICATIONS ADMINISTRATION AND RESEARCH BUILDING, Oak Brook, Ill. Architect: Fred H. Prather. General Contractor: Del E. Webb Corporation. Dover Oildraulic passenger elevator installed by Dover Elevator Co.

Right, above: OHIO PRESBYTERIAN HOME, Columbus. Architects: Tully and Hobbs; Richard, Bauer and Moorhead. Built by John W. Galbreath & Co. for United Redevelopment Corp. Two Dover electric traction elevators installed by Dover Elevator Co., Columbus, Ohio.

Right, below: MISERICORDIA CONVALESCENT HOME, York, Pa. Architects: J. Alfred Hamme & Associates. General Contractor: L. M. Klunk & Sons, Inc. Dover Oildraulic Elevator installed by York-Gregg Elevator Company.



DOVER CORPORATION / ELEVATOR DIVISION

Cuisine Decor

by **ELKAY**®



MODEL ILDR-6622-DD

... the glistening stainless steel sink with decorator faucet deck of silver mist Super-Ceram! Here is sink elegance in smart contemporary styling that flatters any interior ... never clashes with the color scheme. Won't chip, crack, or stain. Requires only occasional cleansing. Wide selection of models. Model illustrated has burn-proof, mar-proof drainboards. Write for free literature.

ELKAY®
Stainless Steel Sinks

Lustertone®, *Picomaker*®, *STARLITE*®, *CELEBRITY*®, Four quality grades by the world's largest producer of stainless steel sinks. Elkay Manufacturing Company, 2700 S. 17th Avenue, Broadview, Illinois 60153.

© 1967 EMC

AIA JOURNAL

PUBLISHER
Wm. Dudley Hunt Jr., AIA

EDITOR
Robert E. Koehler
ASSOCIATE EDITOR
Neil E. Gallagher
ASSISTANT EDITOR
Bess Balchen
ART DIRECTOR
Marilyn S. Housell

BUSINESS MANAGER
Henry E. Kleiner
PRODUCTION MANAGER
Harry N. Miller
CIRCULATION MANAGER
Jane B. Solt

AIA Journal, Official magazine of
The American Institute of Architects,
published monthly at the Octagon,
1735 New York Ave. N.W.
Washington, D.C. 20006.
Telephone: 393-7050.

Subscriptions
For those who are, by title,
architects, engineers, architectural
employees (specification writers,
designers, draftsmen, estimators,
planners or landscape architects,
and to those in architectural
education (faculty and schools),
and to libraries, building construction
trade associations, and building
product manufacturers and their
employees: basic rate—\$5 a year,
\$8 two years, \$4 to architectural
students in the US, its possessions and
Canada. For the same titles elsewhere:
\$10 a year. For all others:
\$10 a year in the US, its possessions
and Canada; \$18 a year elsewhere.
Single copy: \$2. Payable in advance.
Publisher reserves the right to
refuse unqualified subscriptions.

Change of Address
Give Circulation Department both
old and new addresses;
allow six weeks.
Second class postage paid at
Washington, D.C.

© 1968 by The American Institute
of Architects.

Opinions expressed by
contributors are not necessarily
those of the AIA.®



VOL. XLX, NO. 4

Swatches of Thought from a Fabric Man	40
A Craftsmanship Medalist's random but interlaced notions about people and the spaces around them	
Me Gusta Mucho Mexico	45
Where architecture—its form, its texture, its color—has a powerful message in any language	
Blighted Areas of Our Press	54
Architectural Criticism: Real estate sections scrutinized; found in need of thorough cleanup	
No-Nonsense Approach to Practice	59
Practice Profile: Frank Grad & Sons, where cost control and design are inseparately integrated	
A Source of Hazard	67
The infernal results of thermonuclear warfare, a threat not to be ignored, coolly calculated	
AIA/ACSA Teachers' Seminar 1968	71
Reflections from the Montreal meeting, on industrialization and on its impact on construction	
A Community Affair	84
For the love of their town, positive actions	
A Lawyer Crits the Profession	86
Speaking up for better pay, more opportunities	

Departments

Asides	6	Calendar	120
Newslines	12	Letters	122
Unfinished Business	36	Advertisers	124
Books	100	Information Service	126

Cover: Fabrics of designer/producer Jack Lenor Larsen

Asides

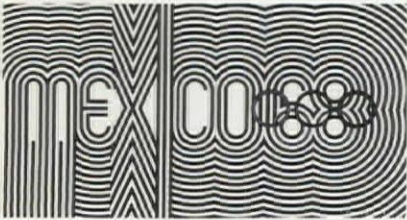
Next Month: The letters "PDP" may become a household term with architects. They stand for Professional Development Program—continuing education, if you will—being undertaken by the Institute as the result of a three-year committee study. The need for the program and its meaning to the profession and the practitioner is covered in a four-part presentation.

Also in November: A Corps of Engineers spokesman talks about the comprehensive plan for Montana's Libby Dam devised by an architect, whose conceptual design sketches illustrate the piece; a Tulane professor expounds a practical preservation philosophy; and a civic-minded architect sings the praises of the "Goals for Dallas" program.

El Año de Mexico: Architects should view this year's Olympics with at least a bit of personal pride. For as most of them know by now, one of their colleagues is in the driver's seat (see p. 50), which led *The New Yorker* in its June 29 issue to comment:

"It seems especially fortunate that an architect has been chosen to head the Organizing Committee—a job that in most countries would go to a politician or to a front man from the business community."

And, oh, those wonderful graphics! The poster below is only one



of two dozen or so that have publicized the Games around the world. Noteworthy, too, is the type, called "Mexico 68," developed from the logotype created by Lance Wyman, graphics designer for the Organizing Committee. It follows from the five entwined circles, the official Olympic symbol. R.E.K.

PHOTO & ART CREDITS: 32 — Standard Studios; 39 through 43—Baedeker, by Robert L. Beckhard; 45, 46, 48 below, 49, 51 above—Armando Salas Portugal; 51 center — Guillermo Zamora; 52, 53—Armando Salas Portugal; 59—Ed Lettau; 61 left—Standard Flashlight Co., Inc.; 63, 65 above left—Creative Commercial Photography; 65 second from above — Gil Amiaga; 65 right — Alexandre Georges; 68, 69—sketches by Robert J. Patton; 84—calligraphy by Masae Yamamoto.

THE AMERICAN INSTITUTE OF ARCHITECTS

BOARD OF DIRECTORS

Officers

President
George E. Kassabaum, FAIA*
St. Louis, Mo.
First Vice President
Rex W. Allen, FAIA*
San Francisco, Calif.
Vice Presidents
Jules Gregory, AIA*
Lambertville, N.J.
Daniel Schwartzman, FAIA*
New York, N.Y.
David N. Yerkes, FAIA*
Washington, D.C.
Secretary
Preston M. Bolton, FAIA*
Houston, Tex.
Treasurer
Dean F. Hilfinger, FAIA*
Bloomington, Ill.
Executive Director
William H. Scheick, FAIA
* Members of the Executive Committee of the Board

Directors

(Terms expire 1969)

California
Cabell Gwathmey, AIA
San Francisco, Calif.
Central States
Rex L. Becker, FAIA
St. Louis, Mo.
Florida
H. Samuel Krusé, FAIA
Miami, Fla.
Illinois
Jack D. Train, FAIA
Chicago, Ill.
Pennsylvania
G. Harold W. Haag, FAIA
Jenkintown, Pa.
Texas
George F. Harrell, FAIA
Dallas, Tex.

(Terms expire 1970)

East Central States
A. Bailey Ryan, AIA
Louisville, Ky.
New England
Philip W. Bourne, FAIA
Boston, Mass.
New York
Max O. Urbahn, FAIA
New York, N.Y.
North Central States
Joseph H. Flad, AIA
Madison, Wis.
Ohio
Joseph Tuchman, FAIA
Akron, Ohio
Western Mountain
Sidney W. Little, FAIA
Tucson, Ariz.

(Terms expire 1971)

Gulf States
Arch R. Winter, FAIA
Mobile, Ala.
Michigan
Walter B. Sanders, FAIA
Ann Arbor, Mich.
Middle Atlantic
Milton L. Grigg, FAIA
Charlottesville, Va.

New Jersey
Robert R. Cueman, AIA
Summit, N.J.
Northwest
John L. Wright, FAIA
Seattle, Wash.
South Atlantic
S. Scott Ferebee Jr., FAIA
Charlotte, N.C.

HEADQUARTERS

1735 New York Ave. N.W.
Washington, D.C. 20006

Executive Director

William H. Scheick, FAIA
Mabel Day, HON. AIA, *Secretary*

Institute Services

Administrator
J. Winfield Rankin, HON. AIA
State, Chapter & Student Affairs
Raymond L. Gaio
Convention
John R. Carlson
Membership
Maureen Marx
Awards
Marie F. Murray

Public Services

Administrator
M. Elliott Carroll, AIA
AIA JOURNAL (previous page)
Governmental Affairs
Philip Hutchinson Jr.
Glenn White, *Review*
Information Services
Neal English
Mary M. Grant, *Memo*
Librarian
George E. Pettengill, HON. AIA
Urban Programs
Israel H. Stein, AIA

Professional Services

Administrator
Frank L. Codella, AIA
Education
Gordon A. Phillips, AIA
James E. Ellison II, ACSA
Research
James L. Haecker, AIA
Professional Practice
Leonard Mayer, AIA
Technical Programs
Thomas R. Hollenbach, AIA
Building Design
Programs
Maurice Payne, AIA

Business Management

Controller
W. G. Wolverton
Assistant Controller
Ronald J. Panciera
Purchasing Agent
James F. Sessions
Data Processing
Loretta V. Cleek

The above is intended to facilitate communications between the membership and the AIA Headquarters and is not a complete staff listing.

If you think stainless is
hard to work . . .

You haven't heard about new JaITEX!

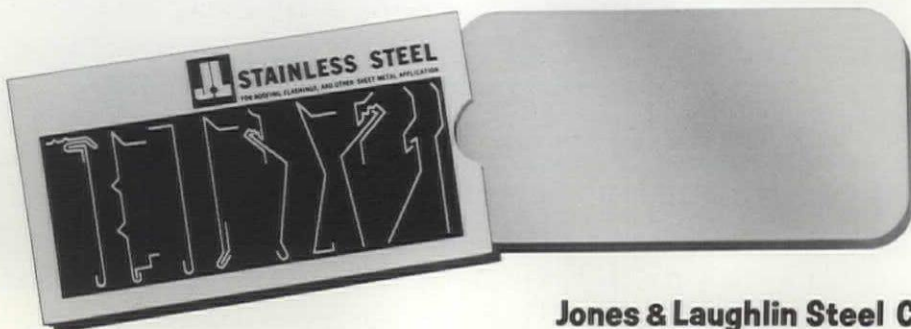
JaITEX is a remarkable product by Jones & Laughlin that will change your mind about stainless steel for roofing and flashing jobs. For one thing, it costs less than most other long-life materials. And this new kind of stainless is surprisingly easy to work because it can be furnished dead soft.

JaITEX in dead soft form shapes and crimps with amazing ease and no springback. It can be soldered, welded, brazed or nailed. Flashing, roofing, splash pans, expansion joints and other architectural elements retain their original good looks permanently because JaITEX is corrosion resistant, waterproof, and *strong*. JaITEX is now proving

its worth in a wide range of building activities: schools, shopping centers, and major office buildings.

JaITEX is available in standard 2D or bright finishes; in sheet and strip coils or cut lengths; in gauges from .010 to .109 and in widths up to 48" in most gauges.

If *that* isn't enough to convince you to start specifying JaITEX architectural stainless from now on, ask us for a sample. One you can bend with your fingers in the privacy of your office. We'll also provide a brochure on J & L architectural materials. See your local steel service center or your nearby J & L representative or write to:



Jones & Laughlin Steel Corporation
Stainless and Strip Division



21000 Mound Road, Warren, Michigan 48090



30

**year life
for Kentile
Vinyl Asbestos
Tile floors—at
3¢ per square
foot yearly
maintenance
cost!**

Owner-conducted wear test at United Fuel Gas Company Headquarters proves so outstanding, vinyl asbestos tile now specified for over 50 branch offices.

When you install $\frac{1}{8}$ " vinyl asbestos tile on 139,000 square feet of office, corridor, cafeteria, and public space—you want to know two things: How long will the flooring last? How much will it cost to maintain?

.014" wear in 5 years! United Fuel Gas Company installed Kentile® Vinyl Asbestos Tile in its 11-story headquarters building in Charleston, West Virginia. Five heavy-wear years later, tiles were removed for testing from areas bearing the roughest, toughest, most abrasive wear—and compared with new, unused tiles by micrometer. The difference in thickness: an amazingly small .014"!

30-year life projected. According to Mr. Charles S. Knowles, maintenance supervisor of the UFG Headquarters Office Building: "Based on this test, we expect the majority of this tile to give service for a period of 30 years before replacement should be necessary."

Floor a perfect "Public Relations" image. In all twelve years this Kentile Vinyl Floor has been down, it has maintained the attractive appearance so consistent with the "clean fuel" image of this utility. Daily sweeping, twice-a-week damp mopping, and a buffing every two weeks are the only care required. Cost of upkeep: 3¢ per square foot per year!

Vinyl asbestos tile now specified. On the basis of this superb performance, UFG has specified the use of vinyl asbestos tile in over 50 branch offices. As one official noted: "It has performed well, even in heavy-traffic areas such as at counters where people pay their bills and in showrooms. You couldn't ask for a better floor tile."

KENTILE FLOORS

BROOKLYN, N.Y. 11215



UFG cafeteria, serving 700 employees daily, features a 12-year-old Kentile Vinyl Floor that gets plenty of heavy traffic. Yet it looks brand-new! Note: All photographs were taken April 1968 and are unretouched.



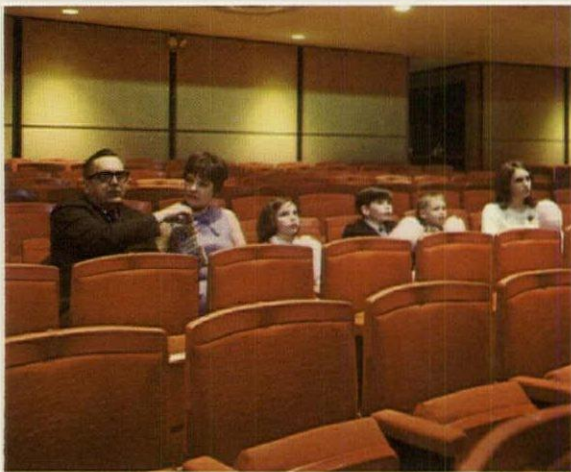
24-hour communications area, where the clean, glossy appearance of vinyl asbestos tile reflects the "clean fuel" image of UFG.



In UFG drafting room, as elsewhere, cost of upkeep for floors is an amazingly low 3¢ per square foot per year.

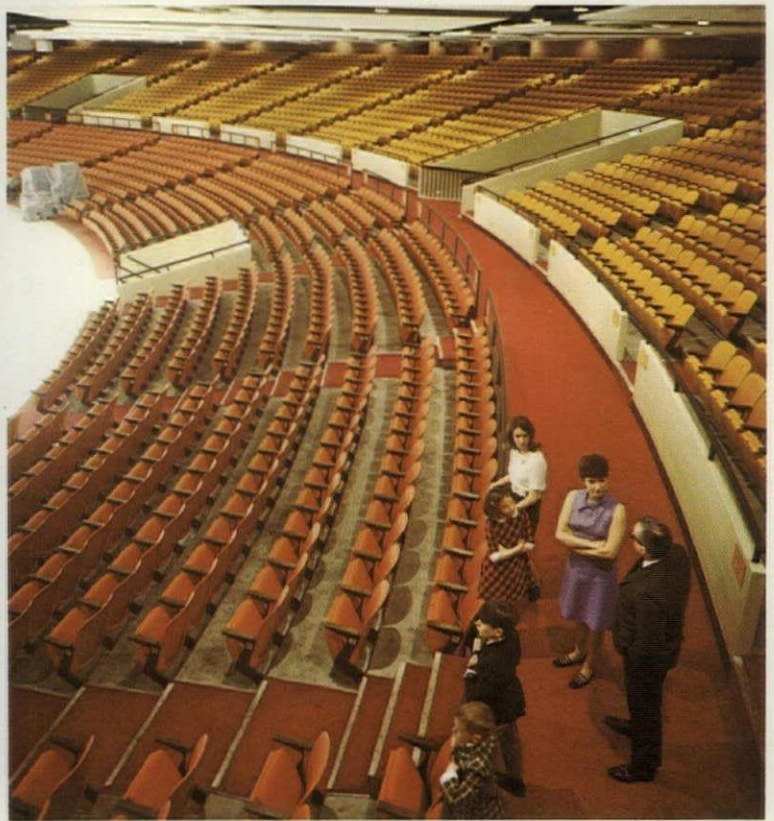


Advanced look of UFG Headquarters, Charleston, W. Va., is complemented beautifully by modern Kentile Floors.



A guided tour of the new expanded Center includes not only the 20,000-seat Madison Square Garden, The Felt Forum, the Bowling Center and The Center Cinema shown here, but also the Exposition Rotunda, Gallery of Art and Hall of Fame. Charles Luckman Associates, Architect.

The new Madison Square Garden Center: She's changed her style and she may change yours



Many architects anticipate a nationwide trend in communities of every size — a trend away from limited-use arenas and auditoriums, toward the more versatile family “center” in which many different events can be held simultaneously, as in the new Madison Square Garden Center.

While Madison Square Garden has changed in many ways, one thing remains the same — the name on the chairs is still American Seating. But, the Garden's expansion to multiple facilities meant new multiple seating requirements. And American Seating was ready with almost a century of experience in planning and installing institutional seating of every kind.

With American Seating you can choose from almost infinite combinations of styles, mounting options, end standards, armrests, and backs — it's like customizing your installation, without paying the custom-built price. Any questions? Write Department AI-667, American Seating Company, Grand Rapids, Michigan 49502.



Fenelon as Aide to Scheick To Coordinate AIA Work; Other Staff Changes Made

Coordination of the work of the national office of The American Institute of Architects will be centered in a newly created position, assistant to the executive director.

James M. Fenelon, who since 1956 has served as executive director of the 550-member Minnesota Society of Architects, has been named to the post.

William H. Scheick, FAIA, executive director of the Institute, said, "Practically every area of our work relates to others and requires daily coordination." Urban and housing programs, for example, interlock with government affairs, and they in turn with practice, documents and research programs.

Scheick made known, at the same time, the appointment of Gordon A. Phillips, AIA, of San Rafael, Calif., as director of Education, and the promotion of James L. Haecker, AIA, from associate director, Education and Research, to director of Research.

Phillips has taught at a number of universities and for the past 14 years maintained his own firm in San Rafael. Haecker has been with the headquarters staff for the past year.

Scheick said the centering of administrative coordination in Fenelon's office is to "free our professional staff for maximum effort in their areas of expertise." He said Fenelon's experience "equips him ideally to perform as a 'utility quarterback' for the AIA."

Fenelon, a native of McLaughlin, S. D., received a law degree in 1951 from the University of North Dakota. Among his duties with MSA have been government relations, public relations and the coordination of the state organization's committee work. For the past two years Fenelon has also been executive director-consultant to both the North Dakota and South Dakota Chapters AIA.

He was advanced to honorary membership in the AIA last year, for "distinguished service to the profession of architecture."

Fenelon is married and the father of four. He will join the Institute staff before the year's end, after MSA has arranged for the transition.



HUD headquarters, said to be a beneficial influence on federal architecture.

HUD Happy in New Home; Building's Influence Cited

Good design, like charity, should begin at home, and that, said Robert C. Weaver, Secretary of the Department of Housing and Urban Development, is true of HUD's new home in the nation's capital.

To Weaver, the new headquarters for HUD's 4,300 personnel—heretofore scattered among 20 buildings—is "very efficient, innovative, attractive."

His sentiments were echoed by President Johnson, on hand for the building's dedication Sept. 9—three years to the date that he signed the legislation creating HUD.

To Mr. Johnson the building is fresh seed in a pedestrian federal garden. "The drab, gray government building, I hope, has finally had its day," he said.

Lawson B. Knot, Jr., administrator of the General Services Administration which constructed the building for HUD, pointed out that it was built at the least cost per square foot of any government structure in recent years.

The building was designed by Marcel Breuer, FAIA, and Herbert Beckhard, AIA, with Nolen-Swinburne & Associates. It consumed only \$23 million of a \$26 million appropriation, reportedly shaking down to about \$17 a square foot.

Lesser officials agreed with Mr. Johnson that the new HUD headquarters will have considerable influence on the design of future buildings constructed under the aegis of GSA.

Indeed, GSA's Karel Yasko, FAIA, said it has been influential already. Yasko, a leader of a press preview tour prior to the dedication, made no effort to conceal his enthusiasm for the HUD home.

"This is technology really coming to the fore," he said in winding up an explanation of the building's integrated structural and mechanical systems.

Weaver, by the way, portrayed Yasko as "probably more than any other individual" responsible for the new, progressive look in federal architecture.

The building is somewhat suggestive of two Breuer designs in France, an IBM building in Nice and the UNESCO building in Paris. It has, however, scored some "firsts," particularly for federal architecture. Its plan (double-Y or "dogbone") departs from the usual block or wing plans in federal architecture, and it is the first precast concrete building in government, according to HUD.

It is formed of 1,584 window units, each of 12 tons, which take the load to W-shaped three columns spaced on 40-foot centers along the perimeter. A single row of double columns runs along the spine.

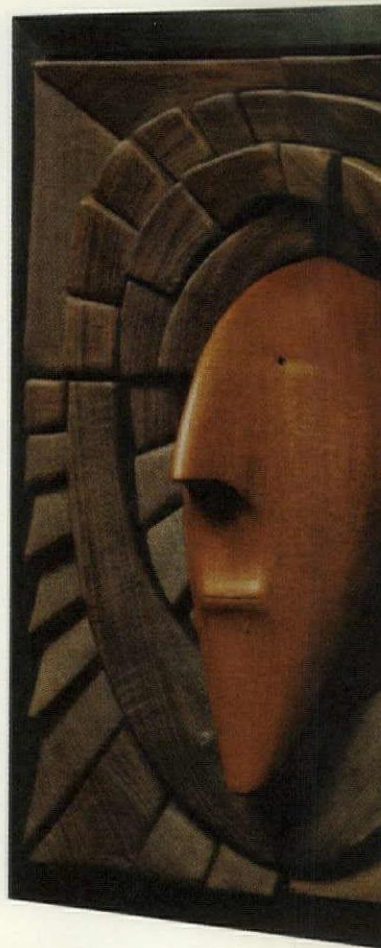
1968 Highway Act Leaves Questions Unanswered; D.C. Freeways up in Air

The signing of the Federal-Aid Highway Act of 1968 in the 11th hour by President Johnson, with what he called "misgivings," left a wake of confusion as to what the measure really means.

Three issues of particular concern to design professionals relate to 1) the highway beautification program, 2) public parklands and 3) District of Columbia freeways.

In a letter to Mr. Johnson urging that he veto the bill, Institute President George E. Kassabaum, FAIA, said, "The AIA believes enactment

Continued on page 17



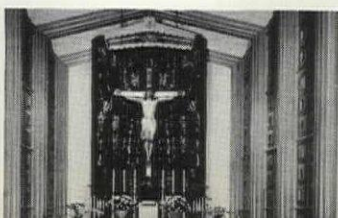
FREEDOM TO CREATE IN WOOD... The promise of wood in the hands of a sensitive designer adds beauty to structure. Form to function... feeling to flexibility. For more than two generations our single-source custom service has enabled architects and designers to unleash their total creativity on the wonderful warmth of wood. We invite you to think of wood as the medium... freely... unconcerned with construction and installation. We can produce it.



WOODWORK CORPORATION OF AMERICA

1432 WEST TWENTY FIRST STREET, CHICAGO, ILLINOIS 60608

ARCHITECTURAL WOODWORK:
Moulding • Wainscoting • Partitions • Building Trim



Custom Furniture • Merchandising Equipment

INDUSTRIAL WOODWORK:
Wood Components • Special Plywood

Circle 263 on information card



Ask Me about LOW COST operable walls!

"When I call for a vote from the school board on any purchase, I want to be sure that I get 'real value'. In Operable Walls, it's not just the initial cost that must be considered, but all the hidden costs of repairs and maintenance over the years that might be necessary to keep the operable wall working. In the long run, the quality product has the lowest overall cost."

That's why R-W Operable Walls are specified for so many schools. They're quality built. The R-W

Wall rides free and clear on ball-bearing hangers that glide in heavy-duty ceiling track. It's completely free of any floor contact; no floor track, guides, slides or "gadgets." Maintenance costs are the absolute minimum semester after semester.

So, if you're considering an operable wall for your next school job, write us! Your R-W Sales Engineer will contact you and assist you where possible. In addition, he'll deliver our latest operable wall information—including Bulletin A-600.

MAKE NO PRICE CONCESSION WITH QUALITY . . . CONSULT



Richards-Wilcox
MANUFACTURING COMPANY

223 THIRD STREET • AURORA, ILL, 60507

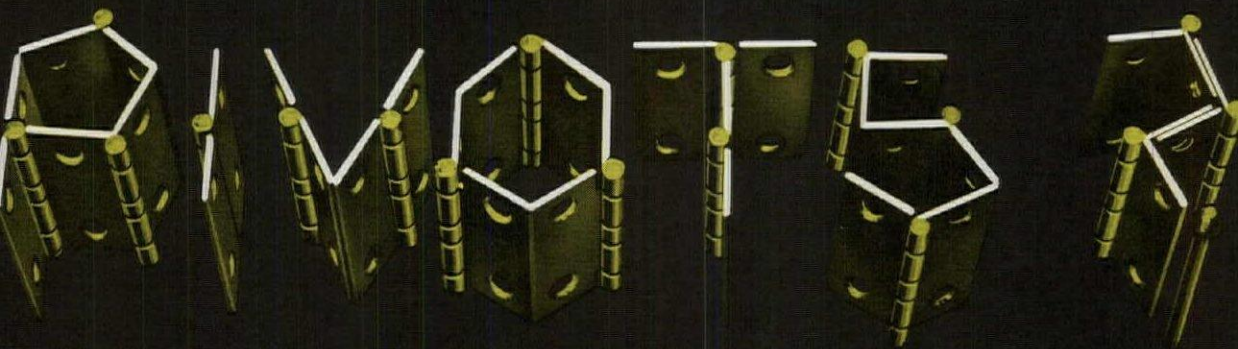


The number is Corbin 4726

Your number for security. Corbin exit devices operate at a finger's touch. Dependable, safe and whisper-quiet. This is only one of many designs. It displays the style, quality and security built into the complete Corbin line of door closers, locksets and exit devices.

Your Corbin distributor can furnish you with complete data on this design, or write P. & F. Corbin, Division of Emhart Corporation, New Britain, Connecticut 06050. In Canada—Corbin Lock Division, Belleville, Ontario.





Consider the facts!

PIVOT SETS:

Are economical. A set with side jamb pivot costs less than a pair and a half of heavy butt hinges.

Assure better anchorage, with screws in shear.

Support doors top and bottom, without weight on side jamb.

Provide vertical adjustment.

Take the shock and racking of overhead door holders.

- Eliminate the need for anchor reinforcement hinges. Yet a Rixson adjustable pivot set, with side jamb pivot included, sells for half the price of an anchor hinge set.
- Are designed for today's architecture.
- Cannot permit door drag or bind if properly installed.
- Far outlast most ball bearing hinges.

For all kinds of exterior, medium or heavy traffic door installations: Rixson pivot sets are superior in every respect. **PIVOTS? ABSOLUTELY!**

RIXSON CLOSERS A DIVISION OF RIXSON INC. Franklin Park, Ill. • In Canada, Rexdale, Ontario

of this legislation would not be in the best interest of the country."

At the Aug. 23 signing, President Johnson issued a statement saying that "by far the most objectionable feature of the bill" is the requirement commanding the District to begin building four specific free-ways within 30 days. But then he added:

"Fortunately, the Congress has called for construction only in accordance with the applicable provisions of the federal highway law. If the authority of the Executive Branch were not so preserved, I would have no choice but to veto this bill."

Referring to the District, the President said it was his understanding that "under federal highway law the Secretary of Transportation is required to approve construction only when 1) funds are available, 2) all rights-of-way can be obtained, 3) these projects are shown to be appropriate links in a comprehensive transportation plan for the District, and 4) other requirements of sound highway construction are met."

Planning Ahead: Meanwhile, at its September meeting, the National Capital Planning Commission agreed to act next month on a general land-use plan and, in addition, to give study to two specific aspects of that plan—thoroughfares and mass transportation. It was also agreed that the latter two plans would be acted on finally at the December meeting.

What all this suggests in terms of the new highway legislation is that the District freeway program, for the time being, is in a state of uncertainty and the 30-day ultimatum is apparently academic.

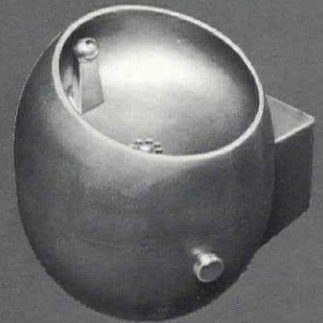
Kassabaum's letter to Mr. Johnson pointed out that "it is most inappropriate and highly undemocratic of the Congress to dictate the plans, designs and construction of specific local highways," adding that such action "could well be a dangerous precedent if applied to other American cities and towns."

Mr. Johnson listed three points which he believed "to be unfortunate, ill-considered and a setback to the cause of conservation," and he urged Congress "to move promptly to correct them." The bill, he explained, will:

- Seriously weaken the pioneering effort to beautify America's highways by depriving that effort of funds it needs and by diluting the

Continued on page 20

Haws makes a better-looking drink of water.



...write for our catalog and we'll prove it!

Yes, send me your colorful catalog illustrating Haws drinking fountains and water coolers of distinction.

Name _____ Title _____
 Firm _____
 Street _____
 City _____ State _____ Zip _____



**DRINKING FOUNTAINS
WATER COOLERS**

HAWS DRINKING FAUCET COMPANY
1441 Fourth Street • Berkeley, California 94710

Also manufacturers of emergency decontamination showers, eye/face-wash fountains, and laboratory faucets

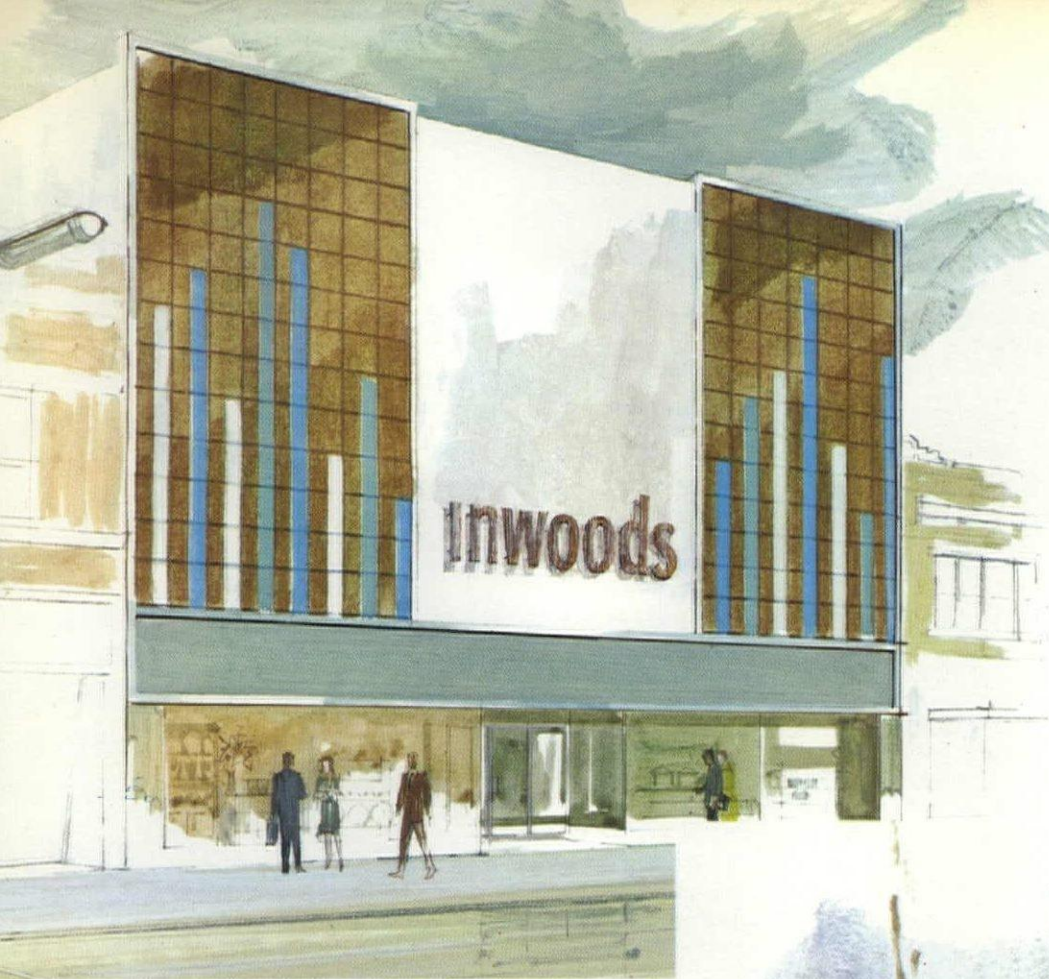
Circle 235 on information card

discover VISTATONE!

the day of the dull facade is past...
Kawneer's aluminum mosaic panels
let you create custom facades with-
out custom costs!



VISTATONE® Core framing system, entrances and Sealair monumental windows in PERMANODIC® Medium Bronze. Available throughout the entire line of Kawneer architectural aluminum products, highly durable PERMANODIC finishes add warmth and distinction to both commercial and monumental buildings. Credits—Citizens Federal Savings & Loan Association, Mt. Vernon, Ohio: Arch., Small & Wertz Associates, Oxford, Ohio: Gen. Con., R.A. Bergs Inc., Mt. Vernon, Ohio.



Kawneer puts prestige in a package, gives you distinctive aluminum mosaics to work with in planning individualized facades for every budget, every application.

Now you can achieve multi-dimensional design with three panel sizes, two panel depths. Design in 10 semi-matte colors and two PERMANODIC Bronzes. Make a solid sculpture of same-sized panels—or vary depth and shape to bring out intriguing shadow patterns. Make it distinctive in subtle shadow tones or important in bronze for prestige applications. Every panel interlocks with every other panel and possibilities are limitless.

Specify VISTATONE for new applications; renew and remodel with VISTATONE, too!

For more information, call the authorized Kawneer Dealer in your area or write Kawneer Product Information, 1105 North Front Street, Niles, Michigan 49120.

KAWNEER

ARCHITECTURAL PRODUCTS

AMAX
ALUMINUM

New Dynamics in Architectural Aluminum

Kawneer Company, Inc., a Subsidiary of American Metal Climax, Inc.
Niles, Michigan • Richmond, California • Atlanta, Georgia
Bloomsburg, Penn. • Kawneer Company Canada, Ltd., Toronto



act's billboard removal provisions.

- Remove the protection we have given in the past to many parklands that should be preserved for the families and children of America.
- Extend the interstate system by 1,500 miles without any serious study of the type of major highway program we will need after completion of the present system in 1974.

Blow to Beauty, Conservation: Regarding the preservation of parklands, Kassabaum wrote that the Institute is "most concerned" by the amendment to Section 4(f) limiting the Transportation Secretary's authority "to block roads which trespass on parklands," calling this provision "a vital blow to the 'New Conservation' achievements of your Administration."

Federal Highway Administrator Lowell K. Bridwell, on the other hand, said the language of the amendment "gives stronger protection to publicly owned recreation areas and parklands" than does the 1966 act. The amendment extends the protective responsibility to state and local officials.

As for highway beautification, the AIA president questioned the "wisdom" of an amendment which, Kassabaum wrote, says that "billboards need not be removed if the federal share of the 'just compensation' [to the owners] is not available. We fear the practical effect of this amendment would be to defeat existing praiseworthy efforts of various states to remove road signs."

\$2.5 Billion Transit Plan Goes Before L.A. Voters

Bigger by far and at least twice as costly as the San Francisco area's BART is a proposed transit system riding a referendum in Los Angeles.

The measure on the Nov. 5 ballot seeks the approval of residents of the Southern California Rapid Transit District (Los Angeles County, roughly) in funding countywide transportation improvements with a half-penny sales tax.

The tax is expected to yield \$49 million yearly at the start, \$121 million yearly by 1980. It was made possible through enabling legislation recently enacted.

The SCRDT directors are planning 89 miles of rail rapid transit—subway, surface and skyway—along with 300 miles of local feeder bus service and a network of express feeders.

Basic engineering has been completed for the \$2.5 billion project. If the electorate endorses the scheme, at least a year of engineering design will follow before actual construction begins.

It would be a giant undertaking, "but Los Angeles County," said SCRDT President Don C. McMillan, "is a giant among the metropolitan areas of the nation."

The Child of Housing Act, National Housing Corp., Aims to Spur Production

"Now," said President Johnson, "the real building begins." The President referred to houses for low- and moderate-income families, mainly, and to the National Housing Corp., born from the Housing Act of 1968.

Real building? Yes, when compared to even a Levitt & Sons volume. In time, it was said, the corporation could generate up to 30,000 units yearly, the equivalent of six Levitts. No, when measured against the Administration-defined need for 600,000 new units annually, 12 times the 50,000 subsidized units currently produced.

In any case, what happens under the aegis of the National Housing Corp. will bear close watching. For the corporation is designed to get big business, big money and big know-how into a neglected sector of the housing market—on a profit basis.

The President last month named Edgar F. Kaiser chairman of the incorporators of the private corporation. It was Kaiser who headed the President's Committee on Urban Housing, made up of business and labor leaders. A report on the committee's work is expected momentarily.

The new corporation, known in the Housing Act as the National Housing Partnership, has a dozen functions including the encouragement of home ownership, improvement in design and technology, assistance to nonprofit sponsors, etc.

But its chief mission, it appears, is to spur the formation of local profit and nonprofit home building groups through technical aid and—up to 25 percent of equity and in some cases more—financial assistance.

But over the long pull its principal significance may rest in a meaningful involvement of US industry and financial institutions in the housing picture.

Continued on page 26

For more information, write or call any of the Institute members listed below:

MO-SAI INSTITUTE, INC.



110 Social Hall Ave.,
Salt Lake City, Utah 84111
Members, Producers' Council

BADGER CONCRETE COMPANY

P.O. Box 1068
Oshkosh, Wisconsin 54902

BEER PRECAST CONCRETE LTD.

110 Manville Road
Scarborough, Ontario, Canada

BUEHNER & COMPANY, INC.

P.O. Box 936
Mesa, Arizona 85201

CAMBRIDGE CEMENT STONE CO.

156 Lincoln Street
Allston, Massachusetts 02134

ECONOMY CAST STONE COMPANY

P.O. Box 3-P
Richmond, Virginia 23207

FORMIGLI SALES COMPANY

Suite 1208, 6 Penn Center Plaza
Philadelphia, Pennsylvania 19103.

GOODSTONE MANUFACTURING, INC.

470 Hollenbeck Street
Rochester, New York 14621

GRASSI AMERICAN CORP.

111 South Maple Avenue
South San Francisco, California 94080

HAMILTON CONCRETE PRODUCTS CO.

1401 East 39th Street
Chattanooga, Tennessee 37407

HARTER CONCRETE PRODUCTS, INC.

1628 West Main Street
Oklahoma City, Oklahoma 73106

INTERPACE

PRECAST CONCRETE PRODUCTS
2855 West Pomona Boulevard
Pomona, California 91766

JACKSON STONE COMPANY, INC.

330 West Mayes Street
Jackson, Mississippi 39205

OLYMPIAN STONE COMPANY, INC.

P.O. Box 685
Redmond, Washington 98052

OOLITE INDUSTRIES, INC.

P.O. Box 877, Ojus Branch
Miami, Florida 33163

PLASTICRETE CORPORATION

1883 Dixwell Avenue
Hamden, Connecticut 06514

THE GEO. RACKLE & SONS CO.

Newburg Station
Cleveland, Ohio 44105

READY-TO-POUR CONCRETE CO.

Boise & Idaho Falls, Idaho

SEKIGAHARA STONE CO., LTD.

2-11-1 Takara-Cho, Chuo-Ku
Tokyo, Japan

SOUTHERN CAST STONE CO., INC.

P.O. Box 1669
Knoxville, Tennessee 37901

TEXAS INDUSTRIES, INC.

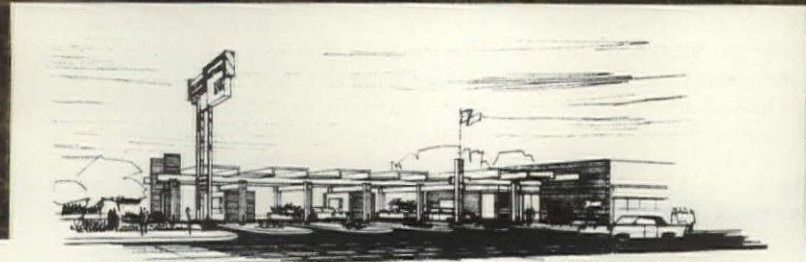
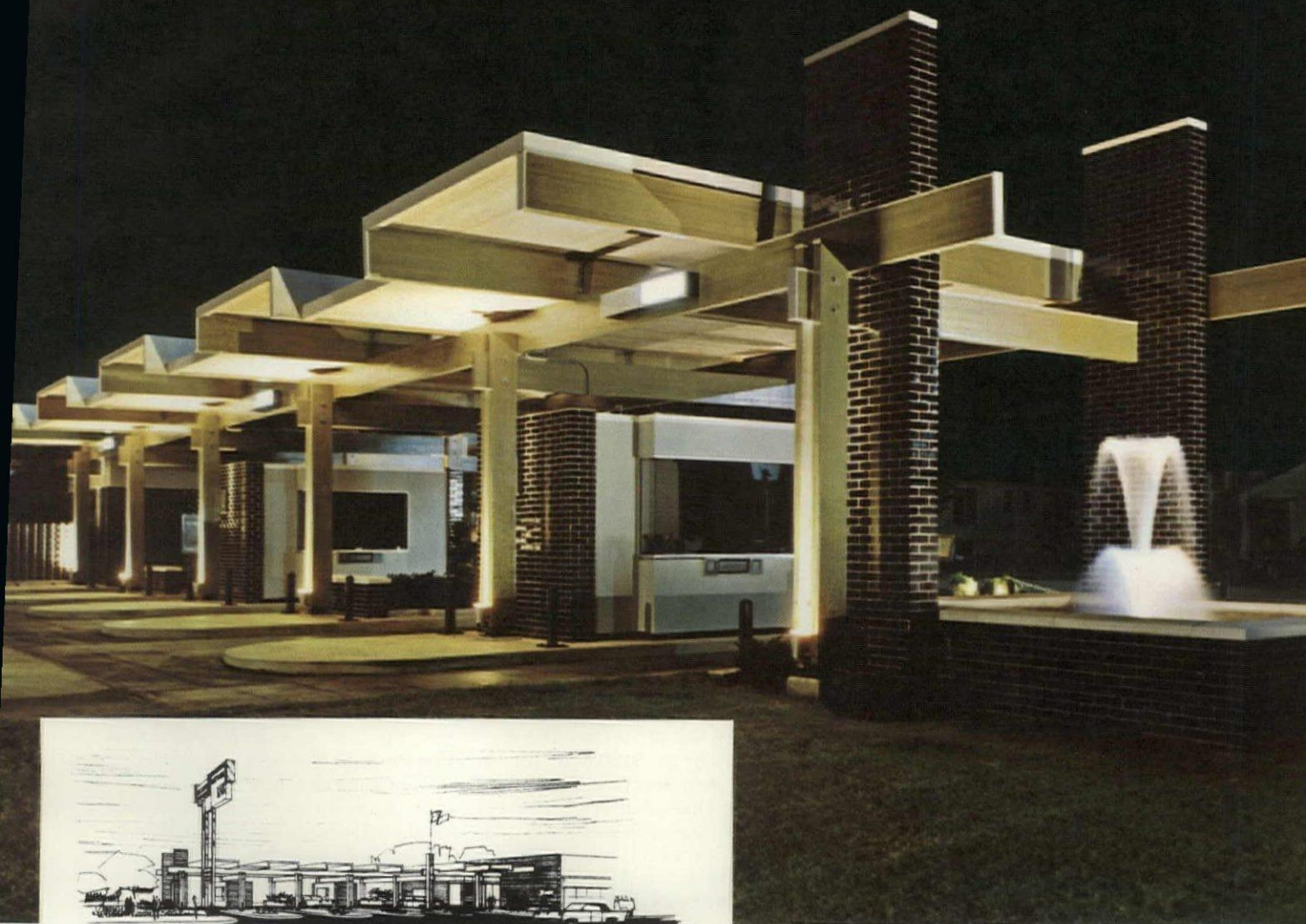
P.O. Box 400
Arlington, Texas 76011

WILSON CONCRETE COMPANY

Highway 75 Avery Road
Omaha, Nebraska 68107

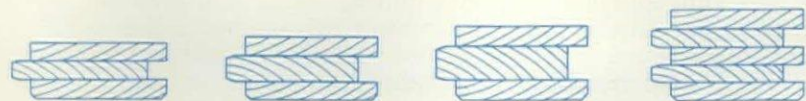
Circle 234 on information card

ARCHITECT BANKS ON LOCK-DECK® DECKING TO SOLVE DESIGN PROBLEM



Architects: Charles L. Monnot, Jr. & Associates, A.I.A.

Potlatch Lock-Deck® decking and laminated beams were specified as the complete roof system for this unusual drive-in bank building in Duncan, Oklahoma. They also form the integral basis for the structural design. The major criteria were permanent, durable appearance combined with capability for dismantling and moving. For more information on this unusual commercial structure write for a special Architectural Report on Drive-through Bank.



Lock-Deck is available in 4 thicknesses and factory finished in 14 colors, Electro-Lam® beams in all sections up to 162 sq. in., lengths to 60'.

For details see SWEET'S Architectural File 1c/Po

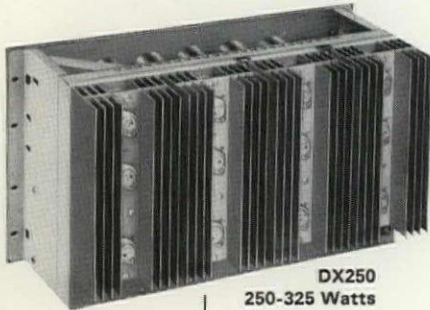
Circle 350 on information card

PROFESSIONAL SOUND by

Rauland

THE DX SERIES

All-Silicon Solid-State
Professional Amplifiers



DX250
250-325 Watts

Dynamic
Excellence

Zero Defect
Parameters



DX125
125-165 Watts

Where high power amplification is needed for industrial or commercial applications...where dynamic and faithful reproduction is a requirement...where unflinching, continuous performance is imperative...today's logical choice is a RAULAND DX Series Amplifier...

with the exclusive
5-YEAR WARRANTY
and individually registered
Certificate of Performance

ask for

COMPLETE SPECIFICATIONS

For detailed specifications of the RAULAND DX Series Professional Amplifiers, write us on your letterhead. We specialize in working with architects and consulting engineers. Write today for full information.

RAULAND-BORG CORPORATION
3535-L Addison St., Chicago, Ill. 60618

Circle 304 on information card

Newsletters from page 20

And this can best be achieved, it is believed, by demonstrating profitability in the creation of new shelter for those of scant or modest means. In fact, this is the corporation's purpose, as expressed in the act—"to encourage the widest possible participation by private enterprise."

The act authorizes the corporation to "plan, initiate and carry out" housing and "related facilities," but it is expected that it will work through partnerships with local building groups and individuals.

New Town Interest Grows; Model Cities Grants Made

The Department of Housing and Urban Development is getting numerous inquiries sparked by provisions of the Housing Act of 1968 which authorize guarantees for financing new towns.

This was reported last month by HUD Secretary Robert C. Weaver as he also made known the award of Model Cities planning grants to 33 established communities.

The act enables the Secretary of HUD to guarantee obligations issued on the bond market by private developers to help finance the land acquisition and land development costs of new towns.

In Weaver's words, there have been "one proposal and many inquiries" from prospective new town developers.

The Model Cities planning grants range from \$78,000 for Danville, Ky. (pop. 13,000) to \$266,000 for a Cleveland neighborhood of 47,000 people, the Dike-Hough area.

The cities were chosen from 163 municipalities which applied for a share of the \$12 million appropriated by Congress for the second round of planning grants. Additional grants will be made in this round, bringing the total to 70-80.

The 75 communities given grants in the first round are now planning for their model neighborhoods, according to HUD, which expects the first plans from this group soon. By June, HUD figures to have 75 plans, with most cities in their first "action year."

The grants pay 80 percent of the cost of comprehensive plans for blighted neighborhoods. After a year's planning and approval of plans, the cities are eligible for Model Cities supplemental grants as well as other federal grants-in-aid to carry out their programs.

Workshops Across Nation To Discuss Fallout Design

In response to a request by the Office of Civil Defense, the AIA will conduct for architects a series of workshops devoted to design for protection against fallout radiation.

While final plans were not available at presstime, it is expected that the workshops, tentatively scheduled for 14 cities throughout the United States, will be concentrated in half-day sessions.

A. Stanley McGaughan, FAIA, who is directing the project for the Institute, said that OCD has been aware for some time that it is difficult for design chiefs of active firms to attend full training courses offered in shelter analysis and protective construction. Thus OCD is setting up the series of briefer presentations tailored to the needs of the designing architect, he said.

The workshops will present and clarify public civil defense policy and include discussion of federal, state and local programs and regulations of consequence to the profession. The impact of nuclear attack and alternative approaches for protection will be explored.

The principles of radiation shielding and design techniques to achieve such shielding will be studied in relation to the architectural process. Emphasis will be on means for creative dual-use facilities rather than on single-purpose shelter. (A foretaste of what is to be presented is available in a series of three articles by Robert J. Patton, the first of which appears in this issue of the AIA JOURNAL.)

The workshops will be coordinated with the expanded Architectural and Engineering Advisory Service offered by OCD. Under this program, contracts have been arranged with universities in 29 states to assist architects in connection with building design.

Fuller Smoothly Bemedaled But His 'Outloud Thinking' Has Editor Doing Likewise

R. Buckminster Fuller got the Gold Medal from the Royal Institute of British Architects without a hitch a while back, but the RIBA Journal's publication of the "outloud thinking" Fuller delivered for the occasion was another matter.

Editor Malcolm MacEwen was confronted with the predicament of

Continued on page 32



Bamboo. One of 12 contemporary Patterned Glass designs by the people who make an art of making glass. **Libbey-Owens-Ford Co.** Toledo, Ohio



Circle 335 on information card

a precast
preview



Over 6800 precast panels. 100 different sizes. Featuring

MEDUSA WHITE

This dramatically beautiful university building is believed to be the largest precast panel job ever designed. Over 6800 units are being precast in Manassas, Virginia, and shipped to the Connecticut site on flat bed trucks. A typical unit, of over 100 different sizes, is a concave, two-window unit 6' wide by 13'11" high. All are a unique salt and pepper color. Pink and gray sand, black, tan and white quartz exposed aggregates and both Medusa White and Medusa Gray Cements were used. Whether your job is large or small, Medusa Cements will help you achieve your creative goal. Write Medusa at P. O. Box 5668, Cleveland, Ohio 44101.

RESEARCH ACADEMIC WING, UNIV. OF CONNECTICUT HEALTH CENTER, Farmington, Conn. Architect: Vincent G. Kling and Associates, Philadelphia, Pa. Gen. Contractor: Lasker-Goldman-Corporal, New York, N. Y. Precast Producer: Earley Studio, Incorporated, Manassas, Va.



MEDUSA PORTLAND CEMENT COMPANY

White and Gray Portland Cements • White, Gray and Custom Color Masonry Cements • "CR-85 Series"® ChemComp® Cement

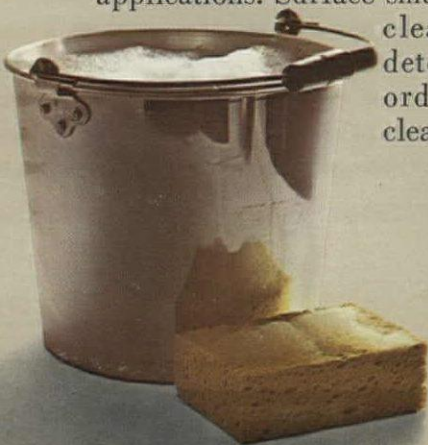
Circle 260 on information card

The Inside Story of Glasweld.

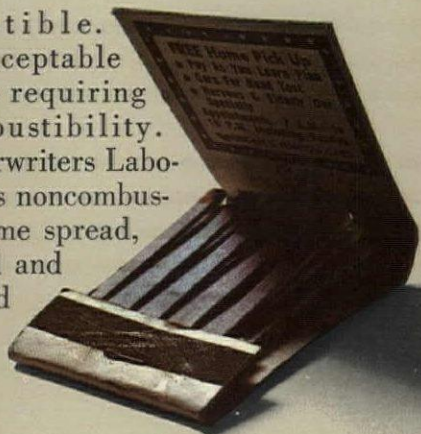
U.S. Plywood's Glasweld® has moved inside in a big way. In more and more buildings it is proving as acceptable for interior uses as for exterior applications.

Here are five—and there are more—good reasons why this asbestos reinforced panel with its all-mineral colored coating can be confidently used on your next interior job:

Dependable. Glasweld never needs painting or refinishing when used in interior applications. Surface smudges are easily cleaned with soap, detergents or any ordinary abrasive cleaner.



Incombustible. Glasweld is acceptable in those areas requiring 100% incombustibility. Listed by Underwriters Laboratories, Inc., as noncombustible with a flame spread, fuel contributed and smoke developed rating of 0-0-0.



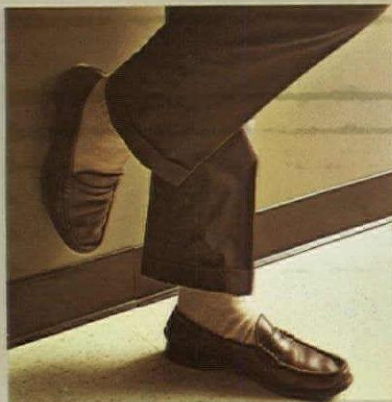
Economical. Glasweld is simple to install with exterior mastic and mouldings. Large sheets go up quickly. All surfacing can be handled by one trade.



Decorative. Since Glasweld comes in 24 colors, it offers great freedom to create almost any interior decorative effect. Equally important, Glasweld retains a visually flat appearance if properly installed.



Durable. Glasweld is highly abrasion and scratch resistant. Properly installed, it withstands everyday wear-and-tear in high traffic areas of schools, hospitals, hotels. In fact, Glasweld's "life expectancy" is as long as that of the buildings in which it is installed.



Why not try Glasweld on your next interior job? You'll find it the most versatile, economical and trouble-free paneling you can use.

For more detailed information, read our brochure on Glasweld. Call the Architects Service Representative at your nearest U.S. Plywood office for a copy or write:

U.S. Plywood
A Division of U.S. Plywood-Champion Papers Inc.
777 Third Avenue, New York, N.Y. 10017

Glasweld

Interior Installation Details.

Apply Glasweld to plywood with matching Glasweld moldings and mastic in areas requiring high impact resistance. Moldings are available in plain anodized, Duracolor or porcelainized aluminum to match all Glasweld colors.

Glasweld can be backed with gypsum board where fire regulations require. (Depending on the construction of the wall, an hourly rating can be secured.) Apply chestnut-size gobs of mastic to the substrate. Trowel, press and seat for adhesion. The "R" series molding shown creates a panelized treatment.

For greater articulation use the "K" series molding. It will create a distinctive scale without increasing overall wall thickness.

Vertical joints without moldings can be secured by chamfering Glasweld edges with a carborundum flocked steel file. Apply exterior grade mastic to the entire substrate, seat and temporarily block at joint. Fasten top or bottom. Use a grout or sealant at joint.

Where impact is a minimal problem, Glasweld can be mounted on furring strips. Spacing for $\frac{1}{8}$ " thickness, 12" x 120". Shown here is a snap-on molding which can be used in a matching or contrasting color.

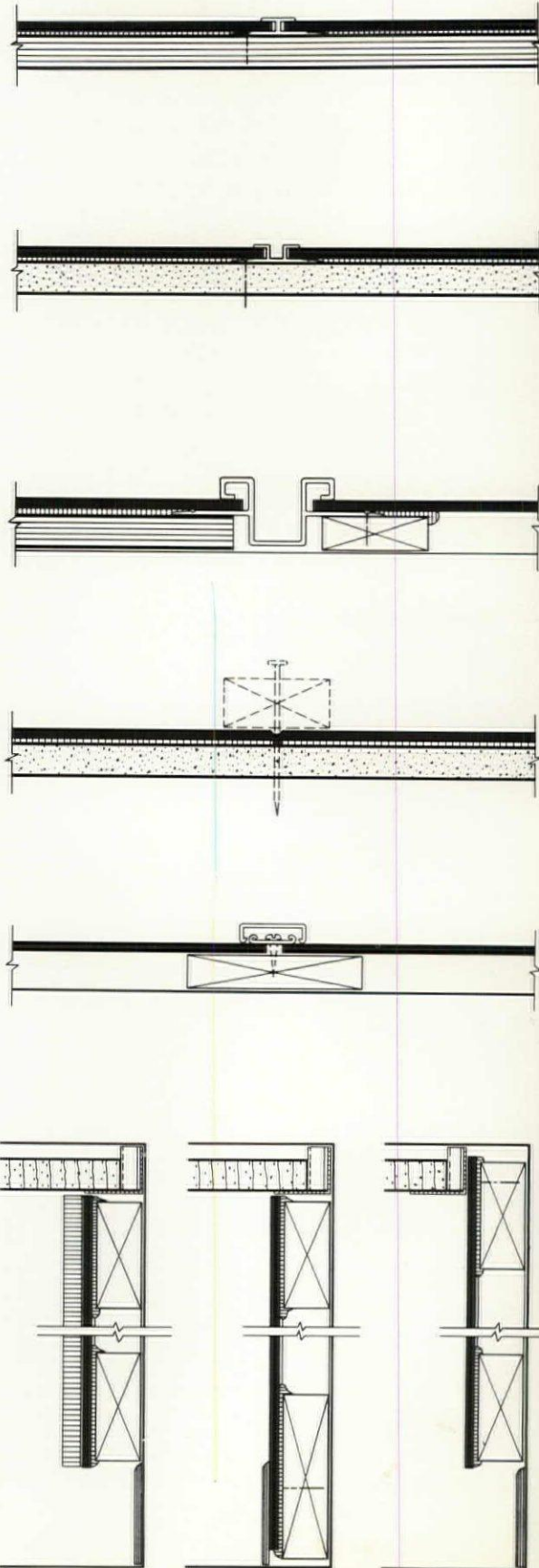
Head and Base Treatments. Where the vertical edges of Glasweld are retained by moldings, panels do not have to be secured top and bottom. Panels mounted without vertical moldings must be mechanically supported top or bottom to prevent slippage due to possible mastic release.

(Scale $\frac{3}{8}$ " = 1")



U.S. Plywood

A Division of U.S. Plywood-Champion Papers Inc.
777 Third Avenue, New York, N.Y. 10017



How Acousta-Voicing™ Can Solve Your Sound Problems.

By GLENN W. MALME

An explanation for laymen of a revolutionary new sound equalization method that makes the words and music sound better....

...on any sound system, in any structure or room. Wherever sound systems are used, you hear the professional sound people talking about Acousta-Voicing these days.

What is Acousta-Voicing?

Acousta-Voicing is a coined word or name which Altec Lansing has trademarked to explain its method of improving the operation of a sound system in any type of structure, room, auditorium, meeting hall, church or building.

Why isn't a good sound system enough?

A good sound system, properly engineered and installed, is the basic requirement of course. However, there are problems in acoustics due to the kind of materials used in construction, the shape of a building or room and whether or not it is used for both voice and music. For example, a church may provide the reverberation that makes its organ sound beautiful to the congregation, but when the minister, priest or rabbi talks, this same reverberation causes his words to run together. Words seem to pile up on each



other as the sound bounces around the structure. If a sound system is used, distortion and feedback become a problem. So the attention of the audience is lost.

What can Acousta-Voicing do to correct these problems?

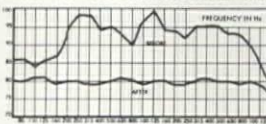
The Altec authorized and factory trained sound contractor makes an engineering survey of the sound problem. To test the sound system, he uses expensive instruments to plot what is called a "house curve." This looks like a line chart, but it tells him what the peaks and valleys are in the sound levels throughout the range of audio that can be heard by human ear, from the lowest tones to the highest frequencies.

What value is this house curve?

The sound engineer is able to diagnose the sound problem with this house curve, much like a doctor can examine an electrocardiogram of the human heart to see how it is performing. With this chart, the sound engineer observes that certain sounds, cer-

tain frequencies over-respond in the structure. In short, they are emphasized because of the type of structural design or materials used.

When the audio level is increased it can only go so high before feedback occurs. The majority of frequencies of sound usually are much lower in level than the first frequency to reach feedback level. The audio level then has to be set to accommodate the level of that frequency that is emphasized by the nature of the room.



How does the engineer correct this problem?

He has now located these troublemaking frequencies and by the use of Acousta-Voicing filters, he can reduce their strength. He literally knocks down these frequency peaks, reducing their strength until they are equal (called equalization) to those other frequencies produced by the music or speaker. Often, there can be many such "peaking frequencies" of sound. By attenu-



ating or reducing them to the sound level of the other frequencies he brings them under control. Once these individual tones have been made equal in level to the majority of the tones, then the level of the majority may be raised up to the point formerly occupied by the individual tones.

Are these frequencies then missing from the total sound heard by the audience?

Not at all, because the attenuation resulting from the isolation of troublemaking frequencies has thereby increased the acoustic gain or audio level of all the tones in the building. A full range of audibility has been established. The engineer has brought up the total sound spectrum in volume until a new house curve would show an equal level of sound, for all of the sounds a human ear can hear, from the lowest bass tones to the pizzicato of the string instruments, from the weakest voice to those with stentorian tones.

An even simpler explanation for those who are not engineering oriented might be this:

Suppose you wanted to fill a tray with water to a uniform depth (fill a room with uniform response to all sound frequencies), but this tray had some dents in the bottom that filled up first (the receptiveness of a room to certain sound frequencies). To accomplish your purpose you would tap out the dents with a hammer until the bottom of the tray was level (attenuate troublemaking frequencies by Acousta-Voicing filters).



Acousta-Voicing literally "taps down" these frequency peaks by the application of filters which are tuned to capture them. By adjusting these filters, the engineer can determine just how much attenuation needs to be applied.

What is the final result of Acousta-Voicing?

Your audience will hear every spoken word with clarity. The sound level throughout the structure will be essentially uniform, no matter if the listener is in the back row, the front row or the third balcony. He will hear total sound—every frequency that the human ear can hear, providing of course, that the sound system is Altec Lansing equipment—amplifiers, microphones and speakers.

Does Acousta-Voicing take long and is it expensive?

"No" is the answer to both questions: Generally a few hours will suffice. However, it depends on the size of the building, of course. Its moderate cost is far offset by the outstanding clarity of sound reproduction which reaches the ears of every listener.

Can any Sound Contractor perform this Acousta-Voicing for me?

No. Only the specially trained authorized Altec Lansing sound contractor can do this for you. He has made a substantial investment in electronic equipment and has spent many hours being specially trained by the company to perform this service. He may be found in the Yellow Pages of your phone directory under "Sound Systems" or by writing Altec Lansing, 1515 So. Manchester Avenue, Anaheim, California 92803. If you're in a big hurry, call us at (714) 774-2900.

VISIT ALTEC LANSING AT BOOTH #6 AT THE U.S. CIVIL DEFENSE COUNCIL CONFERENCE AT THE HOTEL SHERATON-SCHROEDER IN MILWAUKEE OCTOBER 27-NOVEMBER 1.

presenting a 12,000-word transcript, which Fuller felt needed another 3,000 words to convey gestured communication, while MacEwen had space for only 3,000.

It was Fuller who solved the editor's dilemma by suggesting that the *Journal* presentation be scratched.



Fuller in gesticulation.

Fuller said he is writing a book covering his ideas more fully and would send RIBA a copy.

Fuller in his cablegram to MacEwen said in part:

I DO NOT CONSENT YOUR PRESENTATION OVER MY NAME AND PART OR ALL ERROR RIDDEN OFTEN INCOHERENT AND UTTERLY MISLEADING TAPE TRANSCRIPTION BY OTHERS.

He suggested that the *Journal* print the presentation-of-Fuller statement by RIBA President Sir Hugh Wilson along with those of the medalist's two sponsors, as well as the cablegram exchange between the editor and himself.

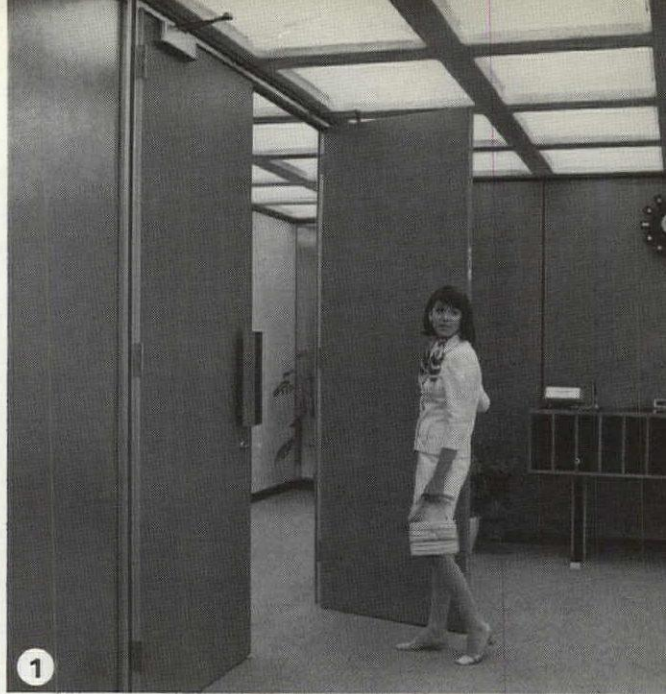
MacEwen in his reply said among other things:

HAD ASSUMED YOUR GREAT PRINCIPLE MORE WITH LESS APPLIED NOT ONLY PHYSICAL STRUCTURES BUT ALSO ORAL AND WRITTEN COMMUNICATIONS UNDER EXCESS WEIGHT WHEREOF SUFFERING HUMANITY BEING SUBMERGED AS WITNESS PROLIFERATION TELEVISION PROGRAMMES AND SUNDAY SUPPLEMENTS NOW CONSUMING MANY ACRES SOFTWOOD FORESTS OTHERWISE AVAILABLE TO PROVIDE HUMAN SHELTER AND OTHER USEFUL PURPOSES.

Both cablegrams were published in their entirety in the August *Journal*. At the same time, MacEwen openly discussed the matter:

"Gold Medalists are under no obligation, moral or otherwise, to deliver an address at all. . . . But if the Gold Medalist chooses to respond by delivering an address, should it not be of Gold Medal standard, worthy of the occasion, presenting the work and ideas of the medalist in a new way?"

Continued on page 34



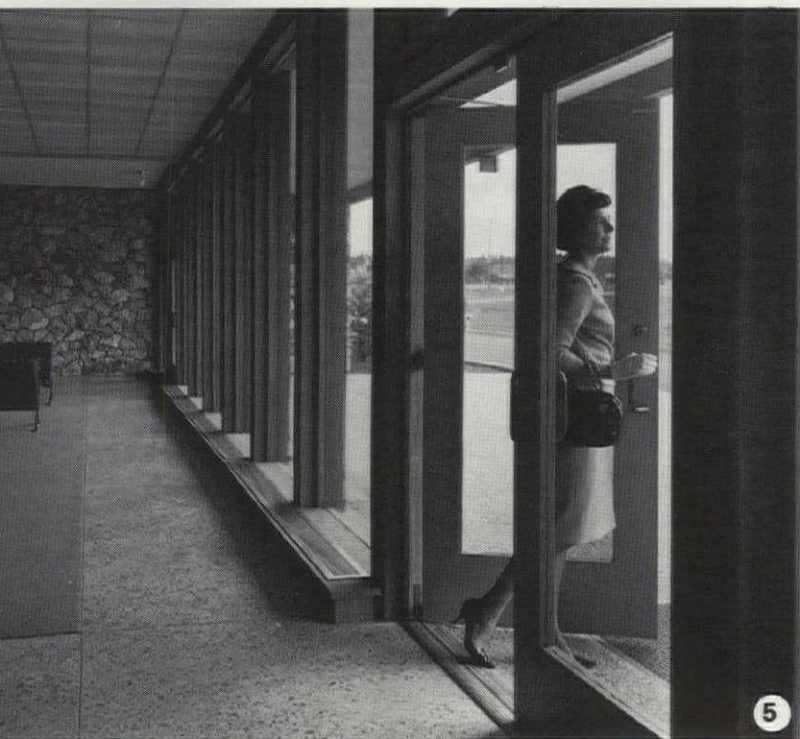
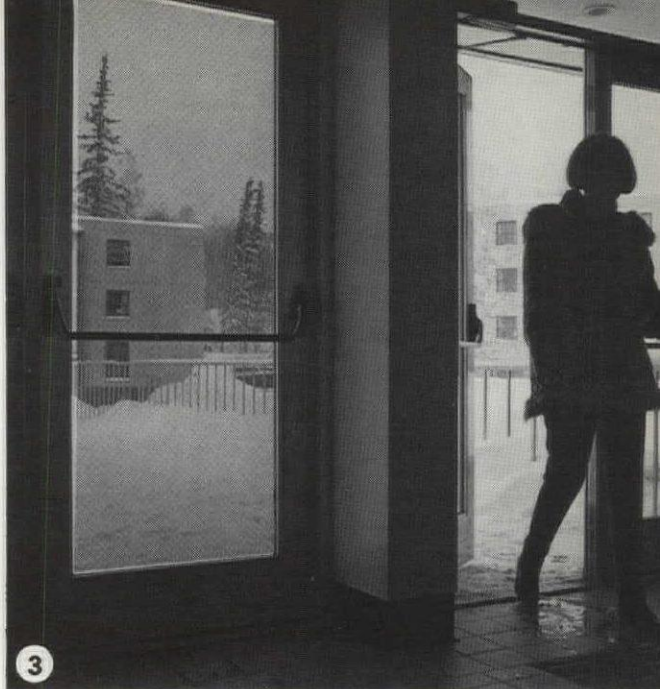
Where should the



LCN CLOSERS, PRINCETON, ILL. 61356

A Division of Schlage Lock Company

In Canada: LCN Closers of Canada, Ltd.



door closer be? LCN offers six right answers.

1. ON THE HINGE FACE OF DOOR

The LCN Smoothee® 4010 Series offers clean lines, superb control. For interior or exterior doors.

2. ON THE STOP FACE OF DOOR

"Smoothee" 4110 Series. With door closed arm folds to a position parallel to door. Interior or exterior.

3. OVER THE DOOR

"Smoothee" 4020 Series mount on trim or wall above door on push side . . . interior or exterior.

4. CONCEALED IN TRANSOM BAR

LCN "Pacer" fits inside a slender 1¾" aluminum transom bar. Exposed or fully concealed arm. Powerful, compact.

5. CONCEALED IN DOOR HEADER

LCN 2010 and 5010 Series. Generally regarded the world's finest closer. For wood, aluminum or hollow metal header.

6. CONCEALED IN TOP RAIL OF DOOR

In some cases the best solution of all. As simple as a lock to install. Recommended for interior use.

These are some of the many styles that make up the complete LCN line . . . Write for catalog.

"Fuller, with the greatest respect to him, did nothing of the kind."

Commenting on the technique of "outloud thinking," MacEwen warned against its use by those lacking Fuller's ability.

The less-than-Fullers, the editor declared, "fill up the blanks in their minds with humming and hawing and such gestures as their limited talents for acting suggest. A transcript of these comments is then forwarded to the author, who either declares that his words must be printed in full and without alteration, or puts in a week's work reducing it to a quarter of its length with four times the clarity. Had he done so beforehand, the audience would have had a better speech, delivered in half the time."

82 Architects Visit USSR In Wake of Czech Tensions

Eighty-two American architects were in the Soviet Union last month in spite of intensified East-West antagonisms due to the Czechoslovak situation. The State Department reportedly viewed the trip as "more important than ever."

The group went to Moscow to take part in a Soviet-American symposium on architecture and urban design. Morris Ketchum Jr., FAIA, said on leaving New York that the meeting "could be of value to our own country in maintaining the cultural bridge-building policies" of the two nations.

Ketchum, a past president of the AIA, and Archibald C. Rogers, FAIA, were group co-chairmen.

'House Divided' Relevance Cited at Restored Capitol

Celebrating the restoration of the Old State Capitol of Illinois, Secretary of the Interior Stewart L. Udall noted that it was in this building that Lincoln, in 1858, gave his "House Divided" Speech, and:

"Today—a century and a decade later—these words have special relevance to us as we contemplate the conclusions of the National Advisory Commission on Civil Disorders.

"The report of this commission, headed by your then Governor Otto Kerner, said: 'This is our basic conclusion: Our nation is moving toward two societies, one black, one white—separate and unequal.'"

Udall, speaking before a Springfield gathering, called upon Americans to "address ourselves to the task of realizing Abraham Lincoln's expectation that this society will cease to be divided."

The Secretary commented on the historical authenticity of the restored building and told of how the architectural firm of Henderson & Ferry acted as "detectives" in the project (see AIAJ, Nov. '67).

Below ground is a 450-car garage and the Illinois State Historical Library housing the world's most extensive collection of Lincolnabilia.

Necrology

JOHN K. DUKEHART

Portland, Ore.

WALTER H. POOLE

Philadelphia, Pa.

CHARLES B. SALSBUURY

West Hartford, Conn.

RALPH F. TAYLOR

West Orange, N. J.

LORENZO S. YOUNG

Salt Lake City, Utah

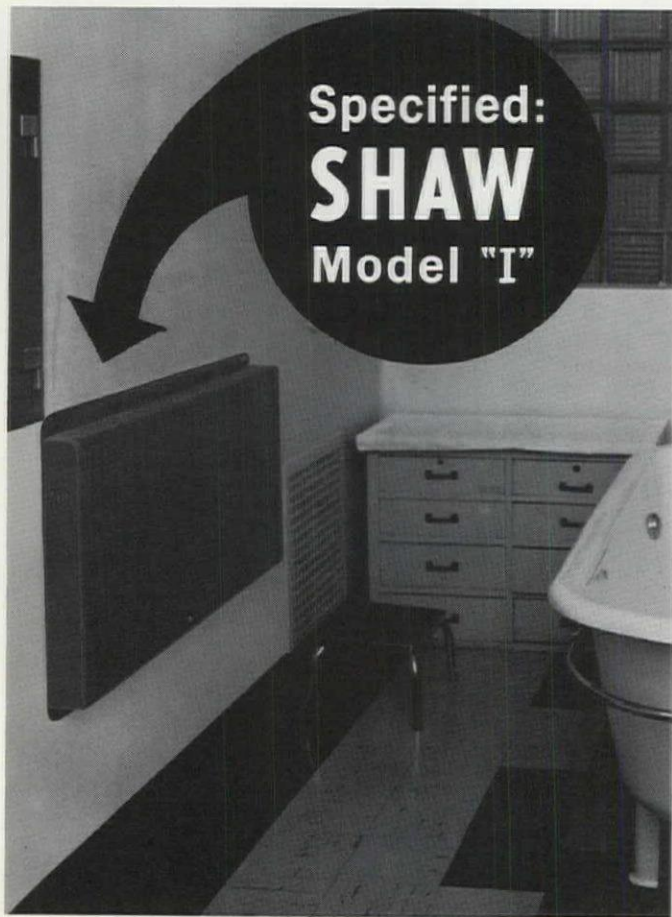
Members Emeritus

HAROLD F. DEAN

Middlebury, Vt.

EDWARD E. MACBRIDE

Chicago, Ill.



Hydrotherapy Room, Woodside Receiving Hospital, Youngstown, Ohio.

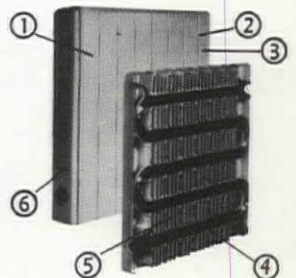
... for the ultimate in security

Shaw Model "I" PanelVectors® are designed specifically for general and mental hospitals, penal and other institutional buildings...

Where safety comes first, Shaw is the *only* specification that meets all the unique requirements involved. Mechanically, physically and psychologically. Perforated cover panels positively prohibit occupants from inserting objects into the interior. Low temperature surface results in comfortable convected warm air and yet is safe enough to touch. Flush mounting and bolting to wall makes PanelVectors immovable. End panels keep controls inaccessible to occupants. Moisture can do no harm. Nothing has been overlooked to make Shaw PanelVectors the safest spec possible. Final finish may be ordered in psychiatrically approved colors if desired.

Available in steel or aluminum. Measuring only 3" deep with lengths and heights of a full range of size, Shaw PanelVectors offer you easy installation, no maintenance problems, low original investment cost and years of safe, comfortable, service-free heating. Consult a Shaw-Perkins Field Engineer or write for supplemental data today.

1. Strong. Heavy gauge, perforated steel or aluminum. Withstands abuse. Lasts a building's lifetime.
2. Safe. All surfaces completely flat — all edges rounded to prevent injuries. Special brackets for flush mounting.
3. Foolproof. Surfaces safe enough to touch. Possibility of accidental burning reduced. No special system zoning required.
4. Self-contained. Rugged vertical serpentine copper coil is an integrated part of full length heating fins.
5. Clean. $\frac{1}{8}$ " perforations keep foreign material out; allow hosing with water or forced air. Fin spacing accomplishes internal self-cleaning.
6. Attractive. Solid end panels protect and assure neat appearance. Simple overall design. May be ordered in factory finish gray or special colors.



SHAW PERKINS MFG. CO.

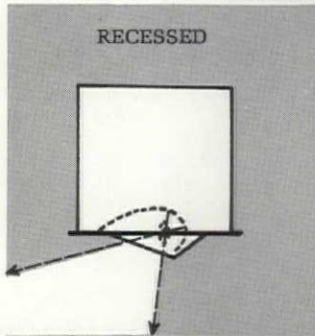
Properly Designed Room Heat Distribution Equipment

P. O. Box 285, West Pittsburg, Pa. 16160

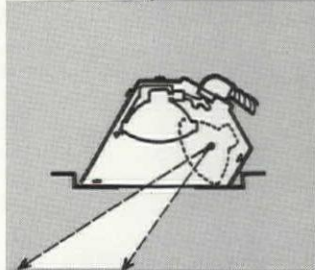
Circle 275 on information card

Serving Architects and Engineers through Creative Design

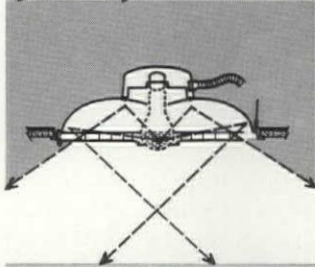
SHOVELITE: A fixture that projects light laterally. An ellipsoidal shovel recessed in wall or ceiling projects light across the adjacent plane. Used to wash murals with light or to illuminate ceiling detail. Available with metal-arc or quartzline lamps.



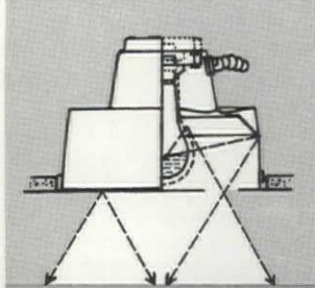
ROTOSPOT: An adjustable Downlight. By manipulation of the lamp in relation to the aperture, the light beam can be rotated through 358° and angled from 0 to 60°. All adjustments can be made from below or above the fixture. Various lamps can be used.



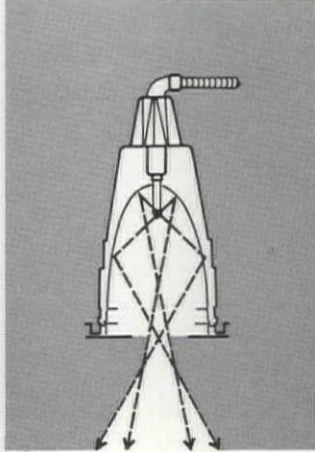
DOME: A direct light fixture that gives wide distribution. A broad, inverted shallow bowl serves as a reflector for a silver bowl lamp and provides a wide spread.



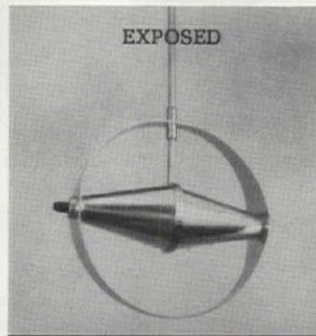
ANNULITE: A self-diffusing downlight. Used where limited plenum space above the ceiling calls for a fixture of limited height, the annulite is a shallow unit with a silver bowl lamp that produces light which is reflected downward through the annular opening surrounding the lamp.



DOWNLITE: A fixture that projects light downward. Recessed in the plenum above the ceiling, an ellipsoidal reflector gathers light and projects a conical beam through a second focal point in an aperture at the base; annular baffles cast shadows inside the chimney so that the source of light is concealed and glare eliminated. Heat from the socket is dissipated by a radiator to prolong lamp life. Available with incandescent, metallic vapor or quartzline lamps from 100 to 1000 watts.

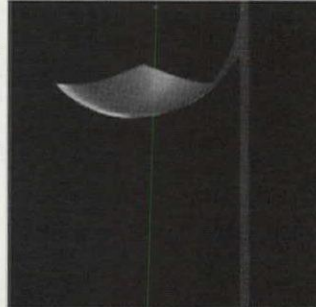


EXPOSED

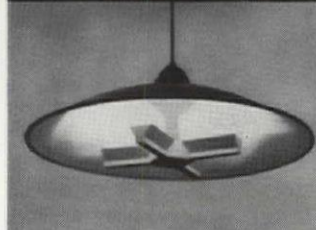


SHIELD: An opaque fixture open on one side only that throws light at right angles to a wall while concealing the light source from the eye of the viewer — for shrines, mosaics, windows. Available with incandescent or quartzline lamps.

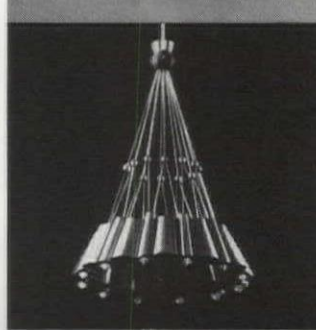
WALL URN: An indirect fixture, bracketed on a vertical wall; it projects light out and upward to illuminate ceilings. Many types of designs available in metal or wood.



PENDANT DOME: Same direct reflector as recessed dome; used instead of a lantern where a widespread cone of downlight is needed; opaque sides and diffusers shield glare from the eye. Also available with uplighting.



CLUSTER LANTERN: A grouping of opaque cylinders in a corona to hold a given number of lamps for up and downlight. Loudspeakers can be built in.



LANTERN: A pendant glass or plastic fixture that diffuses the light source, gives soft light out of sides and upward and a narrow cone downward. Good for general architectural light. Many kinds of wood or metal framing are possible.



Rambusch provides a complete line of fixtures for the lighting of major architectural spaces such as banks, churches, theatres and civic centers. We welcome the opportunity of working with you on each challenging problem.

RAMBUSCH DESIGNERS • LIGHTING ENGINEERS • MANUFACTURERS
40 WEST 13th STREET, NEW YORK, N.Y. 10011—Tel. 212-675-0400
IN CANADA: 162 PARLIAMENT STREET, TORONTO 2—Tel. 416-364-8276



UNFINISHED BUSINESS

BY ROBERT J. NASH, AIA

A member of the AIA Task Force addressing itself to Whitney Young's Portland convention speech, the author practices architecture in Washington, D.C.

A Black Architect Speaks Frankly

The black problem in this country is no longer a white problem. It is a black problem.

This is not to say that white assistance, both economic and political, is no longer relevant. White assistance is not the issue; the issue is the form and spirit in which that assistance is offered.

Whites can no longer be the paternalistic, stumbling, confused stepparents of blacks. Blacks, in turn, are now at the point where it is necessary for them to take a massive, collective, objective look at themselves. The first step toward the solution of the black problem must be an accurate definition of that problem—with black people doing the defining.

This is novel. And it is difficult, for whites have diluted the true definition of the problem to such a degree that it becomes impossible for blacks to maintain a black focus. White people do not understand that their simple presence at a meeting of Negroes can throw askew the very objectives of the meeting.

They have never had to understand the problem of being a black man in the United States of America. The problem, to be sure, traces back not to just the beginning of slavery here but to slavery abroad as well. White domination of blacks is not unique to this continent. England subjugated many classes and cultures in the name of British expansionism, better known as imperialism.

But if the American white man can claim credit for anything new it is certainly his invention of psychological slavery and its end-product, the American Negro.

The best way to keep the black race in slavery, the white man felt, was to add to the guns and chains a deliberate process that would make these once proud people believe they were—and the conditioning extends to this day—no better than slaves. The dehumanizing process began with the slaveowners' forcing of the blacks to identify with slavery as a way of life.

The results of this inculcation

still linger in today's urban ghettos. Through a very long history, the black man sees himself not as a man but as a slave. Obviously, euphemisms becloud essences, and black people are now, nominally, "second class citizens," but it all suggests to me that "a rose by any other name smells just as sweet!"

The no-more-than-a-slave attitude has had a devastating impact on blacks in this country. The physical separation of black men from their wives and families was slavery's crowning cruelty. And slave children were prepared for this in the only possible way; they were indoctrinated in the system, a system which branded blacks as slaves whose own lives were clearly secondary to their owners' economic needs and comforts.

The owners were white, of course, which meant that if you were black, and you enjoyed some freedom from abuse, you were regarded as "white," or something akin to it, because whites took no abuse. They only dished it out.

And the dishing out and subjugation continued after slavery. Relentless in both application and form was the brainwashing. Some of it was pretty bald, like the Jim Crow segregation laws which in no uncertain terms let black people know they were Nature's undesirables. The voting system, on the other hand, was the ultimate in subtlety. But the product of the system was elemental mathematics: It took roughly five men to equal the vote of one white man.

Blacks survived, however, and developed a synthesized culture that intertwined a faint African heritage with the "culture of slavery." They survived with what was left over, the second-hand articles Charlie could no longer profit from. Even soul food originated this way. We didn't invent chitterlings; they were made from one of the few parts of the hog that the "man" felt he couldn't eat.

Soul food was but one part of a subsumed culture that was influenced and coerced by a white noose ever present on the perim-

eter. But the mental enclosure that white people developed to keep us in our place was only the beginning. The next step was to augment the mental encampment with a physical one—the ghetto.

The black ghetto is white-circumscribed in more ways than one. "As whites quietly exit to the comfortable suburbs," Floyd McKissick has pointed out, "they do not relinquish the economic control of the ghetto; they maintain control of the city agencies and the political scene." White political and economic power is never released when whites flee to the suburbs; the "niggers" from whom they flee are not allowed to exercise any political or economic power over the very ghetto in which they live.

Many of the key political positions in the cities are still filled by white people who are not directly responsible to the ghetto blacks. And since the blacks cannot directly influence their own destinies, the result is deepened physical and mental entrapment in a predicament from which they know there is no escape. All that is flaunted in black faces are white exploitative merchants who form the constant reminder that everything black people have, or need, or want, has to come through Whitey.

Still, whites will find it difficult to understand and fully appreciate the ghetto problem. Trying to think as blacks won't help. They will achieve an appreciation only as whites thinking as whites and responding as human beings.

It's tough, and what may be tougher is that whites have to understand that any role they play in rebuilding and planning for black ghettos has to be defined by black people! Whites can participate, but no longer at the leadership or decision-making levels to which they are so accustomed.

We hear it said that whites cannot plan for blacks. It is a statement that has a basis in fact, the fact of white indifference to the culture and lifestyle of blacks.

Continued on page 94

REVOLUTIONARY TABLE WITHOUT LEGS



■ NURSING HOMES ■ HOSPITALS ■ VENDING ■ RESTAURANTS ■ CLUBS ■ SCHOOLS ■ HOTELS-MOTELS ■ PLANTS

Guarantees the aisles.
More seating capacity.
Safety—no tipping chairs or table.
Maintains chair-table arrangement.

Easier to clean floor.
Exciting new appearance.
Unique conversation piece.
Offers more customer comfort.

Write today for free full-line furniture catalog 3-68.

chairs
stack chairs
tables
lounges
coat racks
bar stools
counter stools



Current
Catalog 3-68

COMMERCIAL FURNITURE IN ADVANCED DESIGN

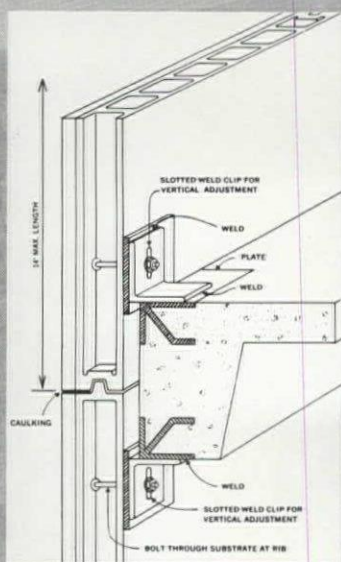


Fixtures Mfg. Corp. 1641 D CRYSTAL • KANSAS CITY, MO. 64126 • PHONE COLLECT 816/241-4500

Scotwall

A NEW

LIGHTWEIGHT MARBLE-FACED PANEL SYSTEM



The new Scotwall panel consists of a cellular substrate of asbestos and portland cement faced with 7/8" marble. It is a lightweight, moisture-proof, fire-resistant unit of great strength and remarkable versatility. It offers new opportunities for the designer's art, and recommends itself for such features as large soffits and ceiling panels; multi-faced fin panels; free-standing partitions; screens; faciae; spandrels, ad-infinitum. It's light to ship, quick to install, and the in-place cost can be less than that of less desirable materials. Let us tell you more about it.

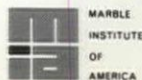
WRITE FOR YOUR COPY OF THE NEW SCOTWALL BROCHURE

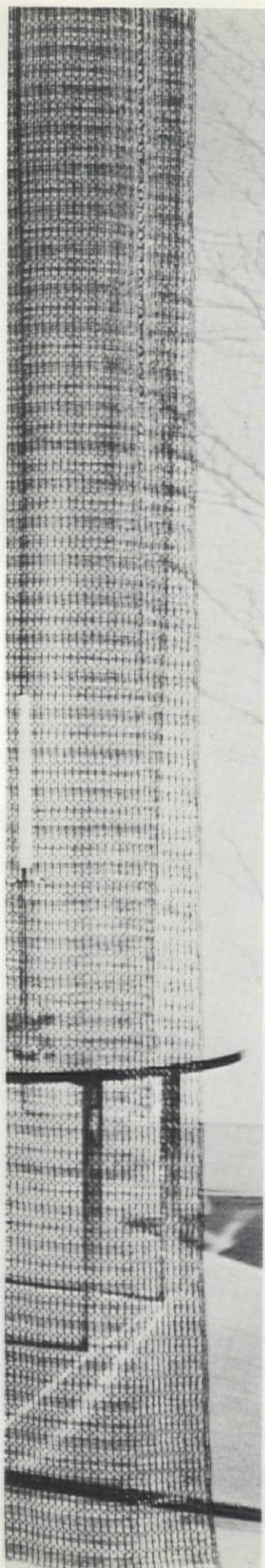


Georgia Marble
Company

11 Pryor Street, S. W., Atlanta, Georgia 30303

COAST-TO-COAST CONSULTING SERVICE—Our engineers stand ready to assist you any time anywhere on any project involving marble or limestone. A phone call will put one of our men across the desk from you in a matter of hours. No obligations, of course.





An interesting thing happened on the way to putting this issue to bed. While preparing the article for our continuing Practice Profile series, we were informed of a rather important change in the personnel distribution chart: The "interior design" category had grown from one to four. The initial reason for the sudden surge is a large volume of college work, according to principal Bernard J. Grad, FAIA, but he adds that it is only the beginning of what will become a complete department devoted to interiors. "It is a must if we are to control the entire job," he explains.

The Grad situation is not singled out as an exception, but it does point a way to the future—just as does a recent communication from an individual architect in Connecticut who, in announcing a change of address, lists "Architecture, Design and Interior Design." Such has not always been the case. Jack Lenor Larsen, in the leadoff piece in October, puts his finger squarely on the problem when he states, "Furnishings—carpeting, furniture, fabrics—play an evermore important role. . . . It is a tough role, somehow divided between the manufacturers and the architect, [interior] designers and consumers. Nonetheless, it is a role that must be filled."

Every architectural office, large and small, fills that role in a different way, with varying degrees of success. But one thing is certain: The profession's involvement cannot be denied. Numerous surveys taken in the last few years have come up with a variety of results, yet it would seem fair to say that at least 80 percent of the firms in the United States have in-house capabilities in this regard. They find it essential to exercise total design for the benefit of 1) the client and 2) the architecture itself.

Why, then, the confusion, among professionals and laymen alike? For one thing, there has been a lack of understanding about the roles of the persons involved and about the vocabulary, too, i.e., terms like space planning and office landscaping. Another is the peculiarities of the furnishings business with its discounts and contract agreements that have tended to create gray areas as related to standards of practice.

No matter who does it, the job of interior design has to be done better and more professionally. In the months ahead, the AIA JOURNAL will focus on specific aspects in an attempt to help make this a reality.

ROBERT E. KOEHLER

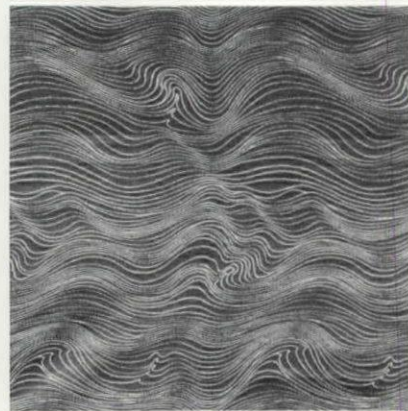
"I am a weaver and a fabric designer trained in architectural disciplines," Jack Lenor Larsen says. True, but it is a self-description too austere to suggest the texture of a man capable of having once said: "The future will be, needs to be, must be, so different that it deserves to be planned for." The 1968 AIA Craftsmanship Medalist says he can see the future through today's hippies. He describes what he sees and shares views of past and present as well, along with some thoughts on fabrics, light, color and the personalization of even "mean" space.

Explaining why the design of the personal environment (a phrase he prefers to the term interior design) is of growing importance, Larsen says ■ ■ ■

Back when most people lived in pleasant, New England-style villages, the whole village was personal environment. The same was true with farmers. The land they owned was theirs and somewhat within their control. The question of whether the village or town was shabby or beautiful was within the realm of control.

In the modern megalopolis this does not seem to be so; we do not control the world we survey. We neither manipulate this world nor even understand it.

Real control is achievable with only that space behind our front doors. This personal environment is the more important for the circumstance.



Swatches of Thought

Moreover, while for more than a century we have had speculative building by commercial builders, never before have we had so much look-alike housing.

Custom architecture and custom building seem no longer affordable to either architect or client.

The vacuum that has to be filled, as a consequence, is the individualization of repetitive, neutral spaces. Furnishings acquire new significance in the absence of custom architecture as we used to know it—with specialized space, rich materials, paneling and moldings, with real stone, real stucco and real wood in abundance.

Furnishings—carpeting, furniture, fabrics—play an evermore important role. They must give character and texture and color to interiors; they must make spaces special; they must also make them different from neighboring spaces. It is a tough role, somehow divided between the manufacturers and the architects, designers and consumers. Nonetheless, it is a role that must be filled.

And we must do more in terms of the mood or psychological meaning of spaces. This is something that eludes our thinking.

In the first half of this century our thought emphasis was on how things work. Our focus was on objects and functions. We concentrated on heating, airconditioning,

climate control—and solutions to storage problems as our acquisitions grew in number and our space dwindled in dimension. Some of our acquisitions were art objects.

The new personal environment must collect moods, not objects; it must be liberating and enhancing, not confining and debilitating. For my part, I am tired of living in a box. I would like to live with the freedom of Kiesler's endless spaces.

Such spaces for living are coming, I feel. They will be infinitely personal, adaptive, changing.

■ ■ ■ On the houses of the past, the current nature of our society and our needs in dwelling, he comments ■ ■ ■

The commodious 19th century house provided a change of rooms with a choice of moods. It often contained a billiard room or a library, a parlor and a morning room.

The houses of both the 18th and 19th centuries were understand-

able, and so were their early 20th century counterparts. They were permanent family residences for a privileged class.

Ideally, a house was separated from other houses. It was a protecting, independent container, a stout pie shell for all sorts of good things within, cushioned and connected by a rich sauce of family bindings.

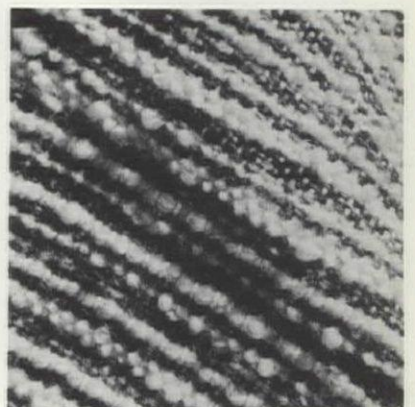
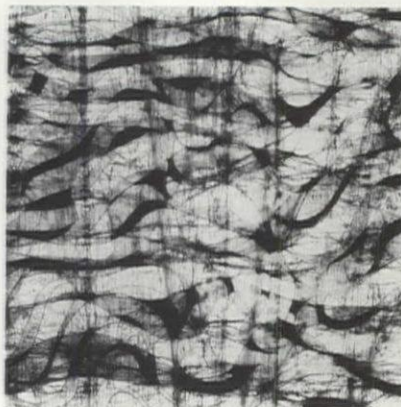
But what now? What is the late 20th century house? What is its essence? What of the family and what of society?

The permanent family unit is changing, perhaps diminishing as a social unit. The Great Society, or whatever else we want to call it, precludes monumental isolation or feudal enclaves; it includes sharing our plenty with the needy. Houses are going to be smaller and simpler—not all, but most.

Smaller and meaner spaces for a society that is in transition and very much on the go amounts to spaces that must be multiple in purpose.

But more important, they must be multiple in mood and, perhaps, changeable in time.

The hippie dreams of a place where things happen, where life is turned on, where environment is not passive but contributive. I wonder if his ideal pad is not what home was supposed to be, i.e., a house with love in it.



from a Fabric Man

■ ■ ■ To get a jump on the future, Larsen turns to hippies, and tells us ■ ■ ■

The hippie is perhaps the prototype human being of the future.

Not all hippies are phony; not all will become the conformists of tomorrow. I believe the hippies are only a less calloused, less tolerant, more perceptive, more vocal edition of ourselves. They are the fauves of our day.

That we don't completely identify with them, and they not at all with us, offers the chance for some detached analysis. What are they all about? What moves them? What will house them?

Certainly they are nonintellectual and untrusting of the single dimension of seeing-thinking. They are scornful of objects as such, feeling that objects are single, isolated, dead. They are unconcerned with taste; it's one more hang-up.

The hippie idea is to be in. Inside, involved, in love, instinctual. Feelings are needed and trusted.

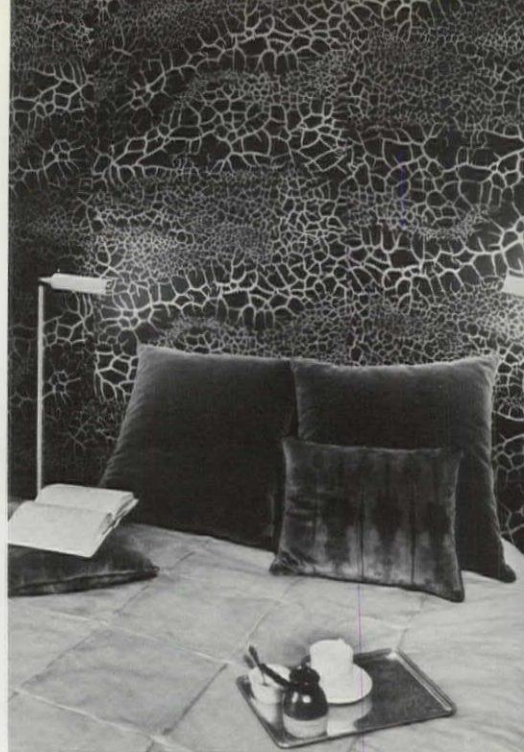
Experiences matter. Matter does not matter. The hippie would be a hedonist except that he does not hope for pleasure.

In my own experience I have wanted to be in art, in sculpture, inside color—not looking at it, but in it, experiencing it.

Wanting to feel, to move, to get out of the humdrum, daytime world, this has been my desire. The manifestation of happenings could, and is, breaking the ice, because happenings point up some of the needs and solutions of those personal environments we call home.

■ ■ ■ As for lighting, we are at a primitive stage; as for color, it won't quit, says Larsen, explaining ■ ■ ■

People today cannot find change by moving from room to room as could occupants of the commodious 19th century house. Their rooms need to change in time, to be



Nylon forms shell in living room and dresses up wall behind leather-clad bed.

as multiple in mood as they are in purpose.

To invoke mood and to change mood, lighting is an incredible tool.

If we are to put our young hippie in a small and pat space, let's not speak to him with dead things like quality and taste, but with what is most alive and promising—light.

We will, one day, understand light and harness it not just to throw it on subjects but to open up whole vistas.

Both the science and the art of lighting interiors are so underdeveloped that we are, relatively speaking, in a pre-electric age.

Color is more important than ever, partly because of mass exposure to color which today is more intensive than industrialized man has ever known. In fact, color has become a major industry.

Color, I have found, is a thing of interminable mystery. In school we learned that color is rational, that there are no new colors, that all colors go together. We were given the impression that color, as a matter of fact, is fairly cut and dried.

This is not so. There is no artist, no designer who is not continually infatuated with color. We do experience new colors and new color combinations.

I keep finding colors that I've not used in my palette and which seem new and rich to me. My reds used to be flame or tangerine; I now consider these oranges; and the new reds which intrigue me are deep and rich—so dark that people in the studio call them "browns."

At the same time, I find new ex-

citement in such colorful light neutrals as platinum and alabaster, and an ever-increasing appreciation of the controlled color in Persian and Mogul miniatures. This is partly because I have never achieved this kind of color.

■ ■ ■ Next to lighting, fabrics are best for personalizing and modifying space, says the designer, amplifying ■ ■ ■

In a jangled urban world, I want to make fabrics that give quiet rooms and thinking rooms the tactile tranquility of a deserted beach. Other rooms for other moods may want effusive rapture or even the supportive comfort of undefined nostalgia.

In short, without resorting to cheap theatrics, I am concerned with emotional and subjective responses to interior environment.

Always in conjunction with light, fabric in its large sense—which includes floor and wall coverings and interior color—is the handmaiden of architecture. She is supportive and subordinate, comforting and, occasionally, pleasure-giving.

Because this is a necessary role



White and silver Larsen studio with silver foil backing up stretched fabric.

it is not a bad one. There is some satisfaction in knowing that after all the planning and the budget that has gone to structure and mechanics, it is the fabric-color-light syndrome that will be seen and is thus the best (or worst) foot forward.

We know that the color and pattern of fabrics on pillows, bedspreads, slipcovers and windows can be changed and stored, but even this chance for change has been neglected since these very items have fallen out of the designer's usage.

To a weaver, fabric is not flat but three-dimensional. It is not decorative but constructed within vertical and horizontal limits as strict as those for building.

Like architecture, weaving is concerned with materials, function,

tion of projected light and draped fabric.

Instead of having fabric permanently colored or patterned, why not project pattern and color on it? The projection could be changed like phonograph records.

■ ■ ■ Speaking of his architect-clients and of the use of fabrics today, Larsen tells us ■ ■ ■

My clients are architects and usually I understand them, even if they do not always go along with my predilection for heady color and romantic pattern.

The use of fabric in architecture is growing at an unprecedented rate. As a curb on chaos, more and more specifications are written with the acoustical and tactile comforts of fabric emphasized. This is true with furniture, window treatment and floor and wall coverings.

Fabric graces distinguished spaces, often saves spaces less distinguished. Spaces without gutsy architectural materials, without a sense of scale or detail, without a garden view or important art, these spaces must rely solely on fabric for organic relief of monotonous production surfaces.

The interior specifier seems more and more aware that of all production materials, woven fabrics can best retain broken color and organic richness. He knows, also, that varying fabric or fabric color is the most direct means to articulate modular spaces.

Fabric problems are being overcome. Moths and mildew problems are gone, and soil, wrinkle, flame and instability obstacles soon will be. And so will the assets of fabrics unless designer and specifier vigilantly preserve their retention.

The specifier must, from the beginning, understand that the role of interior fabrics is essentially and importantly a decorative one.

As architectural projects become increasingly complex, fabric and other interior considerations are becoming part of basic programming. Window treatment often is part of the facade as well as the interior. From where I sit, the contemporary window is as yet unresolved. Many times our studio is called upon to block out glass walls, or to advise on possible window treatments after other installations have failed.

There are questions to be asked: Which fabrics are permanent? Which relatively maintenance-free? Which control glare and provide privacy without shutting out light and view? Finally, isn't it time the architect and fabric designer worked together to devise effective light control?

We have worked on office towers where a single solution is so varied as to shut out glare on the south exposure, give privacy on the plaza level and retain maximum view on the east and north exposures of upper floors.

For large or important projects, a custom approach to fabrics is in order. Sometimes an interior designer can handle the problem, and sometimes a fabric consultant is needed as well. The consultant is retained independently of mill or supplier to analyze need and to design fabrics which meet functional and esthetic needs. Production, installation and maintenance factors are all considered.

Usually, this kind of fabric program is set up so that it can be competitively bid—and the fabric consultant, instead of being an extravagance, turns out to be an economy.

I have made some observations about the use of fabrics in architecture. Let me share them:

1. I am amazed by how few questions are asked before specifications are written. Reasonable ques-

The author: Mr. Larsen, an architectural student briefly at the University of Washington, soon turned to furniture design and weaving. He holds a Master of Fine Arts degree from Cranbrook Academy of Art, and in 1951 he opened a studio in New York City. He designs, produces and markets fabrics.

scale and—to an amazing degree—light and shade. The weaver faces the same moral issues of economy of means, organics and integrity as does the architect.

Fabrics will doubtless play a leading role in the creation of changing environments. One of the most exciting ideas involves the combina-

tions might be: Do you recommend this blue fabric for full exposure to Florida sunshine? Can this fabric be used on its reverse side? What cleaning instructions should I specify? And so on—the point being that these questions usually are not asked until disaster has struck.

2. I am continually taken by the quest for absolutes in fabrics. Most specifiers tend to look for a fiber or cloth that can be relied upon for every kind of use. But fiber quality, yarn, construction and finish are all related to cloth which is relative to use and climate.

I would tend to say that wool makes for a durable upholstery, but what I really mean is that an appropriate wool fiber, in a reasonable yarn, soundly constructed and finished, will make a durable upholstery for an average home or office—but don't attempt it for low-maintenance or heavy traffic areas.

3. I have repeatedly noticed that a technical requirement is taken as a more severe handicap than it need be. For instance, good-enough offices, when faced with "inherently flameproof," specify almost anything which is inherently flameproof without considering draping quality, maintenance, acoustic properties and general esthetics.

4. Too many interior installations are basically negative. They are not offensive. They are not unarchitectural, flamboyant or distracting from the noble properties of the structure itself. But the furnishings contribute nothing to the dignity or comfort of the room.

The manly, prudent attempt comes off timid and scaredy-cat—not within the tradition of what we know as architecture.

■■■ Looking to the future, Larsen discusses foams and forms, fabrics and furniture ■■■

More and more the interior designer is going to be faced with—or let in on—new materials. Probably the most important of these at the moment are moldable plastics and the still newer, moldable, castable foams.

These foams can be soft and resilient, or they can be rigid. They

can be made permanent, although not all have been so.

Using them it will be possible to make new forms—both expensive and cheap ones—but in either case forms that will be made quickly.

In furniture it will be possible to cast these foams over a metal armature, or to cast them in hard foam alone. It will give us the possibility of a truly economical, democratic furniture, made as fast as biscuits and applicable to large audiences. So far the approach to this new furniture has been both creative and courageous, but I suspect it won't be very long before we will be casting conventional knock-offs in foam.

Partly because of the new furniture forms, we have new fabrics. There are a few now; there will be many more later.

Stretch fabric is the leading innovation currently. Stretch upholsteries are a "natural," and at some point in the future they will be in general use.

They are particularly useful for the new furniture with convex and complex curves, having a general advantage of getting trim covers with less craftsmanship needed. Many stretch fabrics are knit; these will come into their own and be more important in the future. They will develop their own texture and not always be as flat as most knits are today.

The whole trend in fabrics will be toward simplification, not only in production but in their application to apparel and furniture.

At the moment, woven fabrics are extremely slow and difficult to produce; many operations are necessary. We are beginning to probe into fabrics which are not woven. The ultimate will be to get from fiber to furniture without going through even a yarn phase. For instance, flocking a one-piece chair with short fibers would be the absolutely simplest, most direct way to cover that chair.

We will have stretchy knit sweaters for furniture. We will have fabrics molded to complex forms—monolithic coverings, woven or knit in one piece—and nonwoven fabrics made directly from fiber. Many of these developments are in progress, more or less secretly. They will suddenly come onto the market and in most cases we can expect them to appear first in the larger apparel market.

While the first endless house seems to require \$200,000 worth of coverage, the sculptured interior of stretch fabric is easily built. And

the curves are always perfect, always beautiful.

I admire the way Pierre Paulin has used this fabric on furniture. Often the fabric does not just cover a form but is suspended in tension to create the form.

■■■ On the design approach of his studio, on design in general, the medalist concludes ■■■

Within a contemporary framework our studio moves easily from asceticism to decadence, from ancient techniques to advanced technology, and from small installations to multipurpose mileages.

This strange admixture of freedom and discipline is stimulating, contributive. If the resulting style has any denominator at all, it is in the eyes of an outdoorsman bound to the accidental and varied rhythms of tree barks and grasses, bowed to the subtle brilliance of flowers and feathers.

Paul Eluard in his little book *To Pablo Picasso* advised, "If you love the intense cloud, pour into every image its warm summer blood."

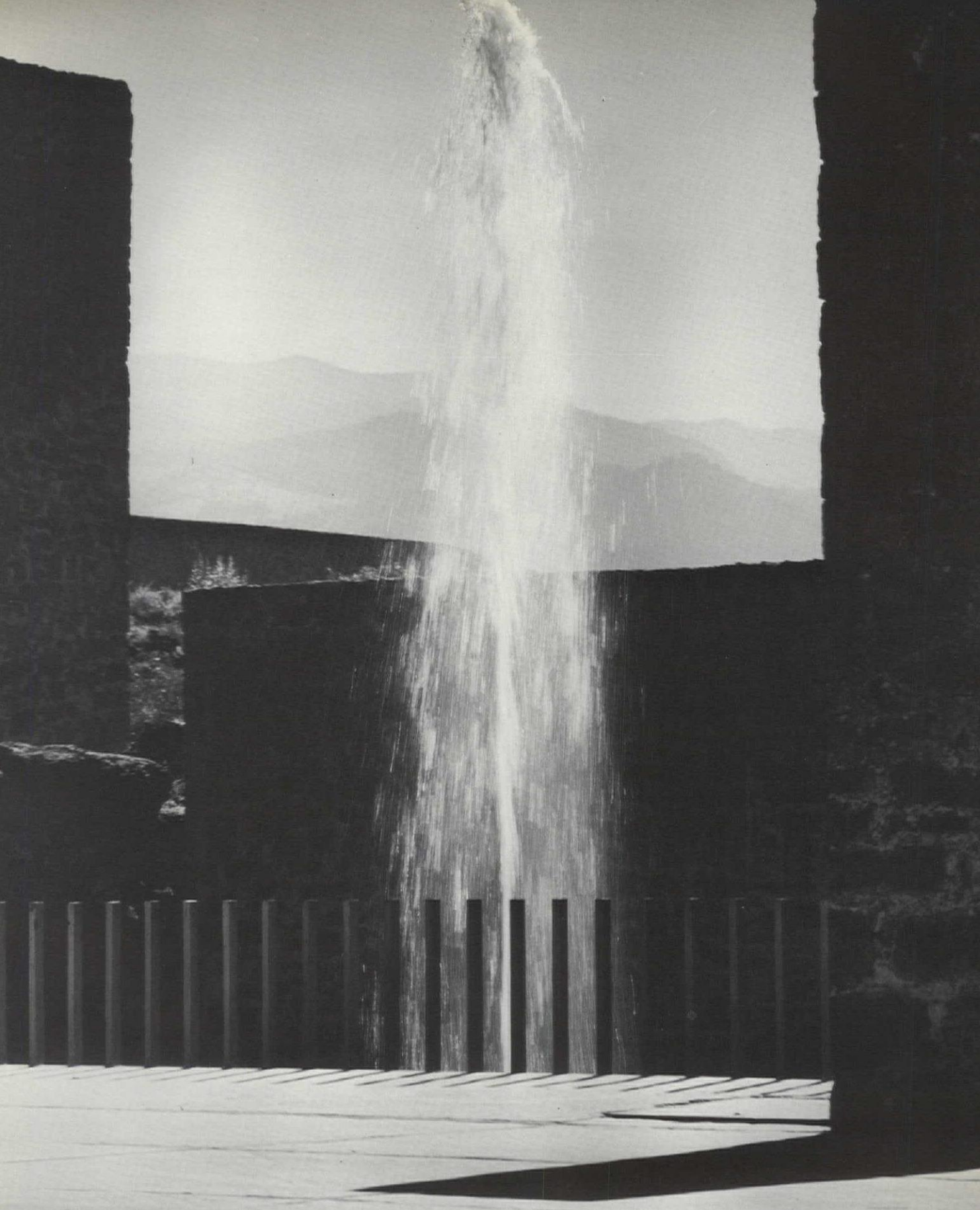
This attitude seems to take more and more precedence in our work—schoolish tennets and revolutionary ones less; self-expression less.

Because it is my life, I feel design must be important, responsible, involved and aware. It must not be mere frosting or mere status. I hope for an ecumenical truce between professional groups and the tangential professions of architecture, interior and product design. I would hope to see the opening up of our ostrich head-in-the-sand home furnishing industry. New confidence and resolution will come with any small success in this direction.

I even feel that architecture may get back on course, working from people to function to structure.

We have the technology to build a protective skin around any interior we plan. So it is time for man to stop adapting himself to any cave that is built.

A new architecture will be a growth out from a personal environment which is human and considerate. □



Me Gusta Mucho **MEXICO**

Me Gusta Mucho

MEXICO

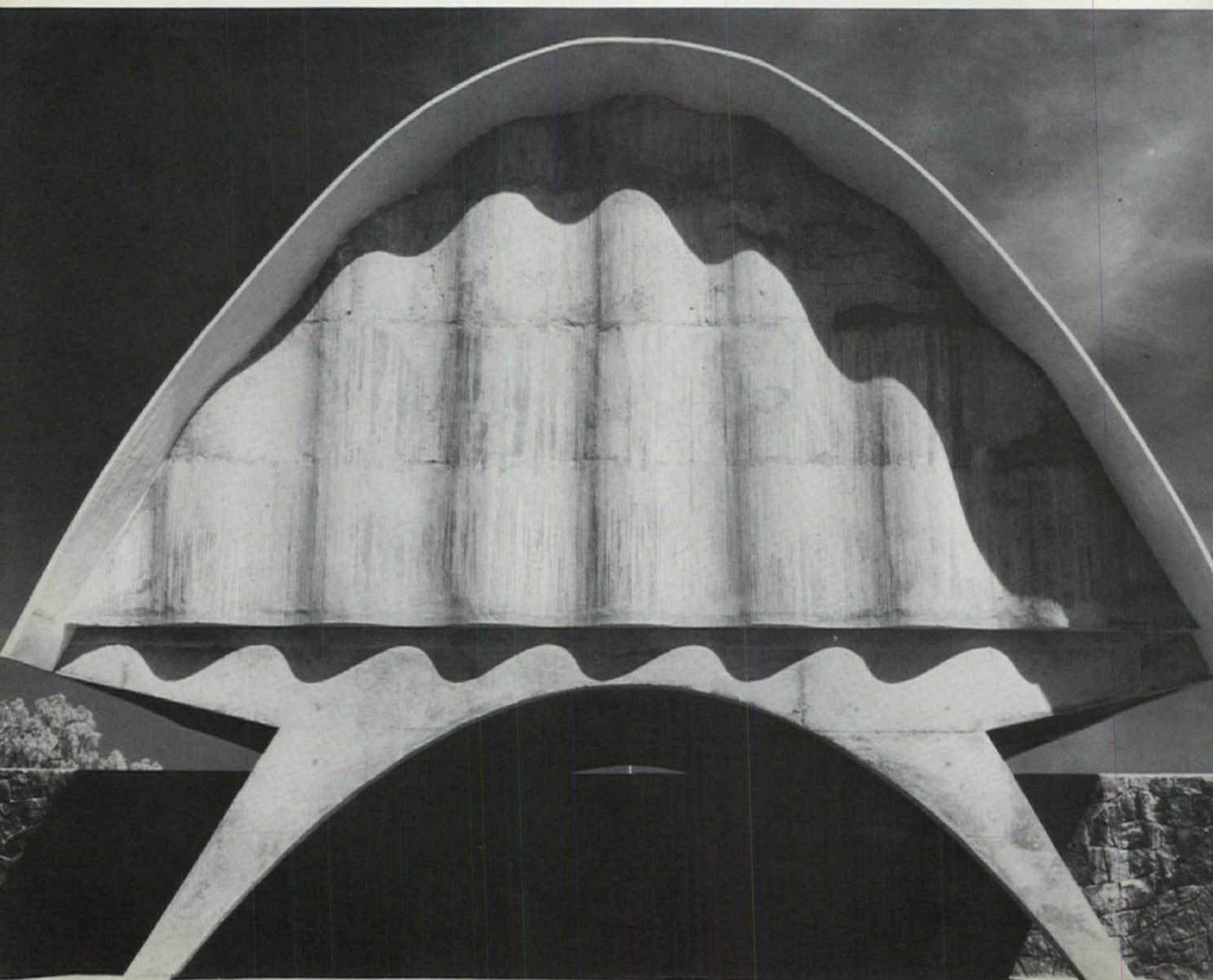
BY PEGGY COCHRANE BOWMAN, AIA

With the Olympic Games coming to Mexico City this October, attention is focused upon our good neighbor to the south. It promises to be an exciting month with great contributions not only in athletic events but also in the realm of artistic culture, especially architecture. Many new buildings, from sports arenas (see AIAJ, Jan. '68 for a cover article on the major facilities) to luxury hotels, have been constructed for the Olympiad. If a few of these structures are experimental in design, it will come as no surprise to any architect familiar with that country, for Mexico's influence in both architecture and art is being felt throughout the world.

Last year I had the good fortune of joining an architecture and interior design seminar-tour affiliated with the Sociedad Arquitectos Mexicanos. It was an educational and inspiring experience that afforded an opportunity to meet such prominent Mexican architects as Felix Candela, Carlos Contreras and Ramon Corona, all three Honorary Fellows of The American Institute of Architects, for an exchange of ideas and a reevaluation of architectural concepts. We compared the problems of Mexican and American architects and discussed the history and future of planning and design in both countries.

Mexican architecture reveals many European influences from Spanish Gothic to Bauhaus contemporary; however, Mexico has developed a

A gamut of texture and form: from amenities of the Pedregal Gardens (previous page) to the bold Cosmic Ray Laboratory.



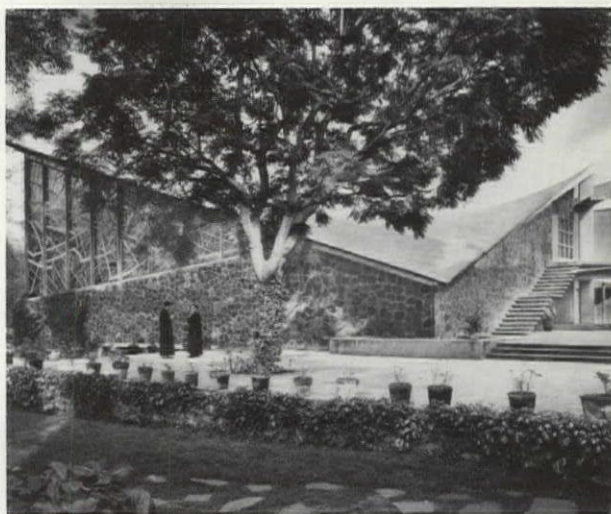


Sports Palace, designed by a Candela-led team, is one of the major competition facilities built for the Olympics.

definite style of its own. The Aztecs, the Mayans and the Zapotecs all contributed important elements to the development of contemporary Mexican architecture. Of these three pre-Columbian, indigenous civilizations, the Mayan is perhaps the most significant with its introduction of the Mayan arch, its grandiose scale, rich carvings, sculptured bas-reliefs and vivid frescoes. The Mayan cities, found in Yucatan and Palenque, were planned around open spaces of courtyards, squares or quadrangles. Their attention to open space around their buildings has had a major influence on the city planning of Mexico today.

Contemporary Mexican architecture, like the Mayan, is characterized by form, color and texture. Mexico is able to experiment freely in design because of the leniency and uniformity of building codes, inexpensive labor and the imagination of architects and artisans, thus creating unusual forms. The amalgamation of architecture with painting, mosaics and sculpture makes color play a dominant role. The colors, influenced by the native flora, are strong and bold. The Library at the University of Mexico, with its solid mosaic exterior by Juan O'Gorman, is a burst of color tied together with flowing, rhythmic lines. The honest use of native materials—translucent onyx, rough stone and richly figured wood—brings texture into play.

Because of the lack of good wood for structural purposes there is a predominant use of steel

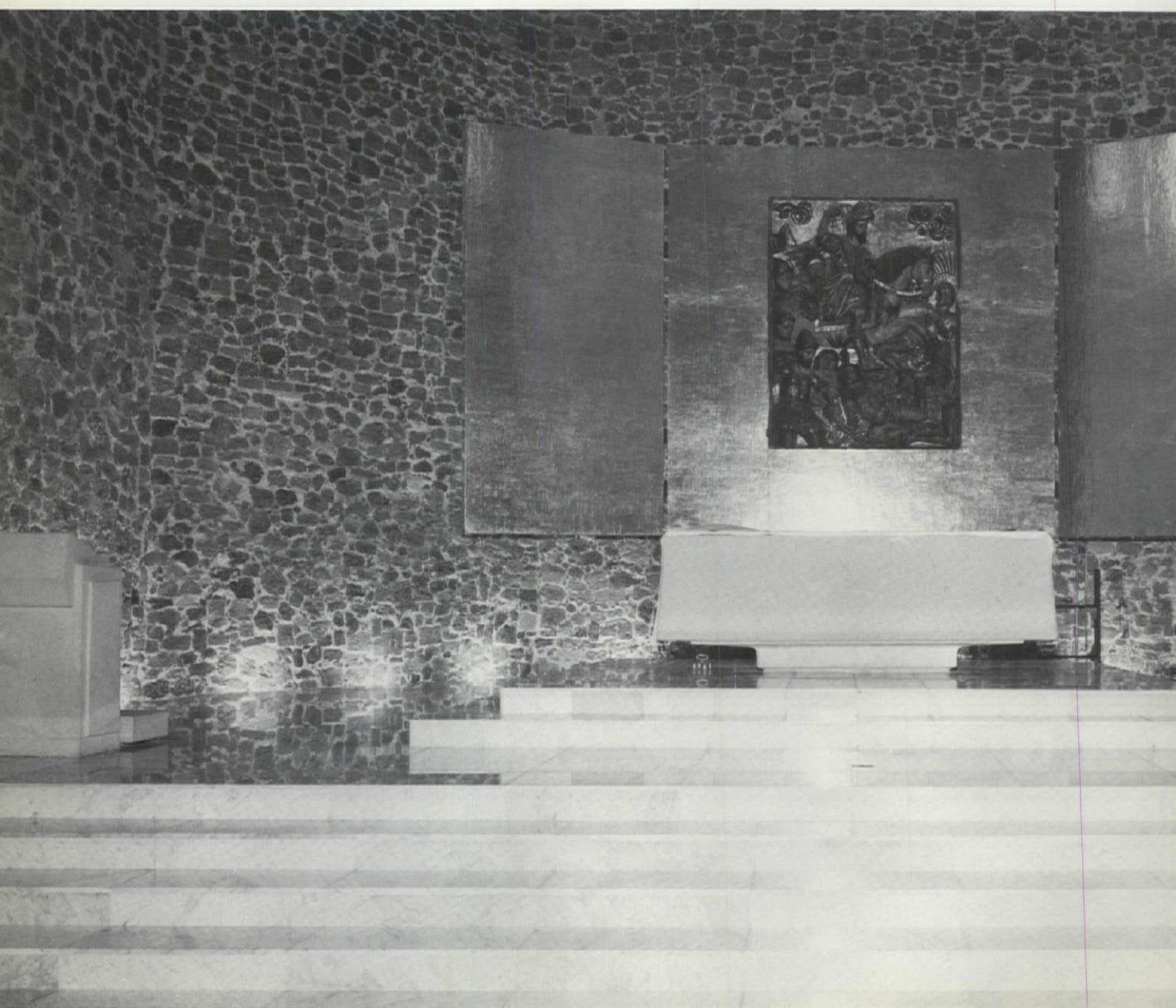


The hand of Candela is evident in the Chapel of the Holy Spirit. He often collaborates with other architects (accounting for variations in published design credits).





Religious buildings, old and new, are in the forefront architecturally. Cathedral in Mexico City illustrates the emphasis on exterior lighting of significant structures. Restoration (Santiago de Tlatelolco church below) is done with sensitivity; new projects (Tlalpam chapel right) very well may be noted for their austerity.



and concrete. Candela was the first architect to devise a $\frac{5}{8}$ -inch thick concrete roof, for the Cosmic Ray Laboratory at the University of Mexico, associated with Jorge Gonzalez Reyna. From this, Candela developed thin shell, concrete

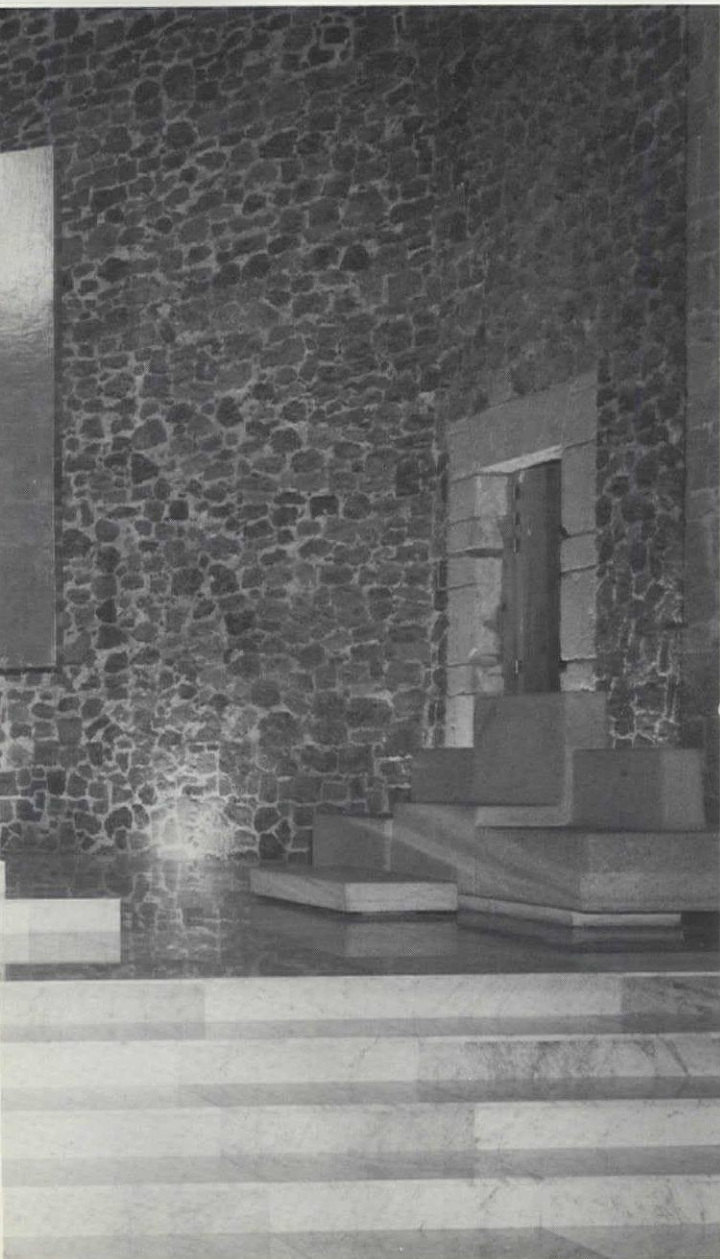
The author: Mrs. Bowman, who maintains her own architectural practice in Sherman Oaks, California, is a frequent visitor south of the border. She has drawn upon her experiences there to write a yet unpublished musical, "Yucatan." Most of the photographs for this article have been provided by Revista Arquitectos de Mexico, under directorship of architect Jorge Gleason.

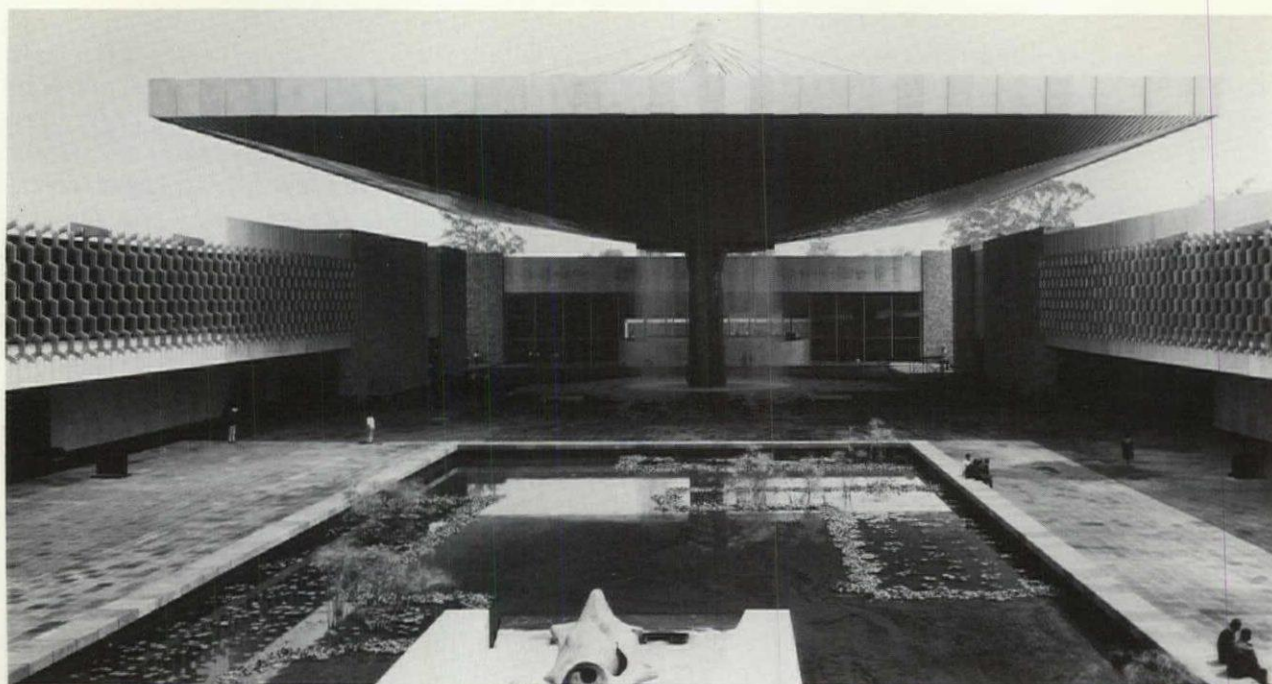
hyperbolic paraboloids to roof his churches, markets and monuments. The Olympic Games Sports Palace he designed with Antonio Peyri and Enrique Castañeda Tamborrel, however, consists of a huge, copper-clad dome on a steel and wood

frame. His Chapel of the Holy Spirit in Mexico City, with Enrique de la Mora, is one of the finest examples of form, color and texture. This small church is an irregular space enclosed with a free form, concrete roof, wide expanses of stained glass and smooth and rough surfaces juxtaposed.

Religion has always been a patron of the arts, and this is especially true in the Roman Catholic country of Mexico. Traditionally, many of its old cathedrals rank with the most beautiful in the world. Many of its contemporary churches and cathedrals are more advanced in design than those of other nations.

The restoration of the cathedral at Cuernavaca, by Ricardo de Robina, who also restored the Santiago de Tlatelolco church, is a masterpiece of experimental religious art and form. The convent and chapel at Tlalpam by Luis Barragan, with its orange and gold altar, its stark simplicity





Museum of Anthropology has won many honors for the architect who is also chairman of the Olympic Games committee.

and contracting textures, is a magnificent tribute to contemporary art. This hidden convent, protected by a plain, high wall, is seldom seen by outsiders. Although only a few miles outside of Mexico City, it has not yet been discovered as a tourist attraction even though the sisters welcome visitors.

Since the introduction of Christianity by the Spaniards, the beautiful churches and cathedrals

An Architect Heads the Olympics

Pedro Ramírez Vázquez, chairman of the Organizing Committee for the Olympic Games to be held October 12-27, was born in Mexico City and obtained his architectural degree from the University of Mexico in 1943. An Honorary Fellow of the AIA, he is a Knight of the Order of the Crown of King Leopold II of Belgium and received the Grand Prize and Gold Medal of the VIII Sao Paulo Biennial for the Museum of Anthropology of Mexico; and the Grand Prize of the XII Milan Triennial for a prefabricated rural school. Vázquez also designed the Aztec Stadium and the Museum of Modern Art in Mexico City and the Mexican pavilions at the Brussels, Seattle and New York World's Fairs.

have meant a great deal to Mexican worshippers. They are willing to contribute money, effort and time to their houses of worship, not only because of their religious reverence but also because they are people who take the time to appreciate their esthetic surroundings.

Sociologically, contemporary Mexican architecture does more than meet the needs of the people; it reflects their character and personality. All at once, it is sensitive, dynamic, colorful, imaginative and cheerful, with a feeling of spon-

taneity. The Mexican people take great pride in their architecture because the buildings are for everyone, rich and poor, to use and enjoy.

The spectacular University of Mexico offers free tuition to all who can pass the entrance requirements. The admission fee to the magnificent Museum of Anthropology in Chapultepec Park is nominal. New public housing like Mario Pani's Unidad Nonoalco with its 12,000 modern apartments, is available at low rent. Three of the most elegant and exciting new public buildings are the Palace of Justice by Juan Sordo Madaleno, the Edificio Cremi by Ortiz Monasterio and de Robina, and the Centro Medico by Enrique Yañez and Jorge Medellín. Many of the new buildings, such as the Centro Medico complex, have been paid for by the populace from the profits of the national lottery.

Contreras was the first Mexican architect to create a master plan for Mexico City. His attempts to maintain open spaces and to organize zoning on a logical basis have been continued by architects Jose Luis Cuevas and Pani. Mexico City, with its 6 million inhabitants, is mushrooming at a rapid rate, making zoning, traffic congestion and smog major issues to be solved.

Mexico City has the unique problem of being built on a lake bed, and many of the older buildings, such as the National Palace of Fine Arts, are sinking. In recent years, three types of foundations have been devised: the flotation principle, concrete piles and hydraulic jacks. The National Lottery Building, built on the flotation method, is highly resistant to earthquake shock. This foundation consists of a giant caisson floating in the mud. While it is the most practical, it is also the most costly of the three methods.

Concrete piles, the oldest of these three foundation principles, has the disadvantage that the ground sinks away approximately 1 foot per year. This makes it necessary to build additional steps each year for access to the building. From this method evolved the hydraulic jack system which permits the shortening of the piles each year so that the buildings will remain at street level. The Hall of Records is built on this type of foundation, and while less costly than the flotation principle it is not as resistant to earthquakes.

The planning department of the Mexican Federal Government is restoring and preserving old buildings and historical monuments. One example is the "Fuente de la Rayna," a 400-year-old fountain in Chiapas. Three cities in Mexico have been proclaimed national monuments by the government: Taxco, Alamos and San Miguel Allende. Much reconstruction, mainly by private individuals, has occurred in these towns, with restrictions to maintain their Colonial style. These charming places with their narrow, cobblestone streets, wrought iron balconies, plazas and patios, contribute to the contemporary scene as prototypes of architectural elements which can be reused.

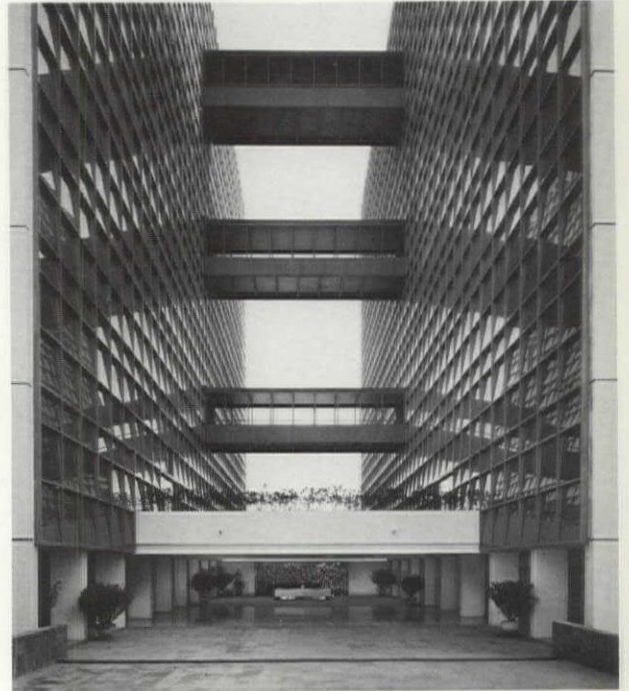
The Mexican architect is indeed fortunate to have such a vast store of inspiration from the past to help create imaginative, colorful and exciting buildings for the future. The adobe house is still a favorite and practical in the warm, dry climate. Many of these houses are being built or restored and their facades adorned in bright colors. Some of the old buildings are surrounded by arcades of Spanish arches and have rough adobe walls contrasting with smooth plaster. Even in the Colonial period, the three elements characterizing Mexican architecture persisted: form, texture and color.

The interplay between natural settings and architecture is another Mexican characteristic. The Pedregal Gardens, developed by Barragan, feature luxurious concrete and glass homes cantilevered over lava beds of flowers. The Restaurant del Lago, by Leonides Guadarrama, appears to be floating on a lagoon, which at night is illuminated by a multicolored fountain. O'Gorman's residence, carved out of a natural cave, is an integral part of its landscape. The large, contemporary home of Sordo Madaleno has almost continuous walls of glass overlooking acres of trees and lawn. The indoor swimming pool has sliding glass walls which can be opened completely to the garden. The proximity with nature is ever present in Mexican living.

One of the most extraordinary homes in Mexico is Barragan's residence/studio, an austere building set in a wild garden. The only opening in the living room—a large square of fixed glass

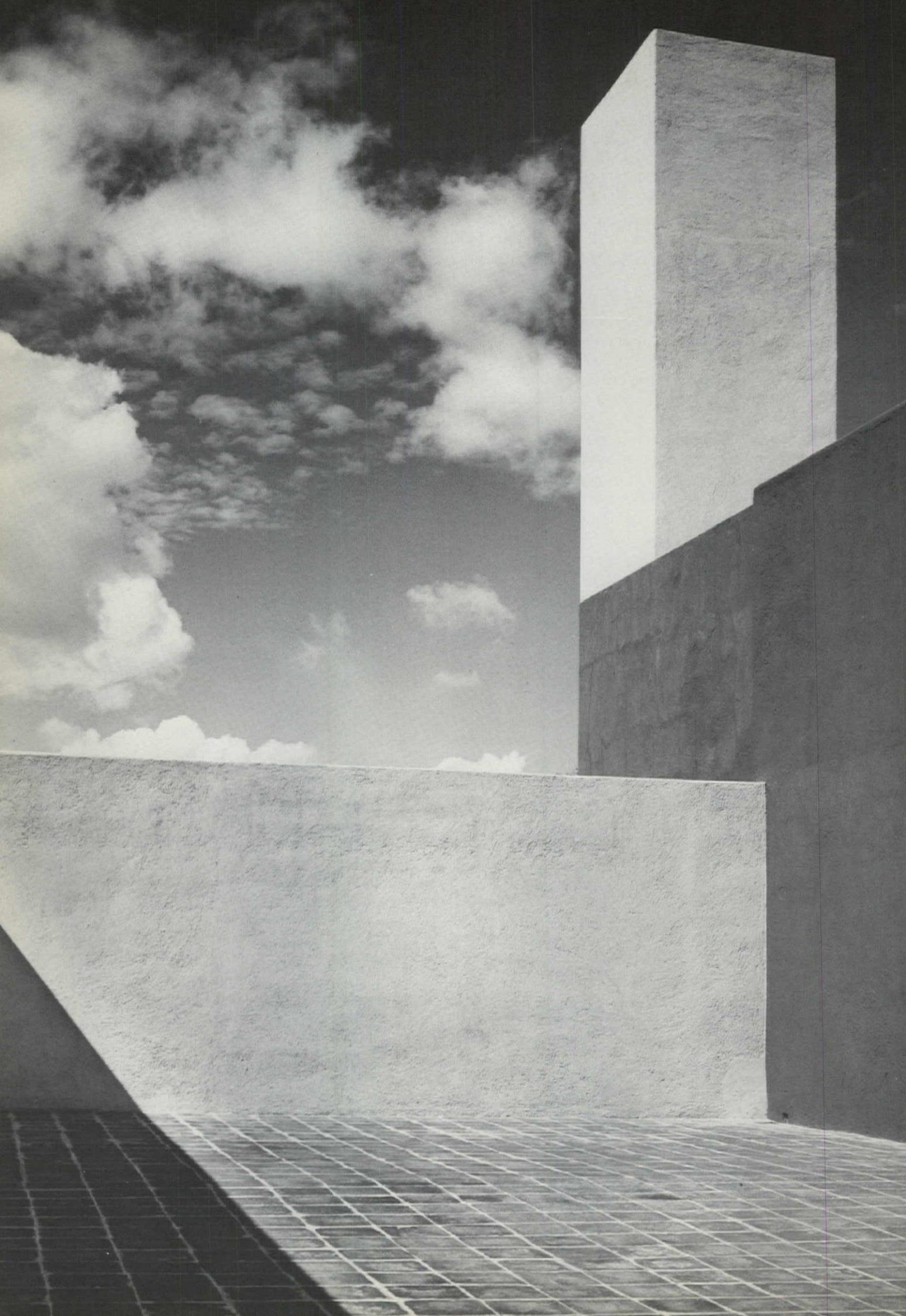


In the Plaza of the Three Cultures, 12,000-unit apartment complex vies with pyramids, restored church to rear.



Among the newer public buildings are the Palace of Justice with its three pedestrian bridges and the Centro Medico complex with its sculptured study/observation rooms.







Although completely different in concept and size, the personal houses of architects Luis Barragan (roof terrace left) and Sordo Madaleno (dining room above) are regarded as two of the outstanding residences in Mexico.

set in a thick, white concrete wall—frames the rugged landscape. Upon entering this home, the visitor is first confronted with a wall of shocking pink. To the left of the entrance is a narrow, concrete stairway, without handrails, leading up to a large gold canvas on the landing.

The use of color is unusually striking. One of the main walls of the studio is a bright, sunny yellow. The roof terrace is enclosed by rough-textured, persimmon-colored walls contrasting with smooth planes of charcoal and white. The building, on three levels, is more sculptural than architectural in quality, with forms creating a play of light and shadow. Unpolished wood plank floors, rough stone against smooth concrete walls and beamed ceilings create unusual textural effects. The simplicity, the contrasts, the imaginative use of form, texture and color make this building one of the most outstanding examples of contemporary Mexican architecture.

Mexico City is more European in character than any North American city. It is reminiscent of Paris, Athens and Rome, but with a definite style of its own. The Paseo de la Reforma was inspired by France's Champs Elysées. Built by Maximilian for the Empress Carlotta, it extends from the National Palace to Chapultepec Castle. This wide, tree-lined boulevard is a showcase for grandiose monuments and fountains. Bordering this avenue are some of the finest examples of contemporary architecture in the world: the Hydraulic Resource Building, the Mexican Institute of Social Security, the Hotel Continental Hilton and the Hotel Maria Isabel, to name a few.

The recent progress of Mexico is based on the fact that the country is geared toward a peace-

time rather than a wartime economy. Strict immigration laws and high tariffs maintain Mexico for the Mexicans. This in turn has created a strong national identity opposed to any form of mediocrity.

While it is true that there is still much poverty and substandard housing, especially in the rural areas, Mexico is making great strides to overcome these conditions. The construction of numerous modern schools, clinics and hospitals throughout the country is bringing health and education to many, hopefully in time to all. New factories, public housing projects and the modernization of smaller cities, such as Hermosillo, are gradually replacing blighted areas. The new city of Ciudad Obregon, in the middle of the agricultural area in Sonora, was carefully preplanned. The wide, landscaped streets with underground utilities are well lit and lined with a sparkling array of contemporary buildings. Its new factories, clean and efficient, are advanced in design.

The future of Mexico looks indeed euphoric and promising, mainly because of the technological advances in architecture. There is a widespread urban renewal program underway, a government agency for the restoration of national monuments, plans for the construction of more clinics, hospitals and schools throughout the country and a subway system in Mexico City.

Pedro Ramírez Vázquez, chairman of the Organizing Committee for the Olympic Games, has remarked: "The art of the Olympics will be every bit the equivalent of the track and field." This month the eyes of the world will be looking at one of the most artistic and gifted nations in the world. *Me gusta mucho Mexico!* □

Mr. Kuhn's article, slightly condensed here, first appeared in the *Columbia Journalism Review*, producing considerable feedback. Supporters felt he had done honest journalism a service, while dissenters found him to be inconsistent and hypocritical. Among the latter were editors of two newspapers who met our request for recent samplings of their real estate pages, illustrated in this presentation.

Defending the *Milwaukee Journal* in a letter published in the *Review*, Associate Editor Arville Schaleben took exception to the author's unrepresentative samples, which included a reference to his own daily, and said further: "We frequently carry news service stories by Wolf Von Eckardt and Ada Louise Huxtable and by other reputable journalist authorities in the field of architecture, home planning, land development, slums and mansions."

Clyde V. Smith, real estate editor of the *San Diego Union*, who also had a reply in the *Review*, conceded to the AIA JOURNAL that Mr. Kuhn's piece "contained some valid criticism." Smith charged him with failing to recognize "the fact that real estate sections can be one of the most readable and informative parts of a newspaper, and more and more are trying to perform this service."

Mr. Kuhn's basic points, in the main, seem to be valid after their original appearance in the *Review's* Summer 1966 issue, though there is little doubt that some real estate pages show improvement. Since there is room for much more, we do not view this as a closed matter; instead, we welcome comments from architects who read these sections and from real estate editors themselves.

THE EDITORS

BY FERDINAND KUHN

One way to put the American press into sharp focus is to get far away from it. A traveling writer on foreign affairs develops a keen eye for the merits and faults of American newspapers, especially if he has had to depend for a few months on papers abroad.

Whenever I come home from Africa or Asia, it cheers me to rediscover American papers. But this time I am newly conscious of a blight upon them. Commercialism pollutes the back pages and Sunday sections like the smog in our city air, the muck in our lakes and streams.

I remember newspapers' air of superior virtue during the television scandals of six or seven years ago. Radio and television stations had been slipping unlabeled plugs for advertisers into their programs. "Sneaky commercials," the Federal Communications Commission called them. The press was right to squawk, and it did so, loudly.

One who protested in those days was the president of the American Newspaper Publishers Association, D. Tennant Bryan. The sins of television, he said, proved the wisdom of newspapers in keeping news, editorials and advertisements in "separate, airtight compartments." To the publishers' association in 1960 he repeated an old refrain: No good newspaper lets its advertisers influence its news columns.

Maybe it was true in 1960. Is it true now? In all but a few big-city papers, one has only to look to know that the press adulterates its news with unlabeled advertising. The line between news and salesmanship is hard to find in the pages and sections that deal with food, fashions and travel. In real estate pages the line has almost disappeared.

The pollution of real estate news is worth the urgent attention of publishers, editors, reporters and schools of journalism for three reasons:

First, the pseudo-news of real estate blurs the line between news and advertising. Second, it shows a failure to use freedom of the press which, as I know it, means the freedom to dig, to inquire, to challenge. Third, and above all, most real estate news columns amount to week-by-week confessions of a deeper failure. They neither report nor even reflect the crisis in urban areas.

Architectural Criticism. In newspaper real estate sections, publishers have let grow slums of promotional copy and thinly disguised salesmanship. But a few big-city dailies across the land are now showing the way to urban-news renewal.

Blighted Areas of Our Press

Real estate news, after all, deals with where and how Americans live and will live. These questions cut to the heart of the problems of our cities and suburbs. Millions of Negroes and the poor of all races live cooped up in city slums and ghettos. They need houses and cannot get them; when they can get houses, they cannot afford them.

Millions of others can find houses or apartments, but discover that it is harder every year to ride to work and home again. This is no specialized subject affecting a few readers. Two-thirds of all Americans now live in urban areas. They know, as real estate editors apparently don't, that our cities are strangled with traffic and choked with fumes, that our suburbs are starved for adequate schools and other services.

Do you find any word, any hint, in most real estate news about the plight of the cities and suburbs? Have you ever seen stories or pictures in these pages about low-cost housing, public or private? Can you find any serious discussion of the future shape and character of our metropolitan areas? No; I sometimes think that all but a few real estate editors prefer to see nothing, hear nothing, report nothing, know nothing of the actual America around them.

The pattern of real estate news is familiar. A big office building may be about to go up on a whole square block. The architect's sketch, complete with shrubbery, stretches across three or four columns. The news story tells how much the building will cost, who will finance it, who has designed it, what luxuries the tenants will enjoy.

But I want to know more. What used to stand on that square block before the bulldozers came? If homes used to be there, how many people have been displaced, and what provision, if any, has been made for them? How will the new building fit in, or not, with the design of other buildings nearby? Will it create new traffic and parking problems for the city?

Or, to take another example, a couple of hundred ranch-type houses are about to fill what used to be open country, outside the suburbs. The pseudo-news story quotes the developer; he says his tenants will have easy and swift travel over uncongested highways into the city. How easy? How swift? A reporter could easily have clocked

it and checked the developer's story if this were worth mentioning at all.

A reporter could have asked a few more relevant questions that the handout didn't cover. How near is a school? If 200 families move in, will the school have room for their children? What are the municipal authorities doing or planning to cope with the newcomers?

In real estate copy such questions are seldom asked or answered. Reporters are seldom turned loose on such stories. Real estate copy is not meant to tell; it is meant to sell.

One example of such puffery, a relatively innocent example, I found in the *Milwaukee Journal*. It was a UPI feature headed "Why Hire a Designer?"—the word "designer" being a euphemism for interior decorator. The story argued

The author: Mr. Kuhn, a longtime newspaper reporter and foreign correspondent for the *New York Times* and the *Washington Post*, is now a freelancer working out of the nation's capital and the author of several books. This article is based on his Henry F. Pringle Memorial Lecture delivered at Columbia University's Graduate School of Journalism.

that everyone furnishing a new home should hire a designer. It attributed the advice to a designer who is a consultant to a firm of fabric makers. "The homeowner pays no more than he would pay at a store," the story said. And "designers are as interested in a \$300 room as they are in a \$5,000 room." As I read, I found my eyebrows rising until they almost hit the roof of my head.

I suppose someone could write a genuine story on interior designing—on the men and women who work in it, their training, their pay, their role in developing American taste and economy.

But the UPI feature was not a story at all. Although it did not mention any brand name, it was a sales talk. I would sum it up with an honorable four-letter term that seems to have gone out of style. The term is "advt."

I have asked editors how they explain or justify this kind of copy. One of them told me it was only "shinplaster to keep the ads from bumping." But shinplaster has two definitions. One is medical; the other (from the unabridged Webster III) is "a

Dramatic Home In Mission Hills Wins Accolades For Architect

By CLYDE V. SMITH
The San Diego Union's Real Estate and Building Editor

What distinguishes a prize-winning house?

Imagination? Esthetic appeal?

Good and practical design?

Ability to create livable space in accordance with the emotional requirements of the owners and within reasonable budgetary limitations?

All of these are obvious factors in good architecture.

There's an award-winning dwelling in San Diego which now has the distinction of being among "Record Houses of 1968," one of 20 chosen as the best contemporary architect-designed houses in the nation. The contest was sponsored by Architects' Forum House, a McGraw-Hill trade publication.

But more than that, this southwestern-type residence which San Diego architect Paul W. McKim designed for his family in an old section of Mission Hills, 5921 Pacific Place, earlier was "honorable mention" in a Home for Better Living competition sponsored by House and Home, another trade publication.

Another accolade was the "Award of Merit" bestowed by the San Diego Chapter, American Institute of Architects, an organization to which McKim belongs. This was at a 1968 competition.

The house has received other recognition and is due to be featured again

area at the rear where it is shielded for privacy, yet brings in the feeling of outdoors. There is also practical convenience in the floor plan.

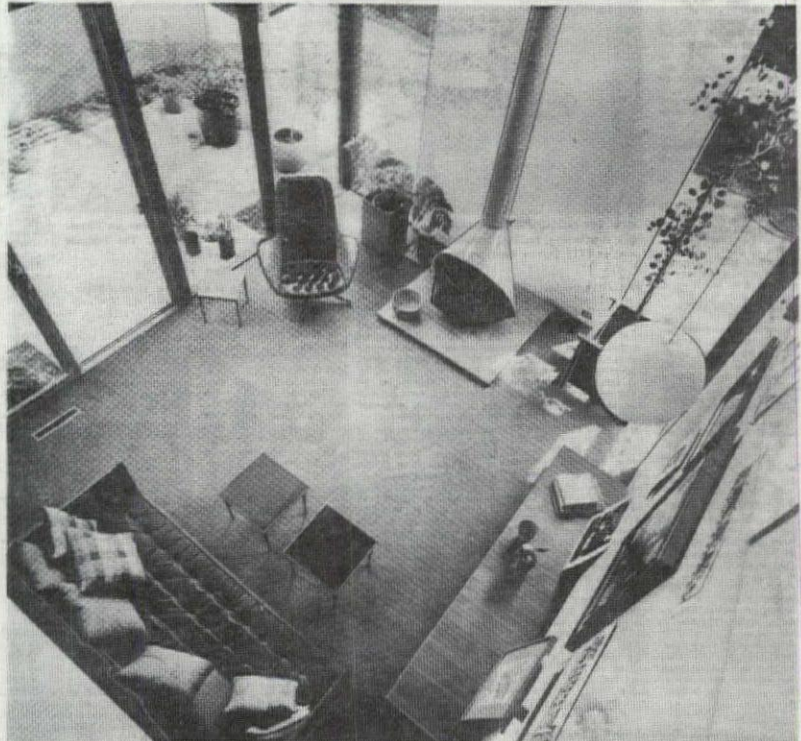
Economy and privacy were two important design criteria for which the editors of the publication cited the McKim house.

"Built on a small, narrow lot 56 by 113 feet and flanked on both sides by neighboring houses, the residence affords the McKims a good deal of privacy, and a nice sense of the outdoors," was the magazine's comment.

"The economy achieved by the architect is a big feature. For a house containing 1,600 square feet of living space, the construction cost of \$21,000 is low, the editors said, "especially when the beautifully detailed results are considered."

Highly significant is that the 36 winning "Record Houses" ranged in value from \$20,000 to more than \$100,000, which puts McKim in an enviable position—good design at one of the lowest building costs among all the winners. A design that gives more for the construction dollar.

According to Herbert L. Smith Jr., editor in charge of "Record Houses of 1968," the award winners were selected after considering hundreds of houses from coast to coast. Only four California dwellings were among the winners and McKim's was the only



WINNER OF AWARDS: Unusual features distinguish the home of architect and Mrs. Paul W. McKim, of 5921 Pacific Place, selected as one of 20 best contemporary architect-designed houses of 1968, plus winning other awards. Fireplace wall is flanked by two-

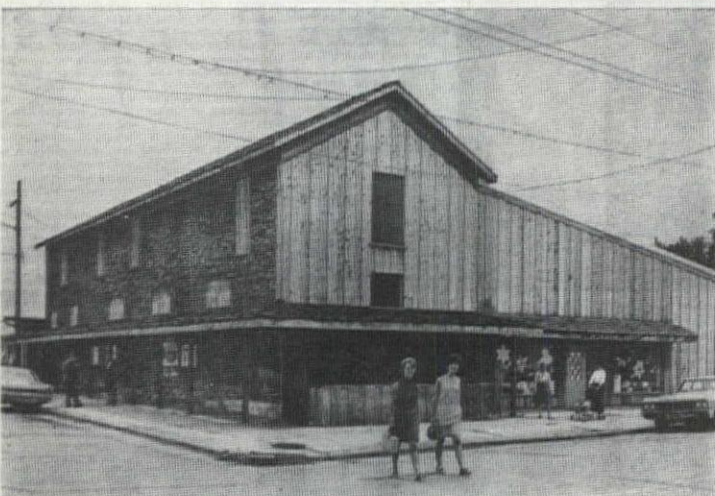
story windows. Two stories provide both space and spaciousness, and give living area link with wooded outdoors. Picture is from balcony-level master bedroom suite, which is open to living room. Ceiling here is 17 feet high. Protected patio court is at the left.

THE MILWAUKEE JOURNAL

Home Section

SUNDAY,
JULY 14, 1968
Part Seven

REAL ESTATE • BUILDING • REMODELING • DECORATING • FURNISHINGS • GARDENING



A major role in the rejuvenation of downtown Middleton, Wis., was played with the remodeling of a vacant building into this interesting "old town" appearance. The building now is occupied by a furniture store and beauty parlor.



Before the start of Middleton's program of rejuvenation, the downtown corner offered the view to passersby—a sadly deteriorating, 100-year-old

Today's New Apartments Show New Way of Living

By WILLIAM A. MAHLY
Real Estate Editor

Growing sophistication of tenants, plus the increasing competition among developers, seems to be forcing new concepts in apartment project planning.

Pools, tennis courts and children's play areas are becoming about a "must" in many of the newer urban green space and comparatively low densities—far less than the people versus area ratios on Milwaukee's lower end side—are becoming commonplace.

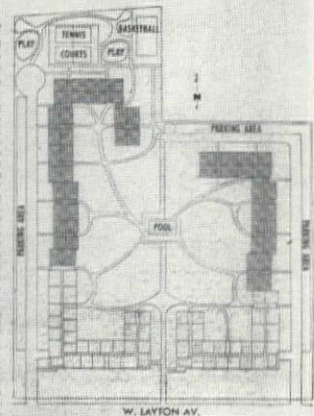
Costs and availability of sites are playing a role in this, too. In more densely populated areas, sites are smaller, more expensive and difficult to come by. This almost forces high rise buildings, with the resulting higher costs of elevators, added fireproofing, etc. High costs being on the rents.

Added Amenities

By sprawling low rise buildings over larger sites in suburban areas, developers can throw in many added amenities and still achieve rent ranges that are on higher—or if not even lower—than in inner city areas.

Thus, there are those who simply prefer city living. To them, the suburban way of life is anathema. But there are many potential tenants who want the suburban living. And they can afford it.

Some have said that if homes after their families have grown. Many others are young married couples, with income sufficient to pay substantial rent but who either are without the large down payments generally required



An example of the new trend in apartment complex design of 2300 W. Layton av. Large central mall area with pool, garden walks (shaded) and corridor type, only peripheral surface parking.

Spanish Mixtures Now Are Favored

By LOAN HAYDEN
of The Journal Staff

mixtures "look like a lot for the money," with their bold proportions and rich detail. They have the warm in-



Two buildings have been completed at Glenarden Apartments, Right, next Road in the area of Glenarden. Occupancy is slated for Aug. 1.

2 Projects Ready Soon
Glenarden Enters New Era

By ARNOLD BEVHRY
The last of two new apartment buildings at Glenarden, the 10-story, 100-unit structure, is slated for completion in August. The first building, a 100-unit structure, was completed in May. The two buildings are part of a \$10-million development in the area of Glenarden, near the intersection of the new road and the old road.

The new buildings are part of a \$10-million development in the area of Glenarden, near the intersection of the new road and the old road. The first building, a 100-unit structure, was completed in May. The second building, a 100-unit structure, is slated for completion in August.

SEC Warns About Fraud In Lending

The Securities and Exchange Commission has issued a warning to lenders about the risks of fraud in lending. The commission says that lenders should be alert to signs of fraud, such as inflated appraisals and inflated sales prices. The commission also says that lenders should be alert to signs of fraud, such as inflated appraisals and inflated sales prices.



A new Hechinger store has been opened across the street from the city's original store in an area that was heavily damaged by bombing and fires during the 1940s.

He Has Faith in Inner City

By DANIEL POOLE

The Hechinger store in the inner city is a sign of faith in the area. The store is a sign of faith in the area. The store is a sign of faith in the area.

The Hechinger store in the inner city is a sign of faith in the area. The store is a sign of faith in the area. The store is a sign of faith in the area.

The Hechinger store in the inner city is a sign of faith in the area. The store is a sign of faith in the area. The store is a sign of faith in the area.

The samples from real estate sections shown across the page are fairly typical of the two newspapers. Each reader might ask himself: "How does my hometown paper compare in this area?" At the right are the opening pages from two Washington, D.C., dailies on the same weekend, although not necessarily representative. It is interesting to note, however, that the Evening Star features two articles that deal with a Negro town (Glenarden) and the inner city, while the Post leads off with a piece on developments for the affluent.



New 10-bedroom, 10-bath house completed in River Falls by Gannett Firm.

2 Major Firms Active in Potomac Area

By John R. Williams
Two major firms are active in the Potomac area. The firms are active in the Potomac area. The firms are active in the Potomac area.

The firms are active in the Potomac area. The firms are active in the Potomac area. The firms are active in the Potomac area.

The firms are active in the Potomac area. The firms are active in the Potomac area. The firms are active in the Potomac area.



Well-appointed Dutch Colonial in Well-Planned Setting of Potomac Falls.



Well-appointed Dutch Colonial in Well-Planned Setting of Potomac Falls.

piece of poorly secured and depreciated paper currency." That says it. That's what fills page after page of these sections every week.

How many reporters complain that their pieces have been cut or killed for lack of space? How many news editors grumble because they can't find space for the good stories? How many publishers wail about the price of newsprint? Never mind; there has to be shiplaster to keep the ads from bumping.

Another explanation of pseudo-news is that papers must offer not only news but "service" to their readers. The story about interior decorators was, presumably, such a "service." Obviously every good paper provides service of many kinds, as all of us discover during a newspaper strike.

Weather forecasts, television and radio programs, lists of the day's events, reports on what's plentiful in the food markets are all legitimate services. Real estate advertising itself is a service to anyone—any white person, that is—who is looking for a home.

But to be a service at all in the news columns, the information has to be disinterested and honest. When a writer simply tries to persuade his readers to buy, he is no better than a tout.

To sniff the rank fragrance of salesmanship in real estate news, I suggest a look at the usual run of pseudo-news about apartment buildings. I found a rousing sales pitch not long ago in the *Philadelphia Inquirer*, under the byline of its real estate editor. It happened to be a day when the paper bulged with apartment advertising. The lead sentence of the lead story asked: "Is there an apartment in your future?" The editor answered: "Probably." According to him, "there is a tremendous demand for the kind of carefree living that is only possible when the landlord takes on the chores of lawn care, snow removal and redecoration."

At this point I looked for that four-letter term "advt." and couldn't find it. If the story had been fair reporting instead of hawking, it would also have mentioned a tremendous, insatiable demand for houses—for peace and privacy, for space and quiet, for one shade tree and one little flower.

I have enough faith in newspapers to believe that responsible publishers will give their real estate editors stiff brushes and strong detergents and will tell them to scrub their columns clean.

I do not want to leave the impression that we get no independent reporting and no careful cov-

erage of metropolitan sprawl and urban decay. These have become subjects of growing concern. Especially in cities that are proud of their beauty, like San Francisco and Washington, the newspapers print news stories, letters, and editorials about highways and bridges, slums and blight, growth and crowding.

But these stories, as a rule, do not appear in the real estate section, the only part of the paper wholly concerned with metropolitan living. They have to struggle for space in competition with other news and features. By their nature they require pictures and maps, and these call for space that often is not available. There would be more room for serious news and discussion of the metropolitan future if publishers would clear out their real estate junk.

In the meantime, a few papers are setting good examples, trying to break with the shoddy commercialism of the usual real estate sections.

Of the papers I have seen, the outstanding one in this field is the *Louisville Courier-Journal*. Its management proceeds from the assumption that the changes around us are too important to be left to the real estate advertisers and their hand-out men. The *Courier-Journal* renamed its real estate section, accurately, "City and Countryside," and reshaped it. It put the section not in charge of a salesman who is called an editor, but under an urban affairs editor, Grady Clay, and a building editor, Simpson Lawson.

Mr. Clay has now taken a new post at the School of Journalism at Northwestern University, where he will train and recruit writers on urban design.* He has said that city planning in the European sense, including architecture, is "one of the most significant stories of our generation." He and his paper have proved that it is possible to banish the trash and make room for the story.

If downtown Louisville has developed a clutter of light poles, signs and other ugly street furniture, the *Courier-Journal* editors don't hide it from their readers. They put it into a feature, with pictures, on the front page of their "City and Countryside" section. If commercial zoning is gobbling too much residential space, they dip into this subject too. Their choice of stories is as wide as the field of urban design. They dig up examples, contrasts, ideas applicable to their city, from other cities and other countries.

Louisville, of course, is a one-ownership town. Its papers run no risk of losing real estate advertising to a shoddy-minded competitor. But even in a competitive city, decent newspapering will not necessarily drive out revenue. A disgruntled real estate advertiser cannot switch to television.

* Mr. Clay is editor of *Landscape Architecture*; consulting editor to the Urban Studies Center, University of Louisville; consultant to Northwestern's Urban Journalism Center; and a frequent lecturer. Mr. Lawson now is an editor of *Urban America's City* magazine.

Obviously, a home hunter cannot take a television program with him while he searches; he uses printed advertising as his guide. This is why 80 percent of all real estate advertising money is still spent in newspapers. In real estate more than in food, fashion, or travel copy, the odds favor a newspaper.

A few pioneering papers are showing the power of example in another way. Each has assigned a talented writer to roam freely over the subject of the urban and suburban environment—which includes the planning of buildings, parklands, transportation and housing. Lewis Mumford has been the trail blazer in this field of American journalism, but he has written primarily in a magazine, *The New Yorker*. I happen to know of only five who have followed the same trail in daily newspapers.

One is Grady Clay of Louisville, whom I have mentioned already. The others are Ada Louise Huxtable of the *New York Times*, George McCue of the *St. Louis Post-Dispatch*, Allan Temko of the *San Francisco Chronicle*, and, my favorite of the lot because of the inexhaustible range of his interest, Wolf Von Eckardt of the *Washington Post*. They differ in their style and in the scope of their work. But all of them, I think, belong on the same roll of honor. They are pioneers and public defenders, and their papers deserve honor for having hired them.

Why can't every metropolitan paper give its readers a service of this kind? One answer is that qualified writers are difficult to find. To fill the gap, other schools of journalism might well copy the experiment now begun at Northwestern. What is needed, in my opinion, is not an architect, but rather a reporter with specialized knowledge and generalized interest. The field of the metropolitan environment is too huge, too varied, for anyone but an informed generalist.

Architecture is the most public of the arts. Everyone can see it every day. Urban planning affects everyone in the community. Public interest may be more sophisticated than the salesmen-editors imagine. Last year, for example, nontechnical magazines printed more than three times as many pieces on city planning, four times as many on water pollution, as they did in a year in the early 1950s.

I would guess that newspaper coverage has grown just as fast. It would grow still faster if so much news space were not wasted on real estate handouts and commercialized rubbish.

In the next five years, I believe, every big-city paper will feel the need of someone to cover this field. And if a publisher has any pride in his craft, he will want to clean his slums in the news columns, his blighted areas in the real estate sections, and print news and comment that matter. □

FRANK GRAD & SONS PRACTICE PROFILE

Located in downtown Newark, this 61-year-old firm is meeting the challenge of the new age of architecture through expanded services.

A No-Nonsense Approach to Practice

How to give the client what he wants and needs within the amount he can afford to spend is a way of life with Frank Grad & Sons of Newark. It has been so ever since Frank Grad, AIA, opened his first office in 1907. Perhaps the most valuable legacy that he bequeathed to his two sons and the six other partners is an understanding of the importance of combining design talent with business acumen so that creative efforts are not wasted by being too costly to build.

The largest architectural firm in New Jersey and one of the largest in the nation (in the top 30), it now has \$150 million of work under construction or in the design stage; and a good share of its growth can be attributed to its method of handling projects from inception to completion to the repeated satisfaction of the client.

This has been labeled a "cost control system," and it is, but it is also much more than the kind of bookkeeping device such a label might imply. It involves communication with the client and the latter's involvement in decision making to an unusual degree, along with careful and complete attention to all details through every step of the way, illustrated by the "On-Target" and CPM charts that follow.

"Tell the client the truth, not what he wants to hear," is the motto of Bernard J. Grad, FAIA—a basic philosophy that is shared by brother Howard, a Fellow of the American Society of Civil Engineers.

The firm's approach sounds deceptively simple as described by Bernard Grad.

"The first aspect of such cost control is in the initial definition of the project. It is unfortunate that on certain occasions corporate clients and governmental agencies have a tendency to make appropriations which are not in accord with their building programs. In other instances, projects are funded without escalation

factors, and often they are well out of date by the time the decision to begin construction is made. Our first job, then, is to place things in proper perspective, to scale the project to the allocated budget and to explain that the client cannot expect the Taj Mahal for \$3 a square foot."

According to David R. Dibner, AIA, head of project development and general management, "This process may require adjustment of the client's thinking in terms of size of the building, or in terms of materials or methods to be used. We may have to research several alternate ideas.



The Grad brothers Howard and Bernard as seen almost every morning at their conference table; and the latter surrounded by partners Orleans, Mahler, Wheeler, Miele, Dibner and Falkenstein at a biweekly meeting.

"In any event, we make sure that we are all talking about the same building, since we have found it wiser to withdraw from a job rather than hope to 'sell' a client on something he doesn't really want. Also, in dealing with large organizations, our client frequently represents a diversity of ideas and opinions in his own company, and these must all be clarified and agreed upon very early in the process," Dibner explains.

"It is when we get into the actual design stages of the project that we are faced with the problem of keeping things in line with the agreed-upon budget. We handle this by constantly reviewing during all

stages. The project manager—an associate working with a partner in charge—is alerted to be conscious of anything added to the job by the client, or in the course of his own development of the design. We call this the 'creep' stage, for all those little things creeping in can be the greatest factor affecting costs."

Kenneth D. Wheeler, AIA, executive administrator (liaison with clients and consultants), states: "We expect the project manager to be sensitive to these so he can call them to our attention and to the client's. Then the decision is made, and the client must participate as to whether to add to the budget to accommodate the change,

forget the change or cut something else out to make room for it within the original budget.

"At the end of each phase of the work—schematics, preliminaries and working drawings—we continue to re-evaluate the budget. In the event adjustments have to be made, at any one of these steps along the way there may be alternatives that will allow us to stay within the budget. When we are well into the working drawing phase, we call in an outside consulting estimator to examine our work. He is skilled in costing, is abreast of the building market and is an outside sounding board who can evaluate the job objectively."

ON-TARGET COST TECHNIQUES

COST TARGET 1	COST TARGET 2	COST TARGET 3	COST TARGET 4	COST TARGET 5
<p>Programming Stage</p> <p>Client establishes dollars. Architect establishes basic design parameters.</p> <p>or</p> <p>Client establishes needs. Architect establishes dollars.</p> <p>In either case client and architect must be in agreement on design parameters and construction cost budget.</p>	<p>Schematics Stage</p> <p>Architect translates design parameters into single line "departmental" plans, sketch elevations and construction material lists. Consultants prepare description of mechanical and electrical systems, kitchen equipment, etc.</p>	<p>Design Development Stage</p> <p>Architect translates schematics into larger scale detailed plans, elevations and sections. Consultants make single line overlays on architect's plans plus layouts of critical mechanical areas. Outline specifications prepared.</p>	<p>Contract Documents Stage</p> <p>Architect translates design development into working drawings and specifications; consultants do likewise.</p>	<p>Construction Stage</p> <p>"Normal" job conditions and minor architect/engineer oversights may eat up contingency.</p>
<p>Cost Estimating Technique</p> <p>Experience of architect in translating design parameters into a square-foot cost of buildings and site.</p>	<p>Cost Estimating Technique</p> <p>Architect applies refined square-foot costs to buildings and site; consultants do same. Allow contingency 5-10 percent.</p>	<p>Cost Estimating Technique</p> <p>Outside cost consultant and mechanical and electrical consultant, kitchen equipment consultant, etc., make detailed take-offs at about 90 percent completion. Architect reviews critically. Allow contingency 1-3 percent.</p>	<p>Construction Cost Technique</p> <p>Outside cost consultant makes detailed take-off of general construction; consultants take off own. Architect reviews take-offs and pricing critically. Allow contingency 3-5 percent.</p>	<p>Construction Cost Technique</p> <p>Examine contractor's "extra" claims with care.</p>
<p>Danger Points</p> <p>Wishful thinking on dollars per square foot and anxiety to show owner a "favorable" budget.</p>	<p>Danger Points</p> <p>Reluctance of architect to face reality if Target No. 2 is missed on high side. If this happens, project must be cut back.</p> <p>Client is advised of adjustments required to plans to stay on target.</p>	<p>Danger Points</p> <p>Reluctance to change almost final contract documents; additional client requirements creeping in; overlooking construction market condition prevailing at anticipated bid time.</p> <p>Client is advised of adjustments required to plans to stay on target.</p>	<p>Danger Points</p> <p>Many small spaces become apparent on plans; mechanical and electrical systems are too sophisticated; special client requests are made.</p> <p>Client is advised of adjustments required to plans to stay on target.</p>	<p>Danger Point</p> <p>Changed client requirements.</p>
<p>COST TARGET NO. 1 ESTABLISHED</p>	<p>COST TARGET NO. 2 MATCHES NO. 1</p>	<p>COST TARGET NO. 3 MATCHES NO. 1</p>	<p>COST TARGET NO. 4 MATCHES NO. 1</p>	<p>COST TARGET NO. 5 MATCHES NO. 1 UNLESS ABOVE DANGER POINT OCCURS</p>

"In our documents," Paul E. Falkenstein, who supervises production, comments, "we try to be as clear as possible so there is no question about what is going to be built. We have found from experience that the more looseness there is in the documents, the more likely bidding will not be sold. We also try to provide for some flexibility, however, by putting in, when possible, 'add' and 'deduct' alternates for which the contractor can supply prices.

"The key to making this system work," Falkenstein continues, "is to keep the client constantly aware of what is going on and to alert him to anything that may affect the cost aspects of the project. For example, if we hear of a price rise in materials, or a problematical labor situation in the locality of the job, we let him know. These are aspects of cost that the architect cannot control and cannot always foresee. Keeping the client informed is, we believe, the best way to keep him understanding and satisfied."

Another important aspect of cost control is the feedback that comes from situations that arise in the field during construction, which is under the direction of Frank W.



New York City's Essex House and Newark's Raymond Commerce Office Building, where the firm is now located, are work done by the elder Grad in 1929.

Orleans, AIA. His reports of problems and bugaboos, while of interest to all the partners, are of particular concern to Arthur R. Miele, AIA, a member of the firm since 1924 who heads the technical review committee.

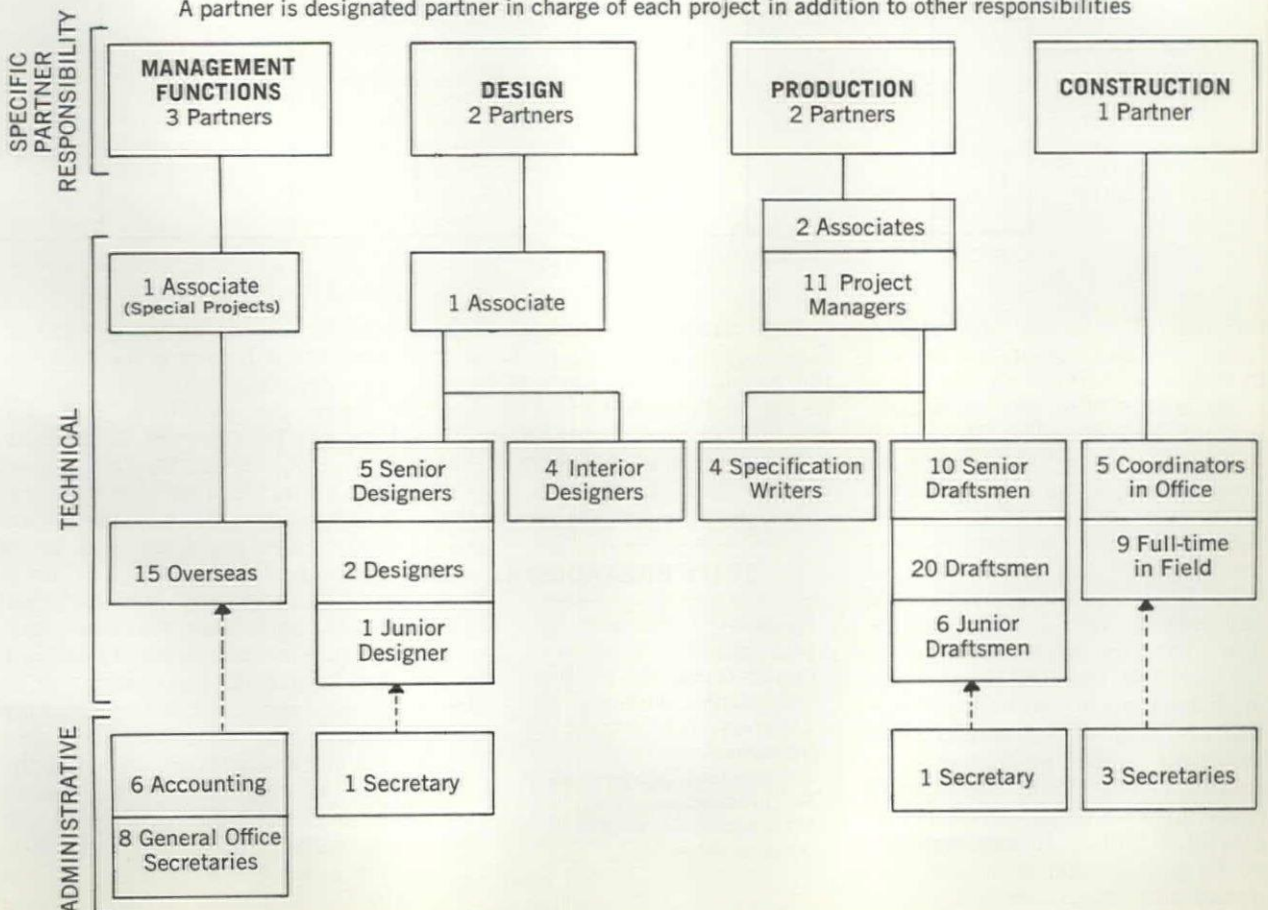
As an example of how the Grad system works, the rough figures on an actual project are revealing. The job was for a large and growing industrial concern, and the preliminary concept study brought a cost estimate of some \$6.3 million, including a 5-percent contingency,

provided that construction start by a specified date. When the final concept package was developed, with design refined to a much greater degree and numerous changes made after client review, the estimate had risen to \$6.7 million, with the contingency reduced to 3 percent.

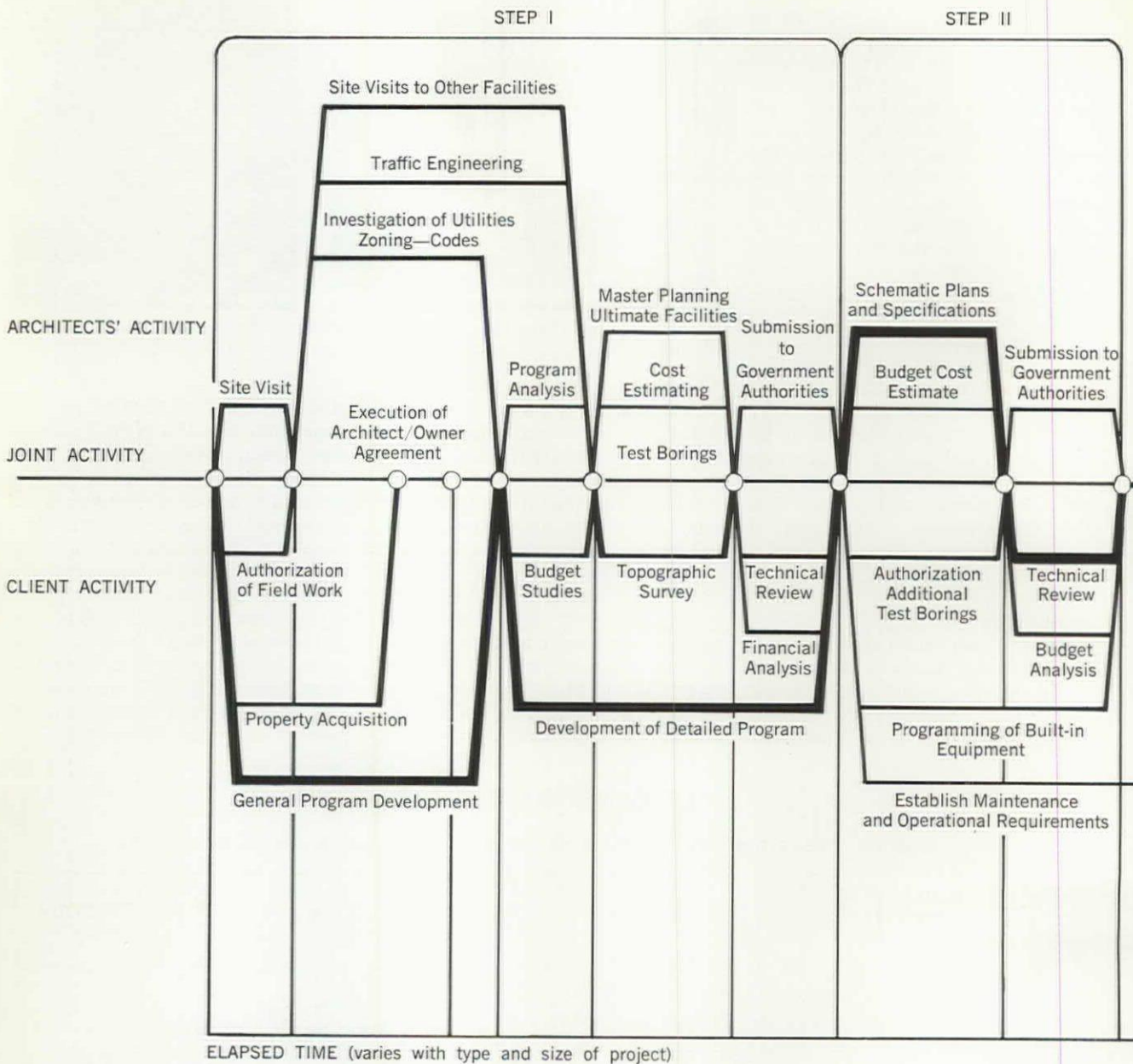
During the final drawing and specifications stage, the client added almost \$400,000 in identifiable costs, bringing the total budget to about \$7.1 million. When drawings and specifications were about 90 percent complete, the cost estima-

PERSONNEL DISTRIBUTION

A partner is designated partner in charge of each project in addition to other responsibilities



FLOW CHART USING CRITICAL PATH METHOD



ELAPSED TIME (varies with type and size of project)

tor was called in and arrived at a figure over \$8.1 million—more than \$1 million above estimate.

No amount of review could bring to light the reason for this project to come in so much higher than the budget, and it was decided that there must be something wrong with the outside estimate. Consequently, with the client's concurrence, the job was let for bids, since any redesign would be done at the firm's expense in any case.

Eight bids were received, ranging from a low of just under \$7 million to a high of \$7.7 million. The architects needed no further demonstration that their cost control procedures were operative and successful. Needless to say, the firm no longer consults with that particular cost estimator.

Cost control procedures in the Grad organization do not end with the preparation of contract documents. In the selection of bidders, the firm advises clients to choose a group of good competitive bidders so they can get true benefits of competition. Any suggestion that

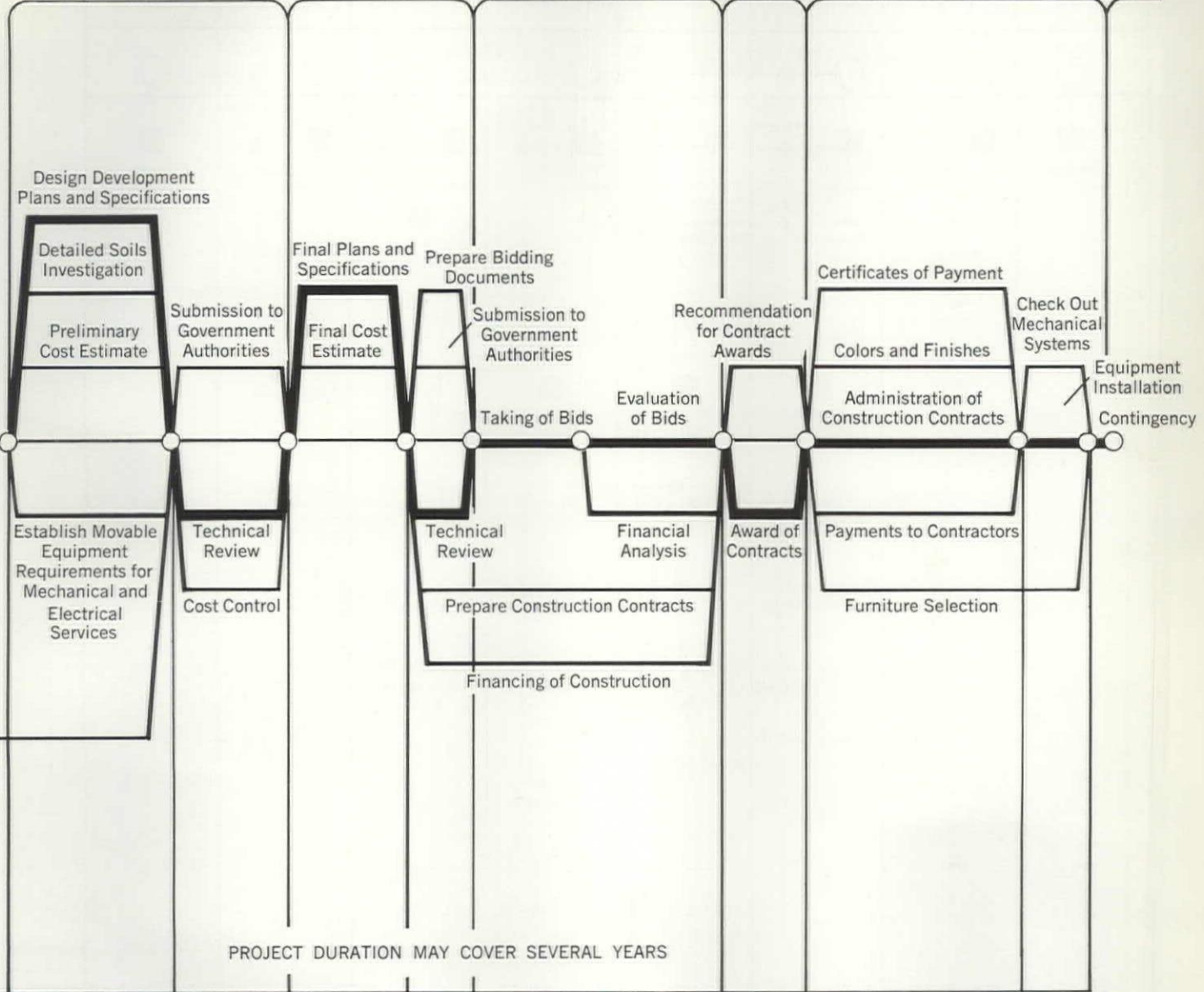
STAFF BREAKDOWN	
Partners	8
Associates	4
Project Managers	11
Specification Writers	4
Designers	12
Draftsmen	36
Construction Coordinators	5
Field Inspectors	9
Accountants-Secretaries	19
Overseas Personnel	15
Total	123

a particular contractor has the inside track will destroy the incentive for careful costing.

Since the architects feel that their greatest weapon in administration of the construction phases of a project is a good set of contract documents, they try to anticipate the problems that might come up. For example, in areas such as temporary heat and light or site excavation work, where preliminary evaluation is very difficult, they have developed systems, criteria and specifications to protect the client.

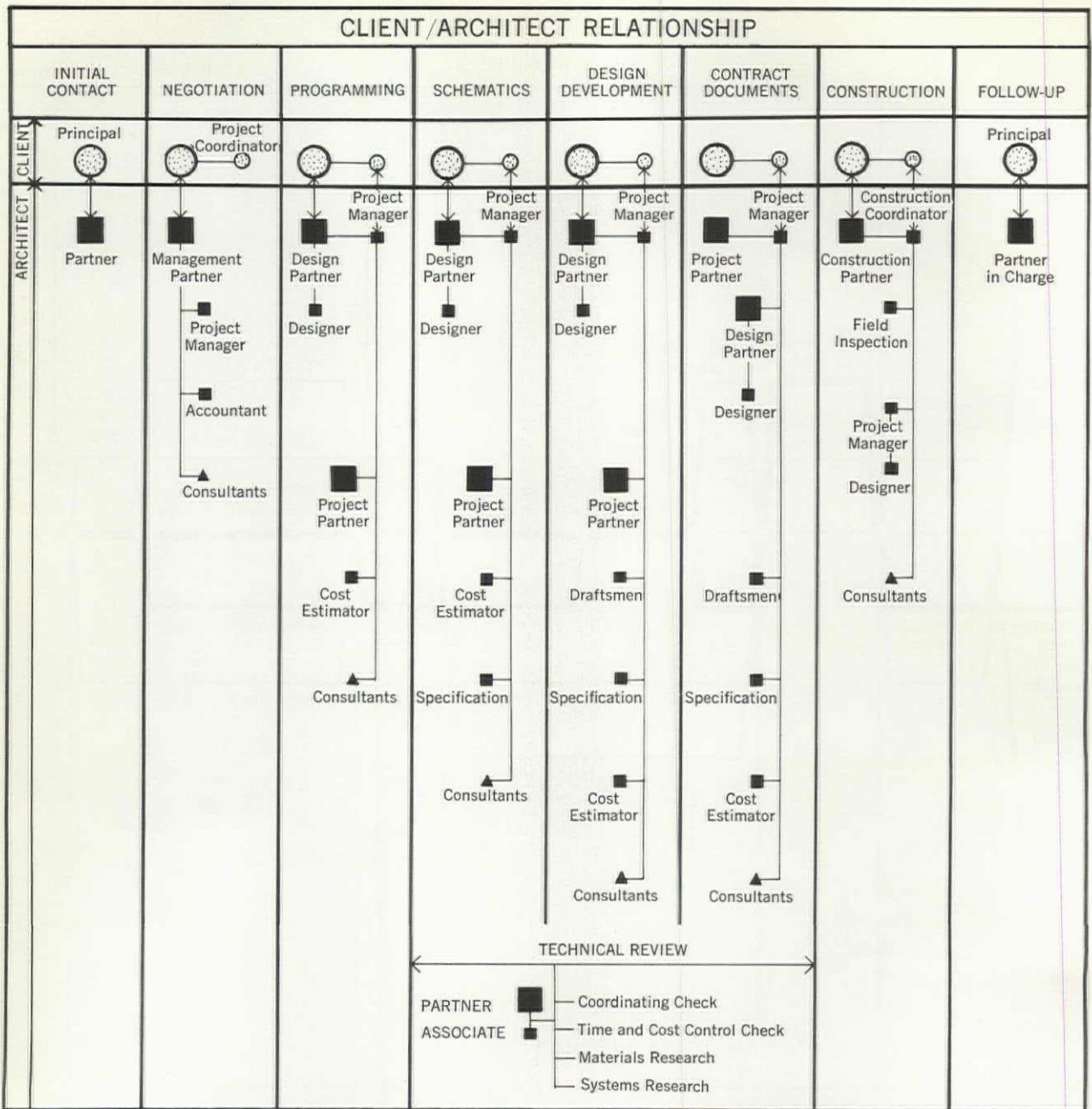
When changes are requested, the firm evaluates carefully and makes recommendations to the owner. It has found that in this area, it is very helpful to have unit prices in the contract documents to protect

STEP III STEP IV STEP V STEP VI STEP VII STEP VIII



Master plan for the New Jersey State Capitol Development Commission in Trenton, including the Grad-designed State Labor and Industry Building and the Cultural Center, represents one of the firm's most important projects. The latter (upper left) is a \$7.2 million, four-building complex consisting of a museum, planetarium, library and auditorium. Key structure in the master plan, the \$12 million, 13-story Labor and Industry Building (lower right) was one of the first urban-renewal jobs in the United States to combine municipal, state and federal efforts and financing. The architects also have done preliminary planning for the State Legislative Building. In addition, the firm has been commissioned to prepare a master plan for expansion of the State Capitol complex in Augusta, Maine, on a river site similar in many respects to that of Trenton.





the owner, since at this stage the contractor is in the driver's seat.

Back in the Raymond Commerce Building—designed by their father in 1929—the Grad brothers share an office in which they have been working together since 1936. Bernard joined the firm in 1932 following his architectural studies at the University of Pennsylvania and in France; Howard, with a degree in civil engineering, also from Pennsylvania, came into the office four years later. The two were admitted to partnership and formed a management triumvirate with their father.

Bernard assumed responsibility for the firm's design policies and, to some extent, client liaison. He is, in effect, a design-oriented partner who also fills the role of states-

man representing the profession internally and externally.

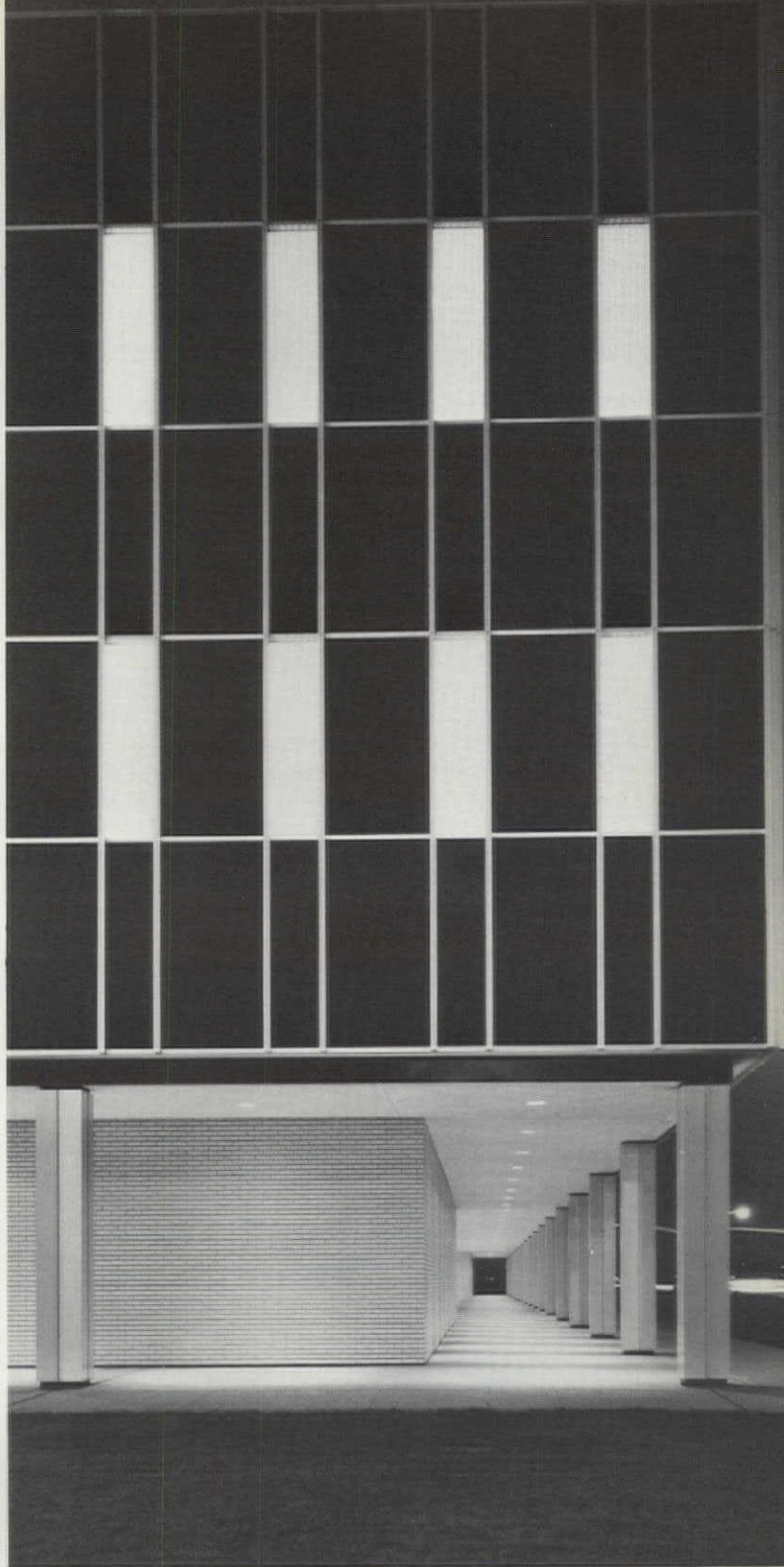
Howard, aside from his joint management decisions on internal business and financial matters, plays the devil's advocate and generates a hard-nosed view on virtually every decision. In addition, he is responsible for business development of engineering-oriented projects such as those for many of the government agencies.

This is not to imply that Howard shows no concern for design. Not too long ago in a speech he said: "The challenge facing architect and engineer today is not quantity but the quality of creative design. This decade, starting in 1960, may be likened to a renaissance of architecture and engineering. New materials combined with new concepts

of design are creating better looking, more livable and more economical structures than ever."

Each brother has his desk against an opposite wall, but a much more important work area is a conference table situated in the center of the room between their chairs. In practice, they use their desks only minimally. Their head-to-head relationship over the conference table takes up about two hours each day, usually in the morning, when they discuss such matters as prospects, problems, post-mortems and personnel. Specifically, three aspects are covered in these sessions:

1. The division of assignment responsibility between them.
2. A general review of all matters of the current and previous day, which each has put on an agenda.



Completed work in the firm's home state are the Robertsville facility for New Jersey Bell Telephone Company, cited by the parent system in its annual design awards program; the Student Union Campus Center for Rutgers University, Newark; and the 11-building Sea-Land Terminal (general office structure directly above) at New York Harbor's Elizabeth installation. Underway is a 14-story headquarters building for Hess Oil & Chemical Corporation, Woodbridge; and Bergen Community College, a new campus for a maximum 5,000 full-time students at Paramus.

YEARLY ARCHITECTURAL BILLINGS BY CLASSIFICATION

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Educational	1%	4%	3%	3%	6%	13%	18%	31%	34%	39%
Religious	—	1%	1%	—	1%	1%	—	—	1%	—
Medical	—	2%	2%	1%	3%	6%	9%	7%	10%	12%
Commercial	48%	14%	38%	35%	33%	12%	17%	22%	22%	21%
Industrial	9%	24%	5%	8%	19%	30%	25%	12%	12%	11%
Defense*	38%	51%	30%	40%	32%	18%	12%	17%	15%	12%
Government**	4%	4%	21%	13%	6%	20%	19%	11%	6%	5%

* Projects for Department of Defense: Army, Navy, Air Force
 ** Projects for federal, state and city governments

3. A list of action points for each one to follow through, stemming from the day's meeting.

Obviously, this is a very close and effective working relationship which depends upon complementary as well as compatible personalities, a somewhat rare quality in any organization. The physical relationship of desk and conference table creates an ideal environment for this unusual "control center"—a system that has worked for more than two decades. Moreover, it has served as a springboard for a firm that is ever expanding its concept of architectural services and tailoring its organizational structure to meet these demands.

This progressive viewpoint comes naturally from a heritage of "imaginative planning today for things that must change tomorrow," a credo of the founding member, Frank Grad.

When he passed away this last January at the age of 85,* he left behind a firm which he established in a loft office on Newark's Market Street. He had migrated to America two years earlier, in 1905, having just been graduated from the Vienna Technical School in Austria.

During the quiet years leading up to World War I, the emphasis was on residential, commercial and industrial buildings. Then, with the economic quickening of the Roaring Twenties, came a succession of major multimillion-dollar projects that helped to shape Newark's profile, such as the Mosque Building

and Theatre, Beth Israel Hospital, the City Hall Annex and Board of Education Building.

The elder Grad's great interest in city planning problems led to his proposal in 1929 of a public parking garage under Military Park in the heart of the city's downtown—a project which his firm subsequently designed 30 years later. In that same year, 1929, he extended his practice to New York City with the design of the Essex House Hotel.

Over the years, the Grad brothers have resisted suggestions that they should move their offices to Manhattan and have demonstrated their faith in Newark: "the place where the Pullman porter comes in to brush you off for New York," as the old vaudeville joke puts it. In an article on "The New Newark," *Time* magazine [Oct. 21, '57] quoted Howard Grad as saying: "A few years ago I wouldn't have given 15 cents and a rusty collar button for this city. Now I'd never sell it short."

After the Depression, the two brothers having joined their father, the firm designed a diversity of World War II military installations along the Eastern Seaboard.

Then in the late 1940s, Frank Grad turned daily management of the firm's activities over to his sons but remained active until his death. In the last 15 years, it has been commissioned by numerous nationally known corporations, by the State of New Jersey and several federal government branches.

Reflecting an era of international tensions, the firm also has been associated with defense projects in this country, Canada, England, France, Pakistan and Thailand.

Two years ago, the firm underwent a major organizational change

when Bernard and Howard Grad were joined by six partners, each with a particular skill and assignment, as indicated by the personnel distribution chart, to direct the more than 100 employees now on the payroll.

One of these partners, Harry B. Mahler, AIA, responsible for architectural design, likes to think of the firm's operation as being cone-shaped. "As business expands, so does our design quality." The number of design-award plaques being added to the office walls seems to attest that this is so; and the firm is particularly proud of the five citations from the Bell Telephone System for "Excellence in architecture at low cost with due regard for simplicity and appropriateness to site and environment."

Of all the current projects, and they include just about every kind of job from the master plan for the New Jersey State Capitol in Trenton to a school for trainable mentally retarded children—Mahler is most excited about the plans for the 167-acre campus of Bergen Community College at Paramus, New Jersey. The design concept calls for a megastucture which developed as a result of a 10,000-mile trip to eight colleges in the United States and Canada on which Mahler accompanied Dr. Sidney Silverman, Bergen president.

Dr. Silverman described the trip as "necessary in view of the different problems faced by a community college with its relatively new academic concept. It requires a strong community relationship, a highly flexible curriculum and provision for a mobile student and faculty body."

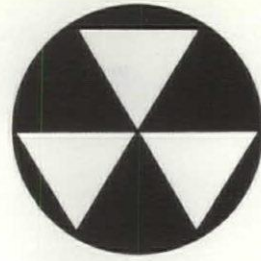
As Mahler points out, "Architects need more than a passing knowledge in this field, but they are not educational programmers."

This is just one example of "a marked broadening of the firm's services so that it now provides management with a wide spectrum of investigatory, economic evaluation and consultant services in problems pertaining to physical expansion," to quote one of the many handsome brochures it puts out as part of an active public relations program.

But in the final analysis, as Bernard Grad sees it, "Design today must relate to the client's practicality. Most of them don't have money to throw around. Fortunately, some are becoming aware that it doesn't cost more for good architecture than for bad."

ROBERT E. KOEHLER

*The firm has set up the Frank Grad Memorial Scholarship in the form of an annual contribution of \$500 to the Scholarship Foundation of the New Jersey Society of Architects. This is particularly appropriate in that the firm helped to commemorate its 50th anniversary by awarding \$10,000 for fellowships and scholarships to four architectural schools.



A Source of Hazard

BY ROBERT J. PATTON

This is the first in a series of three articles introducing conceptual information on the subject of radiation shielding directed to architects and planners. The objective: to present this difficult subject in such a way as to allow design professionals to assess the significance of the problem within the pattern of their activities.

As the author, an assistant professor in architecture at Washington State University, points out: "It is probable that, for an indeterminate period, the people of the United States will live under the threat of nuclear attack. Rarely has it been necessary for the leaders of a country to have to deal with a matter of such enormous impact and complexity. How well our country could survive such an attack and restore technical, political and social resources depends heavily on how we prepare to meet this potential danger."

Currently, The American Institute of Architects, under a contract to the Department of Defense, Office of Civil Defense (for which Mr. Patton is a qualified instructor in its nuclear defense design program), is arranging a program of workshops to be held in 14 cities throughout the land this year, with such material as is presented here. The information is the result of studies begun at the Nuclear Defense Design Summer Institute in Aspen, Colorado, in 1965. It was sponsored by the OCD, the Association of Collegiate Schools of Architecture and the Aspen Institute for Humanistic Studies. Organized by the School of Design, North Carolina State University, under the direction of Dean Henry L. Kamphoefner, FAIA, the Institute comprised faculty members from 15 architectural schools.

Special advisers were Dean Thomas L. Martin Jr., College of Engineering, University of Florida (now vice president of Southern Methodist University), and co-author of *Strategy for Survival*; Professor Hoyt L. Sherman, School of Art, Ohio State University; and Dr. Heinz von Foerster, department of electrical engineering, University of Illinois.

THE EDITORS

A Source of Hazard

During man's long habitation of the earth, he has been subject to the laws of nature and their resulting effects on his environment. The provision of protection from fire, wind, temperature, flood, earth shock and solar radiation has always been a primary concern of civilized survival. Primitive kinds of shelter from these elements were devised early in man's history; we still admire the skill of pioneer craftsmen who created crude but ingenious structures which shielded society from the effects of hostile forces.

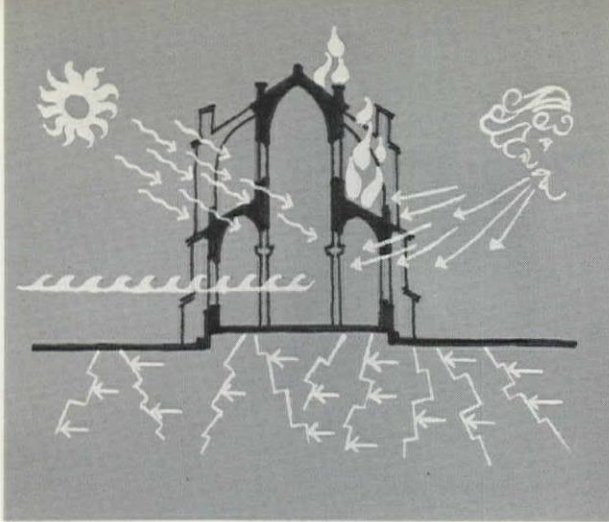
In following centuries, this sheltering task became increasingly specialized, and building forms assumed a unique significance in visual expression because of it. Paralleling this effort, building technology was developed to determine precisely the physical integrity of constructions. Early materials, easily manipulated by a simple technology, progressively gave way to the use of more complex systems which more effectively satisfied man's continuing concern for protecting the everyday activities of life from the hostile forces of nature.

The idea of response to forces is also demonstrated in the larger context of the physical environment—that of the city. Current thinking on the part of architects, planners and engineers emphasizes urban form as giving insight into the forces that shape it. Although technical and material needs are often the essential framework for this form in the 20th century, history reveals that another factor—urban organization to resist natural hazards—often contributed to the visual image of cities. In ancient Mesopotamia, the site of the city was raised on man-made plateaus above the flood planes of the Euphrates River. The old Mediterranean towns were composed of compact, reflective enclosures for protection against the intense sunlight. Both are examples of adaption, and the techniques involved were refined over a long period of time. In many cases, a successful, totally organized urban unit was achieved that functionally protected the inhabitants and their activities from those elements of nature hostile to man.

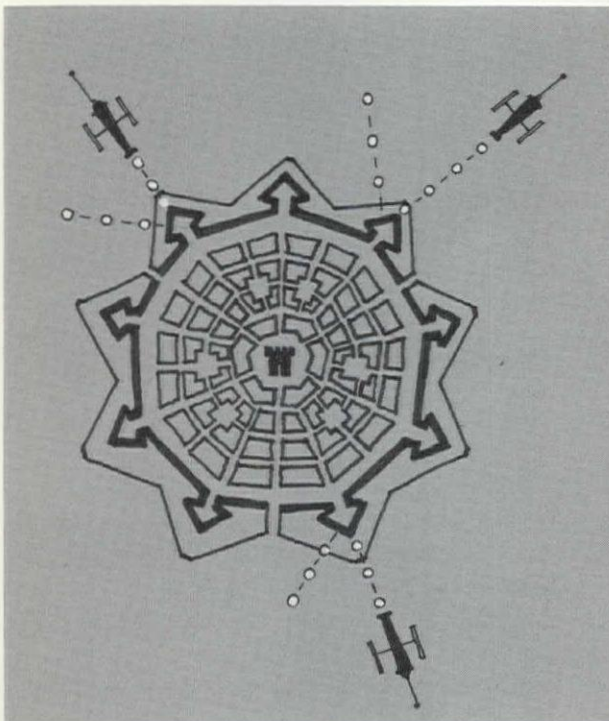
However, this process has failed when the forces of nature have gone beyond man's technical ability to resist, or when a desire for expediency in city building has taken precedence.

Hostility Introduced by Man

Another aspect of hostility imposed on the urban environment has more profound implications and is more directly related to contemporary concerns. Throughout the history of civilization, mankind has been in continual conflict. Beginning

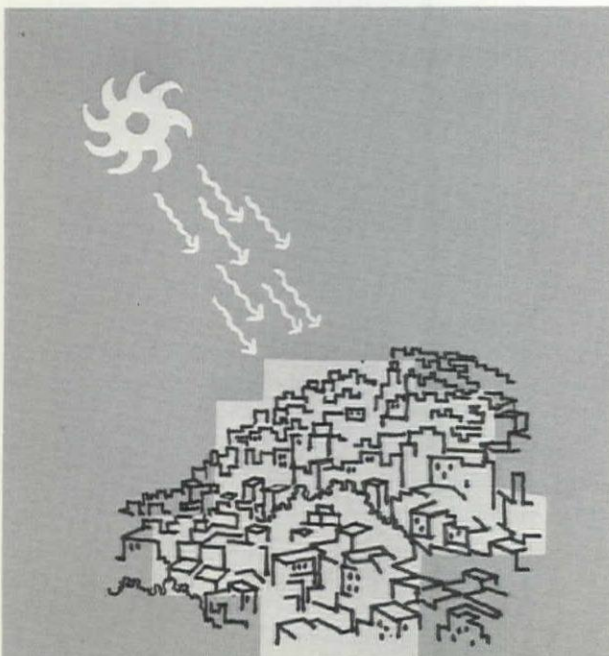


Hostile forces originated by nature



Hostile forces originated by man

Radiation



in the later phases of Neolithic culture, the institution of war produced a new dynamism that manifested itself as a desire of one human group to exercise the domination of another by means of force. As a result, a new and entirely man-crafted hostile element was introduced into the human living environment.

During the initial stages of warfare, a crude and simple military technology brought an immediate response in terms of designing protection into cities. The initial concept, stemming from systems of walled fortifications, was that of introversion as a defense against the insecurity of the times. Here was man, for the first time, turning inward to seek protection from his own kind. This inward-turning process continued until advancing technology destroyed its motivating purpose and created urban forms which, even today, are admired by contemporary historians and planners.

Probably the best examples are the medieval towns, completely self-sufficient within their protective shells of defense; bulwarks against the means of attack of the times; so formidable that life inside the shell could assume complete security. With the advent of gunpowder during the early years of the 15th century, city engineers became obsessed with the design of fortifications based on pure geometry. The "ideal" city was star-shaped with earthen walls forming points from which the defenders could direct converging fire against an enemy attempting to scale them.

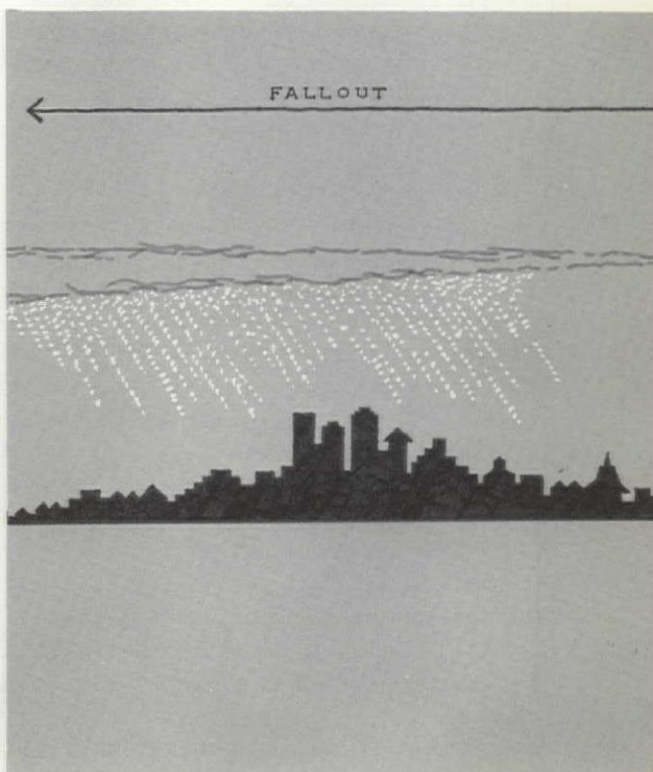
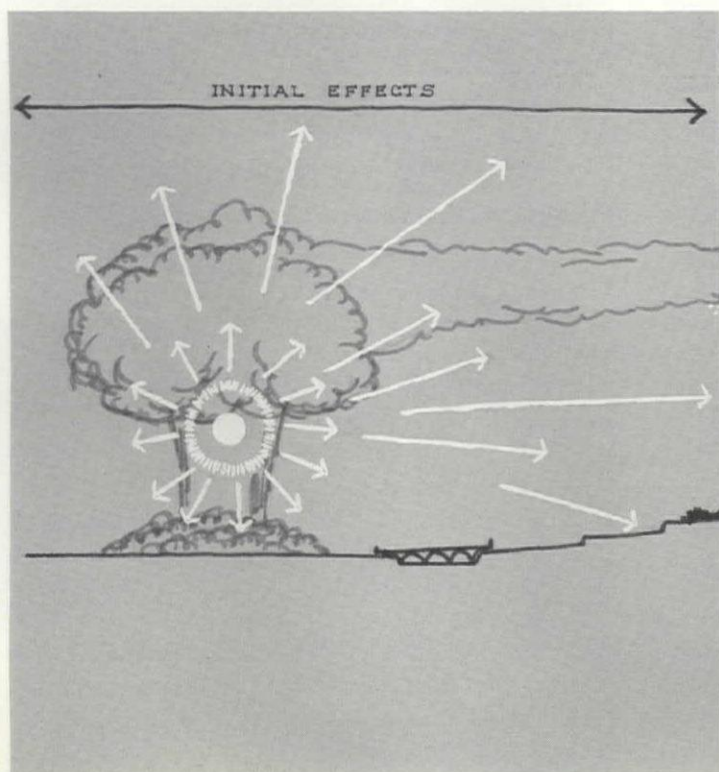
Later, blocks of national unity began to form. With the improvement of artillery, fortifications

became useless and city building became the ambition of rulers to display affluence and power. Walls came down, and the city was opened to the ravages of warfare. For almost five centuries, the city has remained completely vulnerable to all aspects of military attack. Virtually no solution save going underground has developed as a response to modern military technology; certainly no perceivable city-form concept. Perhaps this is the result of the dominance of technology used for aggression over that available for protection. More likely it is the psychological state of man which negates a desire to create urban elements which would remind him of the horror of war in time of peace.

And yet, what happens to the urban environment as a result of modern warfare? The answer to this question is most dramatically expressed in the records of World War II and by those people who experienced it; yet the implications of the bombing of European cities has hardly taken a conscious place in the minds of those who did not experience it. An analysis of this event has meaning relevant to the future of the city and perhaps even to the future of city form.

Environmental Hostility and the Nuclear Age

Today, political and ideological conflicts are still a very real part of man's existence and are carried on with the backing of an arsenal of potential mass destruction far exceeding that of any period in the past. Unstable relations among nations are interlaced with threats, and it is possible that, for an indeterminate period in the future, people will live under the intimidation of nuclear



attack. The reality of this possibility, and the problem of survival and restoration of technical and social resources, is important to consider.

Because no nation has experienced a full-scale attack employing modern thermonuclear weapons, there is no certain way of appraising the result and its effect on man and his urban environment. Predictions are based solely on evidence resulting from extrapolations of the experience of World War II and experiments and nuclear testing conducted since that time. Any analysis of problems facing the city in the nuclear age is dependent on the assumed accuracy of this scientific documentation.

Effects of a Thermonuclear Explosion

The forces inherent in a thermonuclear blast are similar to the hostile forces found in nature but multiplied to an enormous magnitude. At the instant of detonation, a luminous fireball is formed with temperatures approximating those at the center of the sun. This fireball consists of vaporized elements and superheated air and rapidly grows in size. It has tremendous incendiary effect and will ignite all combustible materials in an urban area near the burst. The sudden increase in temperature, causing the surrounding air to expand with the speed and force of a hurricane, creates a shock wave similar to a wall of compressed air which is responsible for a large part of the initial destruction.

Additional energy from the blast is transferred to the earth similar to the effect of an earthquake. In the rupture zone, the original conformation and consistency of the ground is changed permanently, and immense stresses and strains are transferred to the foundations of buildings. These concentrated damaging factors occur in the vicinity of the blast and are of such intensity that the provision of suitable protection for inhabitants would place engineering and economic demands upon society of a scale never before experienced. The actual amount of physical damage incurred in an urban area as a result of the initial blast depends upon a number of variables such as the amount and size of the weapons used and the physical characteristics of the target area. Destruction would not necessarily be universal nor would it be uniformly distributed; however, at the blast point, devastation would be substantial as a result of fire and shock.

A nuclear explosion is triggered by the upsetting of the balance of forces within the nucleus of the atom to make it unstable; it cannot hold together in this condition and begins to break apart. The reaction releases large amounts of energy, most of which is converted into the initial blast and fire-producing thermal radiation. Blast and fire are common to conventional explosions,

but thermal radiation is peculiar to a nuclear explosion. This energy is released as intense heat and light millions of times greater than that from a conventional explosion.

Still another expenditure of energy is in the form of radioactive emission. Although there are several kinds involved, the one significant to this discussion is gamma radiation with characteristics similar to radio signals, visible light and other electromagnetic phenomena but of much greater magnitude. Due to its high energy level, gamma radiation passes through materials in a manner not unlike X-rays and is harmful to living organisms. In the debris resulting from a thermonuclear blast, gamma radiation persists with an intensity so great that the provision of adequate protection is as complex as that of providing protection against the initial fire and blast.

In a thermonuclear blast, particularly near the ground surface, immense quantities of dust and debris are taken in the fireball. Some of this material vaporizes; later, after cooling, particles are formed which have radioactive matter from the bomb adhering to them. The heavier pieces fall to the ground rather quickly and produce a high level of contamination in the region surrounding the point of detonation. Lighter particles can remain airborne and be widely distributed by winds to descend later on population centers physically untouched by the initial effects.

The gamma radiation emanating from these particles of descended fallout has great penetrating power and is effective for considerable distances. Damage to humans depends on the degree of their exposure; moderate exposure may cause only weakness and fatigue, whereas severe exposure may result in death. There is much speculation regarding long-term effects of radiation on human beings beyond the generations exposed to the hazard, but no predictable characteristics or behavior are known at this time.

Protection from Radioactive Fallout

The intensity of gamma radiation decreases with time. This is termed radioactive decay and is an important asset to protection. If people can be protected from gamma radiation until the radioactive level decays to a less harmful intensity, normal human activity can be resumed following a period in shelters.

Designing methods of protection from gamma radiation emanating from radioactive fallout can become rather complex when applied to urban design. Contrary to most popular notions, however, it does not require going underground. In fact, there are many areas in the existing urban environment that, due to the combinations of material, mass and form, can provide effective protection right now. □



Editor: Donlyn Lyndon, AIA, School of Architecture and Planning, Massachusetts Institute of Technology, Cambridge. **Contents:** Summation of the AIA/ACSA Teachers' Seminar in Montreal entitled "The Impact of Industrialization on the Design of the Built Environment," with Kenneth Frampton as guest editor.

AIA/ACSA Teachers' Seminar 1968

The general feeling of the June 9-14 seminar, hosted by the Ecole d'Architecture d'Université de Montréal under the directorship of Guy Desbarats, was that industrialization as such is only one aspect of the problem—that there is a general need to widen the basis of the undergraduate curricula in the schools and to concentrate more on teaching methods for the determination of design goals. There were also proposals that attempts be made by both the AIA and the ACSA to put pres-

sure on the federal government to establish a national building research station and that within an interprofessional and academic structure, attempts be made to raise funds for the support and establishment of centers for specialization and for intensive short course training of both architects and architectural educators. It was further suggested that given the "information explosion," the AIA needs to organize for the profession and its education an information clearinghouse.

Reflections

BY KENNETH FRAMPTON

In lieu of a summary, I can only outline the embryo of a point of view, which, although it was partially formed before, has since acquired a rather different orientation as a result of this conference. This orientation is partially compounded out of an affirmation of views previously held and to a greater extent, out of insights newly acquired.

If I pause to think from what sources these insights have arisen (insights which now become part of my own world view), I find that they have come in no small part from men who are committed, through their daily work and lives, to technocratic management. I feel that we stand to gain enormously in breadth from firsthand exposure to the views of such men. Joseph Sherman, Joseph White, Roland Wilson and Bernard Weissbourd have each in turn made it abundantly clear that there will be no major capital intensification in the production of our physical environment en masse, on a so-called industrial scale and by so-called industrial methods, until there is a sufficient assurance within the society of continuity of consumption.

It seems to me improbable that this continuity will now arise spontaneously (as it may have done, to some extent, in the case of Henry Ford's

famous popular development and mass production of the automobile) unless one includes within one's concept of the spontaneous, a condition of extreme crisis, which may well yet arise.

Weissbourd has convinced me by his very compelling economic arguments that only imminent crisis and consequent government intervention will afford to capital the continuity it requires in order to back the industrial mass production of the habitable environment. It is unlikely that such continuity of demand will spontaneously arise in the foreseeable future, without federal or state intervention; i.e., without the diversion of public concern, to coin a Buckminster Fuller phrase, from "weaponry" to "livingry." For even if the state did not act as the sole promoter for all new housing units for societal consumption below a given income level, it would still be compelled to intervene in order to control real estate, labor and other potentially "negative" lobbies, and to modify zoning and in particular density restrictions, where these exist primarily for the maintenance of existing land prices.

Of course, one may hold in all this the somewhat pessimistic view that the present complex political structure of the United States with its powerful interest groups, its resistance to change as John Eberhard would say, will not permit such intervention, however indirect. In this event, one may expect that either crisis will succeed to crisis for an indeterminate period, leading eventually to obligatory emergency intervention, or that the

government will become the sponsor on a large scale of mass housing to be produced by private industry. All in all, the latter is just a shade more probable given the imminent curtailment of military expenditure in Vietnam.

In his address, Eberhard touched on the dangerous tacit assumption still held in the North American continent that man here stands in possession of unlimited resources. If the government were to begin to determine immediate future land settlement density patterns in the US, I believe that we would have less to fear from this myth of abundancy than we would if it were simply to sponsor mass housing on a large scale. The latter would no doubt be politically easier to effect, but would do little to check our present tendency to extravagant and unessential suburban proliferation, a proliferation which has, incidentally, the capacity to produce side effects bordering on "pollution."

Weissbourd has, in any case, made it abundantly clear that new land settlement densities and government-sponsored housing will be equally necessary if we are to begin to mass produce, at a socially valid price, the 500,000 new housing units per annum essential to supplement our total housing stock—over and above the normal new annual housing market of the United States of 1½ million units. This still would yield only 20 million additional units in 10 years, a deficit some 6 million short of the so-called national target.

Horst Rittel's incisive and charming exposition on a systems approach to the economics of industrialized building only tends to lend support to this overview of technocratic management. Systematic design for Rittel appears to consist of an attempt at the 'societal optimization' of a plan for the transformation of an "is" state into an "ought to be" state. Such a task is deemed to involve the initial establishment of a set of well-defined feasible solutions to which values must then be assigned. In determining the relative feasibility of this set of solutions, a systematic designer must, for Rittel, start with an assessment of their economic, political and cultural feasibilities, before determining a more local order such as their relative physical feasibility. Such a hierarchic approach only tends to confirm the emphasis Weissbourd places first on economic and then, by implication, on political and cultural factors.

It seems to me that it is at this point in the spectrum—in the political and cultural sector—that our initial responsibility as architects and educators lies; and in this I would maintain we have a prime responsibility first as citizens without labels, like the rest of society, and only subsequently as architects in a professional sense.

Within broad circumstantial constraints, societies may be considered as achieving the

environments that they deserve. If our future environment turns out to be an unmitigated, self-destructive chaos, we shall be responsible, as architects, *no more and no less* than any other citizen. The task that is now before us as educators seems to me, after this seminar, to be that of totally reconsidering the range and type of information that we impart to young environmental designers during their five years or so of so-called liberal and/or professional education. This, of course, is an old cry. However, few schools of design even now can equal the social, political and economic concern which may be found today still expressed in the curricula of the Hochschule für Gestaltung at Ulm, Germany.

It is possible that we shall be eventually circumvented professionally and made obsolete by technical and social forces beyond our control. But if we are so destined, it is better surely we should decline as old world "paradigms," thoughtfully and responsibly oriented toward the new. For as educators we do have a responsibility, I believe, to educate future generations; and in this we shall fail if we do not attempt to impart to students, first and foremost, information, skills and a "world view" relevant to an emergent, dynamic and critical world situation.

With due respect to the AIA, which is part sponsor of this seminar, I do not believe in the perpetuation of curricula that stay within tacitly assumed confines, compounded out of liberal establishment values which support, in turn, ultimately protectionist codes of professional conduct. The very delicate issue of societal tolerance enters at this point, on which there has recently been much philosophical debate.

If academic freedom and responsibility have any meaning, I do not see how significant schools of architectural thought, at the university level, can remain neutral, by the implication of their curricula and methods, to the political and social milieu within which they find themselves situated. As it stands today, most architectural schools, with the collusion of the profession at large, still encourage the fiction that they are the breeding grounds of architects of individual genius. The overwhelming evidence that talent of such caliber is extremely rare and takes care of itself, in any case, ought to have been enough to have dispelled such romantic presumption.

Few schools during the past decade have, it seems to me, made a sufficiently total attempt at the education of designers for the realities of the world in which we live. Of these, one stands out as a responsible, even if limited, attempt, beyond all others. This, of course, is as Gunter Schmitz has shown us, the Hochschule für Gestaltung at Ulm. Its attempt at a rigorous and broad education is a commitment which is not neutral—as

constant opposition, often indirect, first from the "Lande" and then later from the West German Federal Government, would tend to indicate.

The culture of 20th century architecture, as the European culture of the New World, was born under the sign of a millennialistic romantic myth, as opposed to the classic and scholastic spiritual ideals that exclusively informed the culture of architecture from antique times until about the middle of the 18th century. This notion has, I believe, been aphoristically expressed by Aldo van Eyck as follows: "Previously, architecture served the prince and the priest; now the prince and priest are disestablished. Therefore if not an architecture for all, then no architecture at all." It is half-conscious realization such as this, as to the problematic nature of culture in a secular mass society, that causes us, I believe, to become so disturbed by the implications of industrialization; implications involving both media and myth at a mass level.

For with this prospect, the nature of our cultural predicament emerges. If the vital forces of our technological society circumvent the professional architect as now conceived, then our participation in the creation of an architecture for all will, of course, be negligible. On the other hand, should we resign ourselves to the task of designing specialized "one-off" structures, we are still faced with the realization that even these structures are problematic vehicles, both programmatically and culturally, for the permanent monumentalization of ideal form.

Being immersed in a pluralistic, secular society, we tend to lack both a physical vehicle for, and a psychological conviction in, any ideal that may be collectively objectivized, i.e., formed in a permanent public sense. Faced with this dilemma, we can either choose to indulge in the subjective expression of a personal esthetic upon opportunity or to participate in the collective generation of socially relevant systematic order. The former cannot be thought of as architecture in any sense comparable to the past architecture of established Western humanism, as it is inherently *exclusive* and *private*. The latter, on the other hand, through its concern with systematic ordering, may well be the only direction open to us for the regeneration of a relevant environmental culture. It may well be, in such a culture, as Moshe Safdie has suggested to us, that the building system is in itself the embodiment of structural information, and that this constitutes its sole esthetic content.

The old duality problem of architecture, whether it is an art or a science, still hovers in the background while we continue to fail to recognize that its province is neither and that it may only be significantly understood not as a com-

pounding of two poles, but as design, as a related but independent act of synthesis.

The current student revolt, and the concerns of this seminar, equally suggest that what we have hitherto blandly inherited as givens: The concept of the humanist university, the constraints of a liberal profession, are now in need of drastic redefinition. It may be, as the HfG Ulm curricula suggest, that the old separate disciplines are no longer relevant but, on the contrary, have become obstructive. It may be necessary for us to now think of our task as that of rebuilding the environment, with the mental set of a socially aware designer, rather than that of the architect in the old humanist sense.

The danger, of course, lies in a technical escapism, in a technical idolatry, the confusion of means with ends and with the consequent loss of all human value. It seems to me, that for education, industrialization implies not solely training in technique, for no particular technique can be a universal panacea, but rather the *broadest possible* design-based education we can organize of adequate depth within the time space of an academic course. Such a widening would have to include courses in the whole economic structure of the building process. □

Industrialization Myths

BY BERNARD WEISSBOURD

A negative attitude toward the application of modern technology processes to the building industry is sometimes expressed even by sophisticated businessmen. In a recent article the chairman of the President's Committee on Urban Housing stated:

"As to the impact of new technology, the committee's studies show that even if business and labor together could reduce direct construction costs by 50 percent, which is highly unlikely in the foreseeable future, the impact would be only about a 12 to 15 percent reduction in monthly rental costs. In other words, costs for materials and labor represent only about 25 percent of monthly rental for a typical low-income unit. Land costs, site improvements, financing and architect's fees represent another 25 percent. The remaining 50 percent of the rental dollar goes for the project's operating expenses and taxes."

The chairman's arithmetic is correct, but does not take into account the way the elements of the rent dollar are related to each other. If direct construction costs are reduced by 50 percent,

then the cost of carrying charges and architect's fees are reduced proportionately. Similarly, in most places real estate taxes are related, at least in part, to the cost of the improvement and would also be reduced.

But just as we must say to those who have blind faith in science and technology that their thinking must be a little smaller, we must say to the chairman that his thinking must be a little larger. What his example does show is that you cannot solve the low-cost housing problem by reducing direct construction costs alone. All of the costs, including land costs, operating expenses and real estate taxes must be dealt with.

Moreover, shouldn't we challenge the basic assumptions? Should not research be directed toward reducing maintenance costs and heating costs as well as to construction costs, and should we not ask ourselves if the real estate tax is not an outmoded way of financing municipal and school services? The real estate tax is regressive, having its greatest impact on persons of low income. My purpose here is not to argue that the real estate tax should be replaced by local income taxes, which I do believe, but rather to show that no element of building cost or operating expense shall be ignored in attempting to deal with low-cost housing.

There is still another myth that should be disposed of. We are frequently told that if the Europeans have industrialized the building process, why can't we? I have seen a number of European industrial processes and some of them are quite good. There are systems in Denmark, France and, now, Russia, which offer great promise.

However, in analyzing what the aim of industrialization ought to be, one must recognize what the competitive process is. After all, there is no point to industrialization unless the process is less costly or unless you get a better product at the same price. The structures for most single-family homes and low-rise apartment units in the United States and Canada are made of wood. And because timber is cheaper in these countries than in Europe, concrete and steel systems based upon cheaper European labor are seldom competitive here.

There are other myths surrounding the industrialization of the building process. The myth of structure, for example. So much effort is put into the structural systems, when the structure constitutes only 25 percent of the cost of most buildings. The other 75 percent of building costs deserves equal research attention.

But rather than continue talking about what I think are erroneous approaches, I should like to suggest the beginnings of a correct approach to the industrialization process. We must start out by recognizing that a great deal of the building

process is already industrialized although we are not accustomed to thinking of it that way. I-beams are an industrialized product, as are door knobs, windows and flooring.

What we are doing now is producing some of the components of the building process by industrial methods. Progress would then constitute either producing more of the components in the factory, producing larger components in the factory, or creating new kinds of components which solve the problems differently. In no case is the entire product produced in a factory; even a trailer home has to be connected to utilities at the site.

There is a great deal of industrialization already taking place in components and systems which either create a small saving in cost or hold the line on costs in the face of rising labor expense. But what I want to discuss now is industrialization which can create a major breakthrough.

I do not expect such a major breakthrough in high-rise construction based on anything we now know. Here the chairman's analysis is correct for, when you start with high land costs, high building costs, unless there are revolutionary developments in the laboratories which develop new methods of lighting, heating, cooling and waste disposal, a major breakthrough cannot be achieved. On the other hand, I believe that in low-rise construction, industrialization is possible at significant cost differences if we recognize and create a special market.

Industrialization requires a large market and enough continuing demand for the product to amortize the cost of the investment in plant and equipment. Ordinarily, the larger the component the smaller the market, since we achieve variety by arranging smaller components in many ways. I think, however, that such a market for large components is about to be created in America. The US is now committed to a solution to the housing problem; we can expect a major national effort in this direction as soon as the war in Vietnam ends. Both the Kerner Commission and President Johnson have called for the replacement of some 6 million substandard housing units in the country.

These units must be built in the outlying areas of the metropolitan regions as the Kerner Commission report notes. First, because there is no longer land available in the cities except by building high-rise buildings at exorbitant costs on expensive land; second, because in the US it is necessary to provide housing in outlying areas for Negroes to halt the enlargement of the ghetto so that our cities do not become all-Negro while our suburbs become all-white; and third, only by building on inexpensive land can a truly low-cost

program be developed. Only a low-cost program, in turn, will create a market large enough for industrialization of the housing process.

The market identified is then some 6 million housing units required, in addition to the normal market of some 1.5 million units per year in the US. If the industrialized builder tools up for this specific market, it is quite possible that the product developed will be accepted in the normal housing market as well.

Now let us examine what the cost goals for such a market should be. First, land cost should not exceed \$1,000 per unit. Since land development costs are approximately \$15,000 per acre and raw farm land in urban areas generally costs between \$500 and \$1,000 per acre, the lowest land cost per acre we can expect is \$16,000, unless, of course, we learn to dispose of waste by systems other than sewers and can somehow eliminate roads, or drain storm waters in new ways. None of these developments seems likely.

At \$16,000 per acre, if land costs per unit are not to exceed \$1,000, we must build 16 units or more to the acre. These densities require that we build townhouses or apartments rather than single-family homes. (It is also possible to mix some single-family homes with apartments.) But it is perfectly appropriate that we build townhouses or apartments for people now occupying substandard housing units. We shall have to do this in any event in order to arrest urban sprawl.

The construction cost today of a 1,200 square-foot house or townhouse selling for \$20,000 is about \$13,000 to \$14,000. (Costs differ from region to region and are somewhat lower in the southern US and Canada.) The balance is land cost, architect's fees, carrying charges, marketing costs and profit. If we wish to reduce the cost of such a unit to the point where it could properly be considered a breakthrough, we shall have to build such a unit or one slightly smaller for \$8,000. Then if we allow \$1,000 for land, \$8,000 for construction, \$1,000 for carrying charges, architect's fees and marketing and \$1,000 for profit, we are able to sell this unit for \$11,000.

If these townhouse or apartment units are sold at \$11,000, mortgage payments with a 100 percent mortgage are approximately \$80 per month. The owner is probably paying another \$30 a month for heating, light, real estate taxes, decorating, repairs and maintenance. His real estate taxes are lower because the value of the improvement is less. This, then, is between \$1,300 and \$1,200 per year for housing costs. If one can spend 25 percent of his income for housing, a family with an income of \$5,200 a year can afford this house or apartment. Three times as many families are in this category as are in the \$9,600 per year category required to afford a \$20,000 house. We

would, therefore, have tripled the market for new housing. Families with a lower income than \$5,200 per year would have to be subsidized by rent supplements or otherwise.

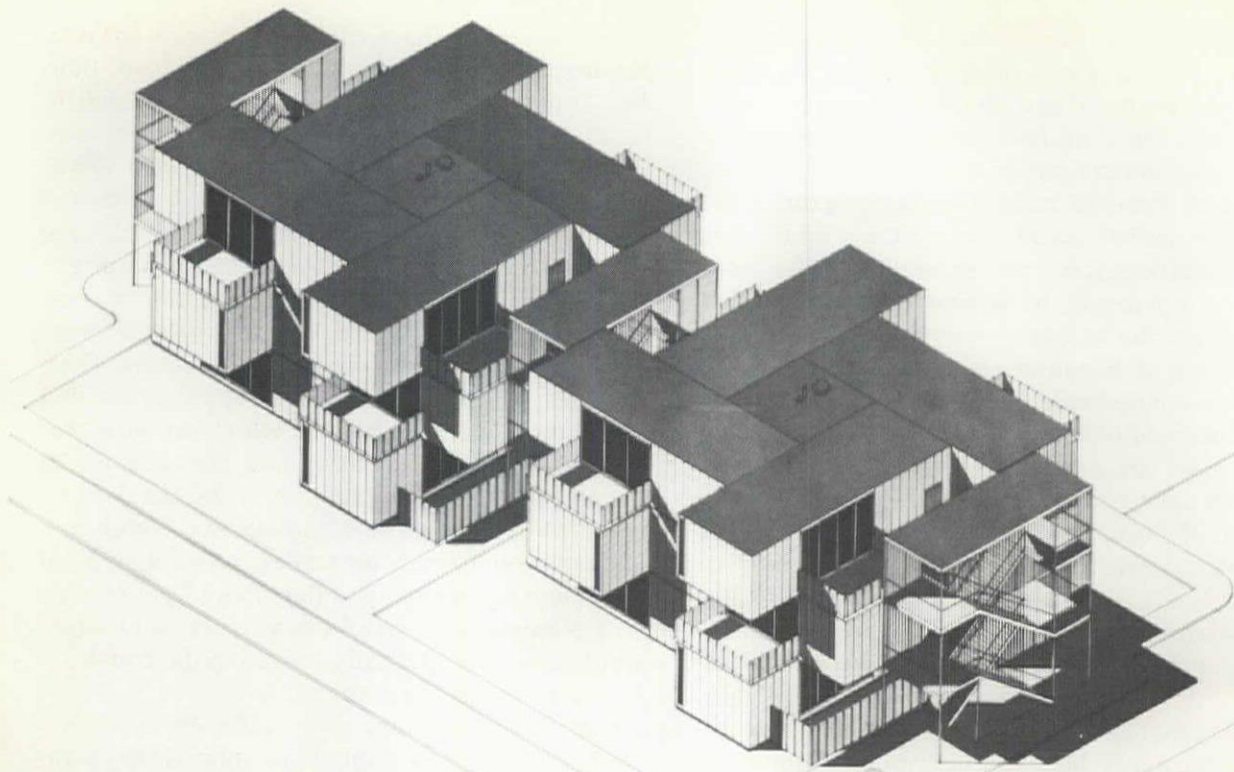
I believe that an \$8,000, three-bedroom townhouse or apartment is a feasible goal. It means we must build for about \$7 a square foot. One industry that is coming close to this square-foot cost now is the trailer industry. The trailer market was created after World War II in the first instance for people who wished to be mobile. That, together with industrial trailer applications, led to the mobile home, most of which are now stationary. The trailer industry now accounts for 20 percent of the housing market in the US. It is an industrialized process, although one which can be improved upon. Most trailers are still made of wood and are based upon the labor of young men with staple guns in small towns working at lower wage rates than generally prevail in the construction industry in larger cities.

There is no reason why trailer-type components cannot be assembled into interesting townhouse and apartment types. A most promising experiment is now taking place in Michigan City, Indiana. A low-rise apartment building is now under construction which is assembled of trailer components (prebuilt modules) around a three-story utility core. Architect Ronald Goodfellow has prepared a report which shows that it is possible to get a great variety of housing types from these units. This approach may be limited to three stories in height, since above three stories serious fireproofing problems arise. As a byproduct, higher density solutions may ultimately be possible based on building fireproof space frames into which components are lifted. Goodfellow has taken another tack. He is spraying the components with asbestos fibre and is proposing to stack them 12 stories high.

The Michigan City project proposes to manufacture apartments in the form of two wholly finished components which are hauled by truck to the construction site where they are assembled around a third manufactured component containing all the utilities services, kitchen and bathroom. The individual units are structured to permit stacking them one on top of the other.

The heaviest unit weighs about 5 tons. All the basic elements of the demonstration structure can be lifted into place by a 25-ton crane in three days. With preparation of foundation piers, utilities mains and laterals, stairways and finishing off, total on-site time will be about 25 working days with a 10-man crew.

Assuming a housing development with 100 apartments, positioning the apartment units on the prepared foundations can be essentially completed in 25 working days. A lead time of about



Prototype of HUD project developed by Housing Research, Inc.; Ronald Goodfellow, AIA, project director.

one month is needed for manufacture of the component units, during which time the site can be prepared to receive them. Finishing off, walks and stairways take another month. Total project construction time is three months, possibly two, if the lead time is utilized properly.

A truly industrialized housing supply requires the techniques of the trailer industry plus basic research and development. The building industry needs a fireproof steel; it needs a fire-resistant structural plastic; it needs a less expensive heating and cooling system and better ways to dispose of waste. These things, perhaps, will come out of the laboratory. In the meantime, an industrialized product based on techniques developed in the trailer industry can perhaps serve the low-cost housing market.

In any approach to industrialization of the building processes, we must be conscious of three aspects of the scientific and technological revolution which have become increasingly clear. The first of these is that we are not always able to foresee the implications of scientific discoveries when they are made. The population explosion is in part a result of the development of antibiotic drugs. Continued progress in automation may well result in a significantly decreased portion of man's time which must be devoted to work and this, in turn, may lead to new attitudes toward leisure time and have an impact on social conditions which we cannot now anticipate.

The rural migration to the cities is the direct result of the mechanization of agriculture. If we

do begin to industrialize the building process, we must be alert to side effects; we must be aware of the social implications of technological developments. Here the architect as a student of the environment becomes particularly important.

The second point is that the lag between the time of occurrence of a discovery or invention and its commercial application has grown dramatically short. This is one of the reasons for the accelerated rate of change in society. Since in a sense the building industry has been bypassed in this process until now, it is quite likely that there are discoveries and inventions which have been applied in other industries for which no application has yet been found in the building industry only because of the lack of adequate research and development programs.

Finally, the rate of scientific discovery is itself increasing steadily both because of the enormous number of scientists and technicians at work and because of the rapid exchange of information which takes place under modern conditions. Ninety percent of the scientists who ever lived are alive today.

A breakthrough in low-cost housing based upon the application of trailer industry technology is a modest goal since the technology is already existing. In order to really reap the benefits of modern science for housing, extensive research and development is required. The entry into the building field of large corporations and the beginnings of government financing of research are hopeful signs.

Finally, I want to make the point that the role of the architect does not disappear in an industrialized process, although it does become somewhat different. His skills will be needed more than ever.

Industrial design has shown us that industrial products can be ugly or beautiful. The land plan, the buildings themselves, the finishes, the landscaping—all these are determinants of whether the industrially built community will be responsive to human needs and whether it will contribute to the solution of some of the most urgent problems facing our society. □

Organizational Patterns

BY COLIN H. DAVIDSON

When we study the literature and the evidence of recent innovation, we see a confusing array of different techniques. The confusion is deepened, because each of these new methods is presented to us as if the embodiment of industrialization itself—in an exclusivist sense. This confusion is hardly surprising, however; no more surprising, indeed, than the arrogance with which each example is promoted. For, while all governments are throwing a similar challenge at their respective building industries, the actual innovative responses occur when some practical and tangible portion of market can be hardened up and made available to any intending innovator. (This is because industrialization presupposes continuity and the risks involved are too great to be left to the market hazards typical of our industry today.)

So, "as many innovators, so many technical responses," but what is significant is that there are certain patterns which run through all the cases we can find. This is an organizational pattern.

Before we look at the new organizations, however, we should clarify the position as it is today. It is no coincidence that traditional building methods* have survived so long—so long past the implementation of industrialization in other fields of human endeavour; it is, I suggest, because traditional methods correspond so exactly to the traditional organization of the industry, and vice versa (Fig. 1).

* Traditional building is as difficult to define as industrialization; like industrialization it is in a state of constant evolution. One of the better definitions can be found in the UN publication "Government Policies and the Cost of Building" (Geneva 1959) and reads thus: "By traditional building is implied the bases of design, organization and execution of building which have come to be recognized as normal practice over a considerable period in any country or region. It is usually characterized by the fact that all operations follow a set pattern known to all participants in the actual building operation and by dependence on skilled craftsmanship for interpretation of instructions and execution of work."

My organigram shows the relationships which exist between the parties in any individual building project—any traditional project.

We note the links (shown by arrows—the head on the arrow indicates the direction in which software or hardware flows), and we also note the absence of other links.

The client (the building owner) makes a one-off decision to build and instructs an architect. The architect prepares one-off documents which describe *what* building is required, and instructs a contractor (however he is selected). The contractor thinks up *how* to build, and mobilizes the appropriate resources on a one-off basis, including one-off orders for materials and components from certain manufacturers.

There are no links between manufacturers nor between manufacturers and architect. (We cannot count Sweet's Catalogue nor the sales representatives as significant project-related links.)

We note that the architect describes *what* the building is to be like, not *how* it is to be built, yet industrialization is a "how" matter—concerning productive methods. As long as the building processes are manual intensive, not industrial, this situation is adequate; the contractor and the manufacturer are able to mobilize manual resources—the *how*—to produce *whatever* the architect shall have required.

In this situation, we find that manufactured parts of buildings fall into two categories (related, naturally, to corresponding categories of site construction processes).

Either we have "generalized" products, mass-produced for sale to any project; they require complex manual operations on site to convert them into building. (For example: bricks, nails, glass, plywood, as mentioned above.) These generalized products are assured of a general and continuing market; it is, therefore, reasonable for someone to invest heavily in their production. Or we have "particularized" products, handmade for sale to specific projects yet able to be assembled easily on site. (For example: window assemblies, curtain walls, precast cladding panels.)

Only the largest prestige projects—one-off projects arranged traditionally—are able to command machine-made "particularized" products, for only they offer the precondition of market continuity.

In order to overcome this problem of lack of continuity, which is characteristic of the traditional organization of building, various intending innovators have introduced new organizational arrangements (Fig. 2).

For example, a large building client group, with a known on-going requirement for buildings (schools, it so happens) has set up a master organization which includes two sets of "archi-

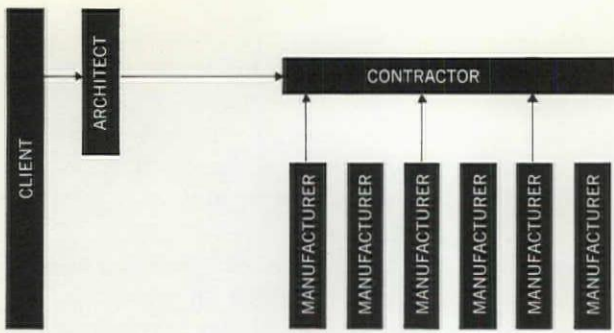


Fig. 1. The architect as independent designer. The participants in the building activity are only connected by the one-way flow of information or instructions. Some manufacturers sit on the sidelines.

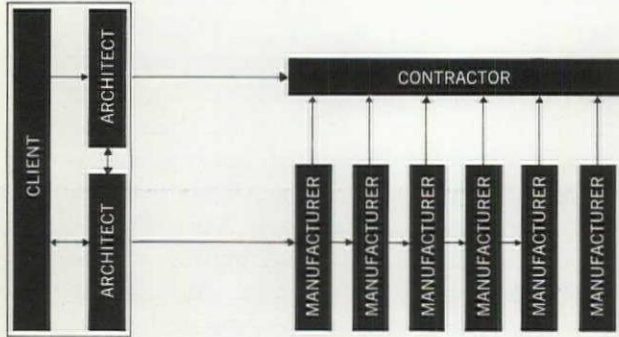


Fig. 2. The architect as consultant to client for systems development and project design. The design and market are closely related; some connection with manufacturers is established.

tects." One, acting as industrial designer, determines ranges of components and establishes links with selected manufacturers (a new link, though a somewhat tenuous one which is rebid annually). Their colleagues use these components for their project designs. (Examples of this are the English School Building Systems such as CLASP, SEAC, SCOLA.)

A variant on this arrangement (Fig. 3) arises when a building client with an on-going program requirement sets up a master organization including an "architect" acting as analyzer of functions and writer of program performance requirements. Because of the way the performance specifications were written, manufacturers had to set up a corresponding master organization around themselves to coordinate their activities. The project architect, however, is outside either of these new organizations, and many of the problems encountered in practice can be attributed to his traditional isolation. (Examples of this are SCSD or URBS in California and SEF in Toronto.)

In another case (Fig. 4), a group of manufacturers works with a consultant (again more industrial designer than architect) to develop ranges of components; these are marketed into the otherwise traditional client-architect-contractor sequence by establishing an effective link between the manufacturer-designer team (with their own

master-organization) and the project architect. (Examples of this are ARCON and COSMOS from the U.K.)

We show lastly (Fig. 5) what happens when a building contractor innovates; he forms a master organization around himself which includes designers and manufacturers. The package he offers is sold directly to clients, with the continuity required for the effective application of the innovation assured in proportion to the efficacy of his sales activities. In this case, the client sometimes turns to an independent designer for counseling, not for designs, since it is reasonable to expect that the process innovation will be strongly re-

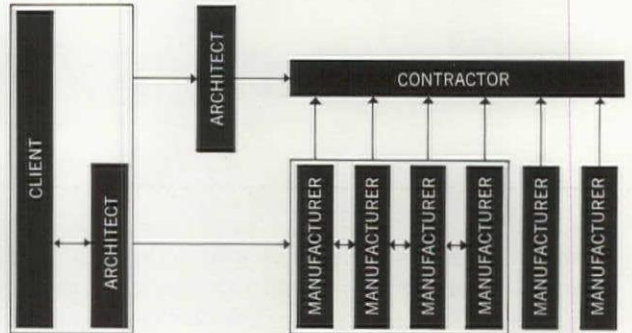


Fig. 3. The architect as consultant to a client, for systems development only—for example SCSD. Manufacturers are now fully involved, but links with project architect and contractor are weak.

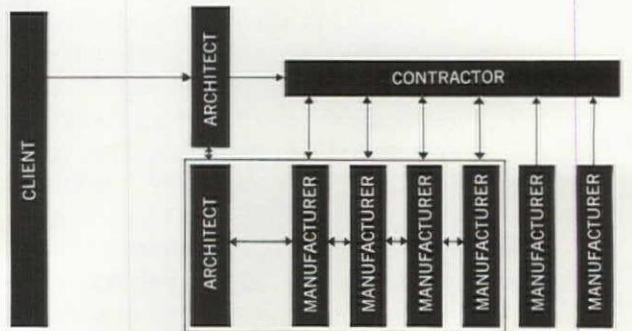


Fig. 4. The architect as consultant to a consortium of manufacturers. Another method of involving the manufacturer, but exposed to the uncertainties of the market.

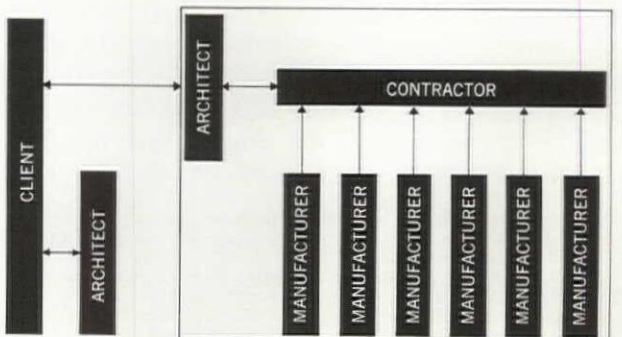


Fig. 5. The architect as consultant to contractor. The contractor takes on an organizing role involving design and manufacture; the market is still outside.

flected in the product on offer—possibly to the exclusion of certain qualitative characteristics. The rules of the marketplace—if they apply—offer some protection. (Examples of this are the many proprietary panel systems in Europe, National Homes et al in the US.)

Other possible organizational arrangements can be, and are being, set up. The number of possible combinations is much fewer than the range of techniques that have been thrown up.

In each case, we should note in passing, the *technical* solution will predominantly meet the requirements for continuity of the innovator-sponsor, in terms that he understands. Thus, the client-architect organizations will imprint an emphasis on standardization of procedures within a variety of buildings; the manufacturer team will stress production engineering considerations based on their own materials and methods; the contractor team will give priority to avoiding site construction problems. I call this “hereditary bias.” Because sponsors are often not aware of their own bias, they do not recognize that their form of industrialization is one of many technical possibilities.

For us, the real interest of the present situation resides not so much in the technical variations as in the organizational arrangements to which I have referred—although the former, which I prefer to regard as case histories, are well worth a thorough study as such. □

Consortia and Construction

BY JOSEPH C. WHITE

There are at least three reasons why the large corporation is having a problem with the language of building.

First, the corporation enters the process after the fact. Basic design decisions have already been made by the owner's interpreters. It is given no opportunity to comprehensively examine the basic problem. An isolated technical problem is many times presented. Typically, a manufacturer is asked the question, “Could you make this?” after being presented with a sketch or drawing. He takes this sketch back to the factory and the resulting research concerns itself with modifying existing tooling for this particular job. Manufacturers many times call this process product development. The resulting product, which often is ill conceived, is then added to the manufacturer's bag as a standard and before you know it his competitor has matched him.

This process of product development leads to misdirected research. We have to make this product better—our competitor has one now—isn't there a way for it to do more things? So the computer and the research facilities go to work—to improve a product conceived by a designer whose chances of being comprehensive in his outlook are probably not very good. Once a manufacturer steps on board this merry-go-round he finds it very difficult to get off. This approach or variations on the same thesis becomes the manufacturer's innovative method—a serious misdirection of his substantial research and development resources.

Second, the corporation that manufactures products for the building market does not usually install them. The manufacturer purposely isolates himself from the process. At best, the process is chaotic and the manufacturer generally feels that he shouldn't ask for any more problems than he already has. The ideal policy for him is to sell his product “material only,” place it on the shipping dock and let someone else take it from there. While the manufacturer theoretically eliminates problems for himself by adopting this policy, he also remains blissfully ignorant as to what the building business is all about.

Third, the corporation providing products for the building market dissipates its marketing resources. Not being able to communicate with the owner, the manufacturer becomes a vendor to the owner's interpreters, the 9,800 architectural and engineering firms, and the 85,000 general building contractors. His marketing managers must use their expertise on learning the politics of the system, how to influence a specification, how to bid a job, how to circumvent an “or equal” clause rather than determining the true needs of the customer and interpreting these needs to the corporation so that a strategy can be developed to satisfy them.

How can this sleeping giant be awakened? The large corporation has the resources and the talent to solve one of the nation's most critical problems. It is incredible that the industrial revolution has not touched building. Yet, the corporation, geared to satisfying the needs of a market, has not involved itself in the nation's largest. What will it take to cause industrialization to occur?

Donald A. Schon remarked in an address before the Building Research Institute in April that SCSD, California's School Construction Systems Development project, was one of the most important events in the building industry in the last 30 years, a dramatic symbol of a new way. He said it might prove to be the event which would break the dynamic conservatism of the industry.

The SCSD project was begun in 1963. Four building subsystems were developed by building

materials manufacturers in response to an organized market formed by a consortium of 13 California school districts. The project was well organized. The problem was defined in a systematic manner so that the resulting subsystems were compatible and were integrated even though developed by different manufacturers. The project was organized and financed by the Ford Foundation and has received an immense amount of publicity.

I feel that the SCSD project will have a significant effect on the building industry but for quite a different reason than what appears to be the popular view. A myth has sprung up about the SCSD approach. It goes like this: Organize a market of sufficient size, and the large hungry corporations eager to innovate will rush in. It didn't happen in the SCSD project and it hasn't happened since. Actually, 123 corporations were interested enough to attend the SCSD prebid conference in California but only 26 bid. Several large corporations were among the 26, including Westinghouse and Kaiser Steel who teamed up to bid the entire package. Most of the bidders were small companies, however, and of the successful bidders only one, Inland Steel, the company with which I was associated, is listed in the Fortune 500. The Westinghouse-Kaiser team finished far out of the money. This experience has caused Westinghouse to take a much more conservative attitude toward the SCSD approach. Inland approached the problem with an open mind, hired an outstanding research architect, Robertson Ward, who follows me on the program this morning, to design the structural and lighting/ceiling subsystems to meet the SCSD performance specifications. The subsystems were admittedly excellent, and the company planned to market nationally. It came up against the problem of fitting a new concept into an old process and before the answer was found, the company decided to give up the attempt. Inland, similar to all large corporations, was product-oriented and failed when they tried to adapt the new "hardware" to the old process. □

A Building System for Housing

BY JOSEPH SHERMAN

The present national policy, as set forth by President Johnson in a recent housing message, calls for a national goal of 26 million new housing units during the next 10 years. This rate is 10 times the housing replacement rate of the last 10 years.

Added to this, there are over 30 million Americans presently living in some 10 million dwelling units which are rated as substandard by any of the numerous housing and/or building codes which exist in this country today.

When the number of housing units that will serve as replacement housing is added to the normal requirement for housing caused by population growth, the problem of meeting the Department of Housing and Urban Development's goal of a decent living unit for every family becomes an impossible task within the limits of our existing building technology.

It seems that most of the deteriorated existing dwelling units are located within our urban areas. In fact, I have seen figures which show that approximately 70 percent of all deteriorated dwelling units are located in our cities and constitute a major slum problem. These units lack the minimum requirements for health and safety and are characterized by old and nonfunctioning plumbing, inadequate and unsafe electrical systems, cracked plaster walls and ceilings, floors which are rough and unmaintainable and doors and windows which no longer keep out the weather or intruders.

Not only has this situation become a national disgrace, but also a source of persistent community unrest, as evidenced by the report of the National Advisory Commission on Civil Disorders, published just a few months ago. This report places the housing situation high on the list of causes of unrest which led to the riots in our cities last year.

Why should we consider the use of an industrialized building system?

I think we all agree that there is a tremendous need for housing today, and there will be an even greater need in years to come, as population increases and our present stock of marginal housing begins to deteriorate. With our present labor force, and only a 3 to 4 percent unemployment rate, where are the men going to come from to rebuild our cities? With the present construction methods and existing labor force, I dare say we not only will not meet the President's goal of 26 million units over the next 10 years, but we might not even be able to replace units at the rate of existing deterioration. At this rate, we will not create a new and better environment, we will not even be able to maintain the "status quo." We are going backwards.

We must overcome this backward trend and develop the residential environment to the extent that we have been able to improve the environment of the business areas of our countries and then, with the two together, we can talk about the total environment.

How can we, the construction industry, meet

the housing requirements set forth by the President? But more important, how can we of the industry meet the needs of the people? How can we make the present slums a decent place to live; maybe even a desirable place to live? How can we eliminate the relocation problem usually associated with urban renewal so as to ease the pain of transition? How can we build rapidly enough and on a large enough scale to make a significant inroad into the problem? How can we reduce costs?

The only answer at this point is to develop an industrialized building system designed with the intention of solving these problems.

What must an industrialized building system accomplish if we are to meet the goals?

In the development of a building system for residential use, certain criteria which I feel are important must be met. These criteria are:

1. The units must be capable of being mass-produced under a controlled environment.
2. The system must make a breakthrough in total housing costs.
3. The system must be able to be constructed with the minimum relocation of existing residents through rapid on-site construction and extreme design flexibility.
4. The system, if it is to be flexible enough, must be designed using fireproof construction, so that it can be applied to all types of density situations.
5. The system must provide a livable residence.
6. Units must be transportable.

Management of Design

BY JOHN P. EBERHARD

In every society, in every organization and in each of us there exists a built-in resistance to change. At times this resistance can be constructive because change is not always constructive, nor does it always represent progress. My concern today, however, is with a profession which shows a reluctance to change, to adapt to new means and methods of utilizing its skills in order to assure society that the direction of industrialization in building is a positive one.

Change is most difficult when a profession is being bolstered in an entrenched position by the educational institutions which supply the new additions to that profession with the same paradigms (models) and same value systems as the bulk of the practitioners. Your chairman says, "The bulk of [architectural] schools are hesitant and perplexed before the phenomenon [of indus-

trialization] which challenges the more traditional attitudes of the profession." So were the astronomers and physicists when Copernicus announced that the earth is not the center of the universe, but only one of the planets that revolves around the sun from whence it receives its energy.

Perhaps it is unfortunate for the product of today's architecture schools that the term "architect" derives from the Greek equivalent of "lead worker," because they are far from being able to lead, except by default or by rising above their education.

For good or ill we are now embarked on the second steps of a massive effort to industrialize the processes of building. The first fumbling steps produced windows, doors, roof shingles and mobile homes based on the mass production model of the automobile industry. Architects have had practically nothing to do with the design of those products. We are now attempting the production of building blocks like Safdie's Habitat 67, and other efforts of this kind which are more common in Europe and Russia. But we are only fumbling at the frontiers of a new paradigm. The new paradigm will shift our focus from the product to the process; from the client to society; from the art of a building's form to the esthetic content of technology; from the architects as presently narrowly conceived and institutionalized in the AIA to the designers whose talents range across a broad spectrum of competences, but whose binding force and central purpose is the fusion of our ways of knowing and doing (our intellectual and technological capability) with our ways of feeling. It is this quality of engagement with the emotional content of life that promises a place in the sun for the next generation of architects—if they know how to manage and utilize the advanced technologies which are emerging.

John Gardner, in his book *Self-Renewal*, says: "Still another error is to assert, as many do, that the 'inhuman' aspects of modern social organization are the fault of science and technology. This view has deep emotional roots and there is not much point in arguing with those who hold it. They would rather stay mad.

"But the truth is that workers in the grimmest moments of modern industrialism were no more miserable than, let us say, the Egyptian slaves who built the pyramids. It is not advanced technology that causes the trouble. The root of the difficulty is an attitude of mind that has never really died out in the world, nor perhaps even diminished greatly since the days of the Pharaohs—a willingness to sacrifice human values to other objectives.

"Modern technology *need not* destroy esthetic, spiritual and social values, but it will most certainly do so unless the individuals who manage

our technology are finally committed to the preservation of such values."

It has been my observation that the best young men and women who come to architectural schools for their education these days are looking for ways to provide a means of preserving (or perhaps even restoring) the esthetic, spiritual and social values of this society in the face of apparent materialism and misapplied technology. They are most often disappointed by the education they receive—in some cases even revolting against it. A misguided notion of artistic content in building design, coupled with a gross lack of technological sophistication, means that too many faculty members in architecture are more poorly equipped to deal with today's important design decisions than are their first year students.

If the nature of the changes facing the building designer comes from "industrialization," then we should be clear on our terms. Any systematic approach to building, or new products and hardware systems, does not necessarily indicate a shift to industrialization. I believe that term should be used to indicate a shift to more capital intensive methods of design, engineering, production and management. The SCSD approach resulted in a more capital intensive process of design (including the associated research by bidding firms) not more capital intensive processes of production. Therefore, it is not the new hardware components which represent a shift to industrialization.

Industrialization draws on the reservoir of technology which a society has available to it. Technology is the sum of the ways in which a society provides itself with its material objects, not the objects themselves. These ways include:

1. The men in whom the skills to utilize the technology reside

2. The employing organizations and institutions
3. The resources available, financial and natural
4. The rules, regulations and traditions which determine the relationships between the first three.

We therefore have in existence technologies for producing buildings. For the most part, the users and methods of these technologies are not very advanced nor involved in very capital intensive processes. Most of our advanced technology in the United States has been oriented toward the production of weapons systems, space systems and atomic energy. The question I presume this conference is concerned about is: What will happen to the design content of our built environment if those men and institutions now engaged in such advanced technology decide to turn their efforts to urban systems and buildings?

I don't think architects are in a very good position to influence the decision makers in these advanced technology industries, but neither are these industries in a very good position to include

in their decision making those elements of human satisfaction to which the architect is sensitive. I believe, therefore, that we should be educating a new breed of professionals who can participate in the management of such enterprises—not just be consultants to them. If these new managers are firmly based in design philosophy, they can and will be in position to add to the sum of our ways of doing and knowing these elusive qualities that have to do with feeling and understanding.

We should not be optimistic that we can in fact produce such professionals, because we lack much of the knowledge we need and the shared paradigms that would provide us with methodologies. I hope we are not in the position of the Chinese four centuries ago. Alexis de Toqueville wrote in 1830 that:

"When Europeans first arrived in China, 300 years ago, they found that almost all the arts had reached a certain degree of perfection there, and they were surprised that a people which had attained this point should not have gone beyond it. At a later period they discovered traces of some higher branches of science that had been lost. The nation was absorbed in productive industry; the greater part of its scientific processes had been preserved, but science itself no longer existed there. This served to explain the strange immobility in which they found the minds of this people. The Chinese, in following the track of their forefathers, had forgotten the reasons by which the latter had been guided. They still used the formula without asking for its meaning; they retained the instrument, but they no longer possessed the art of altering or knowing it. The Chinese, then, had lost the power of change; for them improvement was impossible. . . ."

"It is then a fallacy to flatter ourselves with the reflection that the barbarians are still far from us; for if there are some nations that allow civilization to be torn from their grasp, there are others who themselves trample it underfoot." □

The papers presented here are extracts, except for those by Frampton and Eberhard, which are published in full. A copy of complete conference proceedings has been sent each school member of ACSA. The authors: Frampton, School of Architecture, Princeton University; Weissbourd, president of Metropolitan Structures, Inc., Chicago; Davidson, School of Architecture, Washington University; White, in charge of the SCSD project, formerly vice president of Inland Steel; Sherman, vice president of Construction and Development Corp., Washington, D.C.; Eberhard, dean, School of Architecture and Environmental Design, State University of New York, Buffalo, formerly director of the Institute for Applied Technology.

Committee Chairman: Thomas R. Vreeland Jr. (now UCLA), department of architecture, University of New Mexico.
Committee Members: Richard M. Bennett, FAIA, Loeb, Schlossman, Bennett & Dart, Chicago; William M. Conrad, president, Kansas City Chapter AIA; Guy Desbarats, dean, School of Architecture, Université de Montréal; James E. Ellison, executive secretary, ACSA, Washington, D.C.; Donald Hanson, chairman, department of architecture, University of Illinois; Richard Whitaker, head of design, School of Architecture, University of Colorado; and Princeton's Frampton.

TCS

TERNE-COATED STAINLESS STEEL

The creation of TCS—Terne-Coated Stainless Steel—by the Follansbee Steel Corporation is one of the most significant developments in the history of architectural metals.

TCS is 304 nickel-chrome stainless steel covered on both sides with Terne alloy (80% lead, 20% tin). The former is the highest quality stainless available for this purpose, while Terne itself has a performance record established by three centuries of continuous field exposure.

Based on the most rigorous technical evaluation, TCS is the finest metal ever developed for a broad range of

architectural applications including roofing and weathersealing.

Among its more notable attributes are sustained resistance to atmospheric attack, unexcelled durability, and predictable weathering. TCS, furthermore, should never need maintenance; it solders perfectly without pre-tinning or other special preparation, and is among the most easily worked metals.

These demonstrable advantages are, we believe, more than sufficient to warrant your giving TCS immediate consideration for all roofing and weathersealing applications.

FOLLANSBEE

FOLLANSBEE STEEL CORPORATION • FOLLANSBEE, WEST VIRGINIA

A Community Affair

日本街

"Neighborhood self-determination must be matched by the assumption of neighborhood self-responsibility.

"It is not enough to demand social reform. The hard work element of the reform process must also be undertaken. Otherwise the demand will be little more than an emotional holiday. The pinnacles of a better society are wonderful images to conjure, but the paths up the slopes are rough and sometimes exhausting."

These words, taken from the 1966-67 annual report of the San Francisco Redevelopment Agency, express a practical philosophy of urban renewal. Putting its philosophy to use, the SFRA has worked during the past few years with residents, businessmen and property owners to encourage and assist them to assume the role of redevelopers of their own area, the four blocks known in San Francisco as "Nihonmachi," or Japan Town.

The area, bounded by Post, Webster, Bush and Laguna Streets, is in the Western Addition area of San Francisco's north side. Nihonmachi, which has been the center of the Japanese-American community in the city since shortly after the earthquake and fire of 1906, is immediately to the north of the new Japanese Cultural and Trade Center designed by Minoru Yamasaki, FAIA.

In an effort to transform their four blocks into an attractive pedestrian-oriented living/shopping area, Nihonmachi citizens four years ago formed a development corporation, the Nihonmachi Community Development Corporation, and employed a staff to assist in resolving the complexities of financing, policy control, equity interests, relocation and other assorted problems. The corporation retained architects Van Bourg/Nakamura & Associates, in association with Okamoto-Liskamm, to design the new portions of Nihonmachi.

Property owners and tenants in Nihonmachi and members of the

United Committee for the Japanese Community were invited to participate by purchasing shares in the corporation. Some 80 individuals joined; more than 60 percent of Nihonmachi property owners and 50 percent of the commercial tenants are members. Thus the corporation represents residents and owner-occupants of commercial enterprises, not absentee owners.

Shareholders will be given the first opportunity to buy cleared sites at fair market values and to develop these sites consistent with the master plan.

On March 19 of this year, the SFRA agreed to sell a number of Nihonmachi sites to the corporation. Parcels of land will be sold for commercial and residential development as they are assembled, to cause the least possible disruption to businesses and residents and to obtain financing more easily. During redevelopment, the corporation and the SFRA will continue to consult constantly on design and construction, in accordance with agreed-upon architectural guidelines.

The plan for Nihonmachi provides informal landscaped plazas and walkways through new and restored homes, small Japanese shops and service buildings. Bilingual signs typical of commercial areas in Japanese cities will convey a Ginza shopping atmosphere. The SFRA recognizes the value of the corner store; its annual report notes that "small shops and individual shopkeepers are vital to most neighborhoods and warrant every effort for support and encouragement in the renewal of neighborhoods. They provide warmer, more personal contacts for the residents of the area."

More than one-third of the houses and businesses will be restored. Regarding the question of whether to raze or restore, the SFRA comments that "there is an understandable insistence on far more rehabilitation than clearance of housing—a proper and worthy goal. Yet people need not short-

change themselves with rehabilitation so blindly used that the resulting facilities are only sanitary, dull and inadequate rather than new, attractive and comfortable."

In all, some 250 new units of private housing will be added and 80 units rehabilitated. For the most part, housing will be in the low-to-moderate price bracket and will primarily be developed by the present owners for their own uses.

Buchanan Street, which bisects Nihonmachi in a north-south direction, will be closed for two blocks to create two major shopping malls. The malls will be connected by a Japanese-style pedestrian bridge across Sutter Street, the east-west bisecting thoroughfare. Shops serving the malls will be located in two-story buildings with ramps and bridges connecting approximately 100,000 square feet of stores and offices. Japanese trees and plants will complement the new shops and businesses.

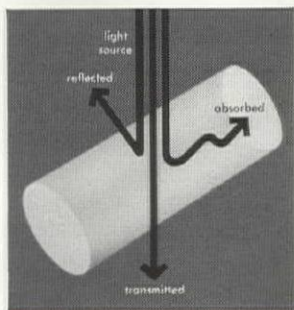
Adjacent to one of the malls and fronting it will be a community center with a plaza for outdoor community activities.

Of the 10 acres of land within the Nihonmachi area, more than 3 acres will be allocated to public and institutional use and for open space. Churches and shrines of several sects in the neighborhood will be preserved. Several restaurants will be restored to retain the traditional sights, sounds and aromas of Nihonmachi.

M. Justin Herman, executive director of the SFRA, regards the Nihonmachi project as "significant proof that good design can emerge from grass roots community collaboration with action agencies." Herman adds that such projects "point the direction in which planners and architects will be increasingly required to work with neighborhood lay groups, certainly within renewal areas. Though extending the time needed to produce feasible development plans, the demand of neighborhoods to participate in their own changes must be accommodated." □



Antron® picks up just as much day-to-day soil as any other carpet fiber. But your clients will never believe it.



"Antron" fiber balances light to look clean.

"Antron" is the surprising new fiber from Du Pont that keeps its new look longer than any other carpet fiber—and keeps the appearance level of the busiest buildings at their highest.

Even light colors look clean longer, because Antron* nylon minimizes the appearance of soil. Some carpet fibers are transparent, so you see not only the dirt on the side facing you, but the dirt on the opposite side is magnified. "Antron" is different. It is specially structured to be opaque. It controls absorbed, reflected and transmitted light to minimize the appearance of soil.

And because "Antron" is a nylon, it's the most durable carpet fiber made. It resists crushing, pilling and fuzzing and is easy to clean.

When you combine all these benefits, your clients end up with carpets that need less frequent cleaning and keep their new look longer. Carpets with pile of "Antron" deliver a long term saving. And *that's* something you *will* believe!

"Antron" is the optimal carpet fiber for high traffic areas and is available in a wide variety of contract styles from leading mills. Ask ALEXANDER SMITH about "Narrator," "Decathlon," "Chronicle" and also "Commentator."

For a free brochure on "Antron" (and Du Pont's other contract fibers) write: Contract Carpet Specialist, Du Pont Company, 308 East Lancaster Avenue, Wynewood, Pa. 19096.



Better things for better living...through chemistry

*Du Pont registered trademark. Du Pont makes fibers, not carpets

A Lawyer Crits the Profession

Carl Sapers, Boston attorney who currently is acting as consultant to the AIA Committee on Licensing and the National Council of Architectural Registration Boards, sees the architect as the dominant figure in the construction industry.

As I observe the architectural scene, the problems of recruiting, pay scales and the organization of professional offices are formidable indeed. Their resolution will substantially affect the quality of our environment, competence of architectural services and the economic survival of the profession (listed, as I view them, in order of importance).

Thus I am deeply concerned that only a handful of offices in my own city offer young architects a decent (nonhumiliating) starting wage and, still less, hold out the promise of advancement within the firm.

The result is that there are two quite distinct worlds of architects. The first, most visible to the public, consists of the large, highly reputed, design-oriented firms doing substantially all of the cream of architectural work, including the institutional, the more elegant public and the prestigious industrial projects.

The second world is composed of the other architects who earn their livelihood by modest political commissions, housing (particularly repetitive projects), developer office buildings, shopping centers, etc. Numbers of architects in the latter category are decent, competent and even talented men. They are almost always in debt and it is their economic plight, I suspect, as much as anything else, which permits them, and in turn their designs, to be dominated by the developers' view of an orderly universe.

How does the organization of the architectural firm affect our environment? In my judgment, the fact that the profession forces so many of its younger men out on their own to compete in the marketplace, when they have insufficient economic power or reputation to

avoid exploitation, has led to the dichotomy referred to earlier.

It is these young men—and very often for a number of years—who, with a view toward duplicating the success of the large firm, allow themselves to be exploited by developers, politicians, contractors, etc., in order to assemble a portfolio which will ultimately permit them to compete for the institutional business. I cannot believe that this brutal system can commend itself to architects. Still less does it commend itself to those of us who watch ugliness and indifference to the environment growing on all sides.

We all yield to the temptation to extrapolate from the known to the unknown, and a good deal of my judgment on this subject comes from the observation of the development of law firms. We have gone through a decade of consolidation and growth. The smaller ones are fast dying out, while the larger firms, providing the broad spectrum of legal services, are obviating the need for the former. Young men out of law school come to our office and work under the presumption that they will be partners in the firm. This encourages stability in the profession and avoids the creation of a subterranean world of competitors.

Moreover, the larger firm has typically been most able to exercise judgment both on client's problems and on whether to take or discharge a client. Few architectural firms are stable enough or large enough to be able to enjoy these prerogatives.

I look forward to the day when architectural principles will offer young men a reasonable compensation and the opportunities to devote their full energies to the maturing and growth of the firm, rather than moonlighting out of necessity in the early years for the purpose of developing an independent practice against the ultimate day when they must go off on their own.

I have suggested that one of my great concerns was who is to call

the shots on the shape of our environment. God knows that architects do not possess perfect solutions and are not possessed of divine judgment. But that proposition ought not to frighten them away from laying claim to being the profession best trained to deal with the environment. I sometimes think architects are too modest.

Surely the developer, whose main skill is acquiring money at the right rate and at the right time and for the right terms, have no training and very often no sensitivity to the physical results of their effort. If architects are our main hope in this area, and if the physical environment in which we live is critical to our future on the planet, it follows that the architect must dominate rather than be dominated by the related partners in the construction industry.

In general, an ideal model would have the architect in the role of the entrepreneur taming the money men, the construction men, the real estate men and all the rest. But this ideal model is too simplistic. There is a real talent to organizing a venture and there is a skill required to organize financial sources. If the architect possesses these talents as well as his professional skill, there is no reason why he should not dominate; but the larger the project, the less likely that is to occur.

On the other hand, the field of housing, where creative design has been so sorely needed for so long, may be the perfect place for domination by the architectural profession. Once again, I am not thinking of Reston, Virginia, or the other enormous complexes which require the organization of vast sums of money. I am thinking, however, of single- and multiple-unit urban and suburban housing.

In the first place, the financial requirements for such housing have, over the years, been solved more and more by federal programs. While this means that the architect must have access to knowledge of the appropriate programs, he has as much claim on

Continued on page 92

PRESTRESSED CONCRETE RESISTS FIRE!

RESULTING IN LOWER INSURANCE RATES

Check the cost-comparison tables*
in this new brochure!

*Office building, paper-box plant, school, and supermarket fire-insurance rates on various kinds of construction are compared.

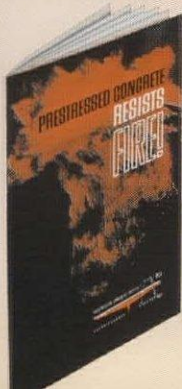
Prestressed concrete, inherently resistive to fire, provides the benefits of low insurance premiums, increased personnel safety, reduced damage to structure and contents, lessened restoration time, and early building reuse.

How these financially rewarding virtues come about is covered, in detail, in this free brochure. Other subjects, of equally vital concern when total building cost is counted, are:

- Insurance cost factors
- Building codes
- Construction cost vs. total cost
- Business or use interruption
- Fire resistance of prestressed concrete
- Fire-test procedure
- U. L. Labels
- Fire-resistive design
- Prestressed concrete in actual fires

Replete with up-to-the-minute fact gathering and analysis, this brochure is worthy of close consideration by the entire building team. Return the coupon now for your free copy of "Prestressed Concrete Resists Fire!"

Circle 270 on information card



Please send my
FREE COPY of
"Prestressed
Concrete
Resists Fire!"

PRESTRESSED CONCRETE INSTITUTE

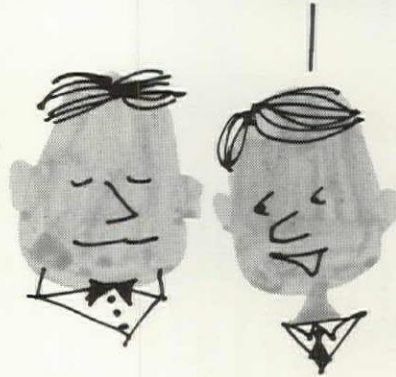
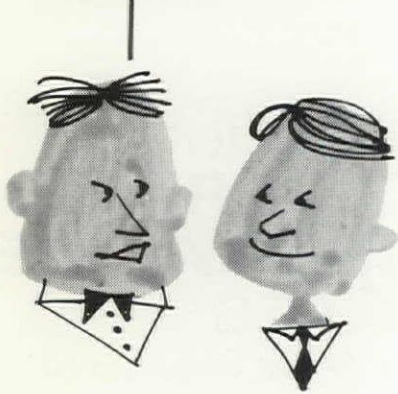
205 WEST WACKER DRIVE
CHICAGO, ILL. 60606



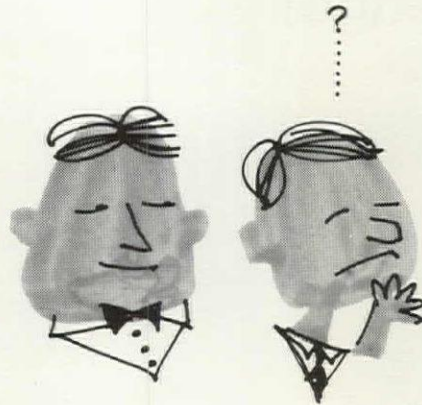
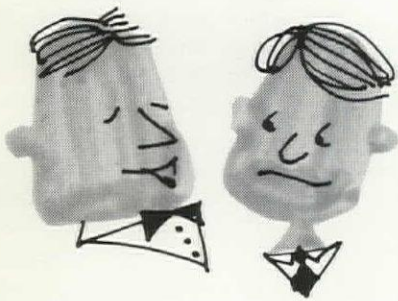
Name _____
Firm _____
Address _____
City _____ State _____ Zip _____

WHO DO YOU THINK OF
WHEN I SAY "ROOFING,
SIDING, WATERPROOFING,
BATHROOM CABINETS,
RADIO-INTERROOMS, AND
RANGE HOODS?"

PHILIP
Carey®

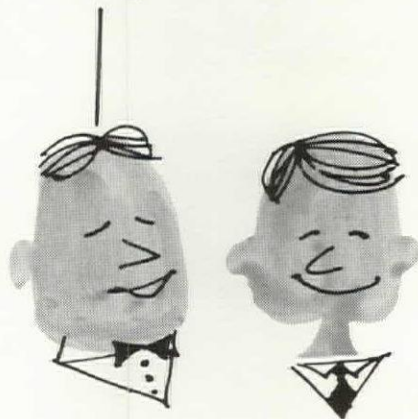
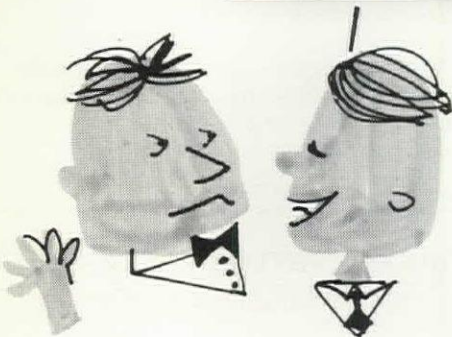


WRONG!
TRY AGAIN



**PHILIP
CAREY**®

RIGHT!

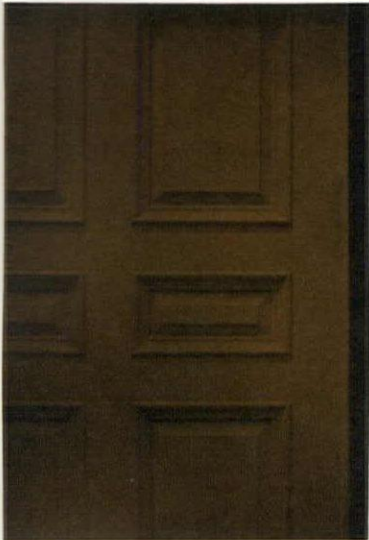


The old Philip Carey trademark (above right) is out! The new Philip Carey trademark (lower left) is in! We hope your continued confidence in our products will lead you to see it often in the future.

PHILIP CAREY CORPORATION, Cincinnati, Ohio 45215

Dry film or spray film for doors?

Here are two places where spray film has the edge!



That's because it has no edge. It's sprayed on. So it flows smoothly around door edges and beads. Dry film can be applied only to flat surfaces. As a result, people can see where it leaves off and the wood begins. And sometimes dry film lifts off at the edges. All of which, we feel, can detract from the esthetic appeal of a quality door.

As for toughness, it's tough to beat the spray film used on Eggers doors and panels. Eggers' Gardall contains polyester and polyamine resins which dry much harder and tougher than lacquers or varnishes. Yet a Gardall finish won't crack or craze. And if it does get marred, it can be quickly and easily repaired with some sandpaper and a little more Gardall.

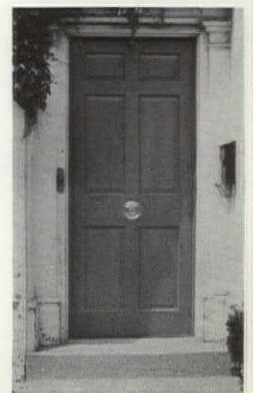
(If dry film gets scratched or nicked, you may be on the phone a long time trying to explain how to patch it up.)

So, when you want an architectural door or panel that's tough, beautiful, easy to maintain — and no more expensive than a varnished or lacquer-finished door or panel — give yourself an edge with Eggers. And Gardall.

For more information about the advantages of Gardall spray film on Eggers doors and panels, talk to your Eggers man listed in Sweet's $\frac{17C}{EG}$.

Eggers Hardwood Products Corp.
Neenah, Wisconsin
Telephone 414-722-6444

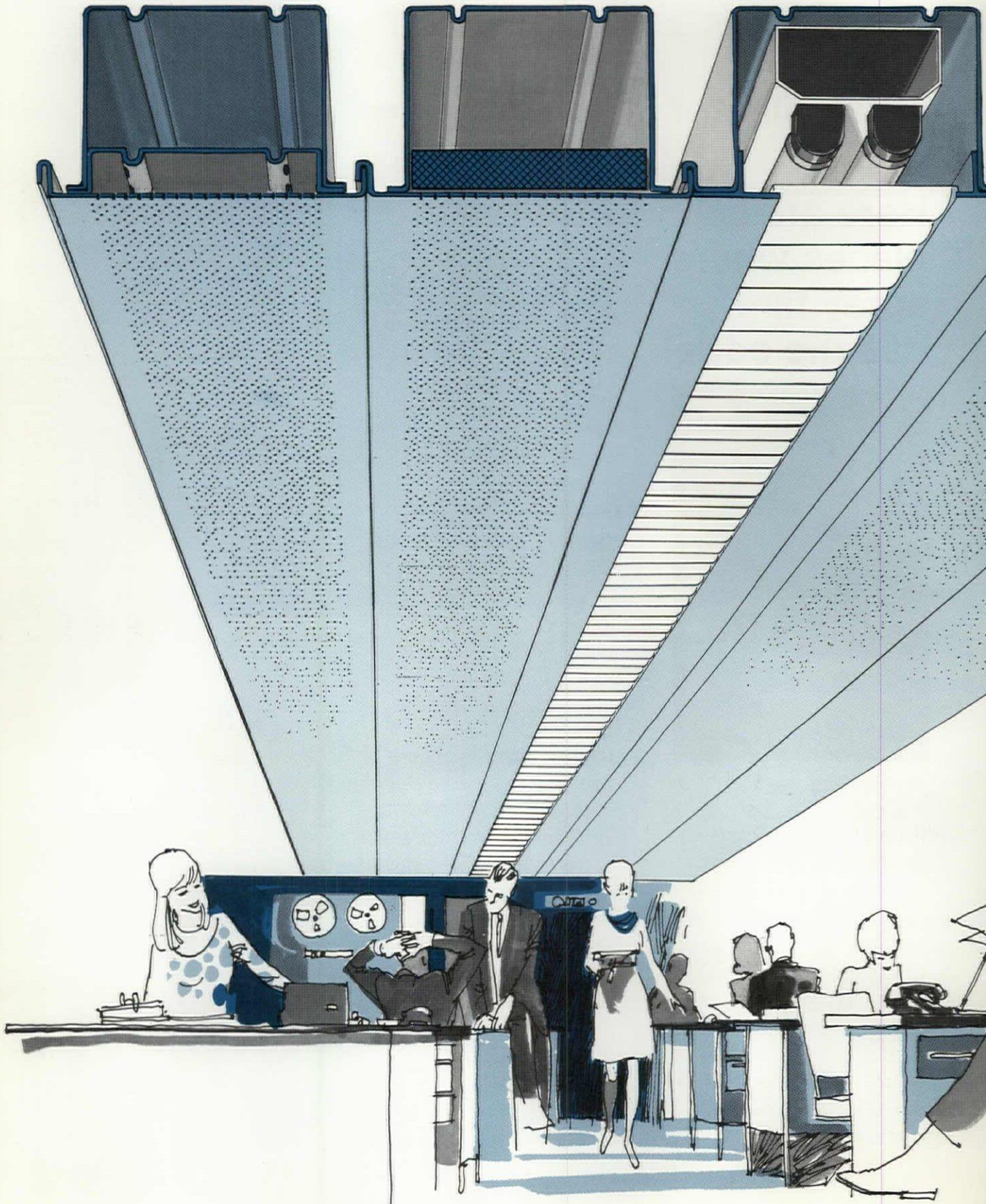
Eggers Plywood Company
Two Rivers, Wisconsin
Telephone 414-793-1351



Air Diffusion

Sound Absorption

Lighting Fixtures



Sound Absorption

Air Diffusion

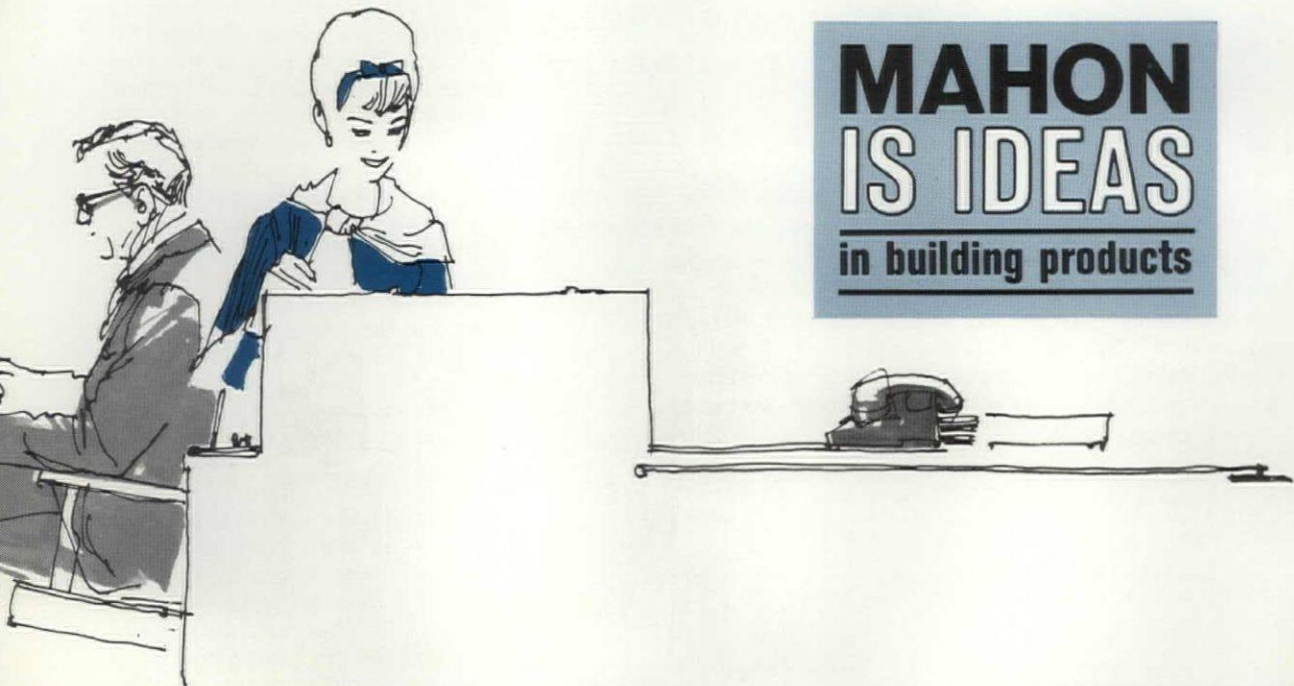


Beautiful ceilings. Functional ceilings. Mahonaire ceilings. They have hidden talents. Strip away that attractive exterior and you'll find rows of rugged steel "cells" designed to give structural support, and to house warm and cool air distribution systems, recessed lighting, sound control materials, power lines and sprinkling systems.

Specify Mahonaire ceilings and give your clients more than just a roof over their heads. For complete information, write The R. C. Mahon Co., 34200 Mound Rd., Sterling Heights, Mich. 48090.

MAHONAIRE

The ceiling with hidden talents!



MAHON
IS IDEAS
in building products



CMC*
suspended ceiling
system
supports heavy
light load at
Mankato State
Library

This ceiling consists of a series of modules formed around columns spaced on 21'-8" centers. The need for high illumination was achieved by supporting sixteen 1'x4' ventilating light fixtures in each 20'x20' module. That's quite a load . . . and the Chicago Metallic system holds it without a bit of deflection. Whenever you want ceiling flexibility—with strength and beauty—specify Chicago Metallic.

***CHICAGO METALLIC CORPORATION**
4901 South Austin Avenue, Chicago, Illinois 60638
CHICAGO METALLIC CEILINGS, INC.
4720 District Blvd., Los Angeles (Vernon), Calif. 90058



Project: Mankato' State College, Mankato, Minn.; Architect: Raugland, Entrikan, Domholt and King, Inc.; General Contractor: George Carlstrom, Acoustical Contractor: Harry Hendley & Sons Inc.

Circle 251 on information card

A Lawyer from page 86

these funds as does the developer.

Second, the organizational skills involved in the multiple-unit developments are well within the skill of an enterprising architect. The equity money required for such projects may well be within the budget of many of our successful architectural firms. More important, as housing yields increasingly to industrial operations, I view the architect as having the key or pivotal role between the factory, the on-site contractor, the government financing agency and the ultimate consumer.

All of these practical considerations are dwarfed by the overwhelming concern over who will control the great quantities of housing to be built in the next decade. In my judgment, they must be built by people who are skilled at meeting the needs of a favorable environment for the occupants—in short, the architect.

Right now, the ethics of the profession and many of our state registration laws and regulations serve as obstacles in the path of the architect assuming the role described. They command him to have no part in a construction company or in a manufacturing firm supplying the structure. They often command the architect to have no role in the real estate business.

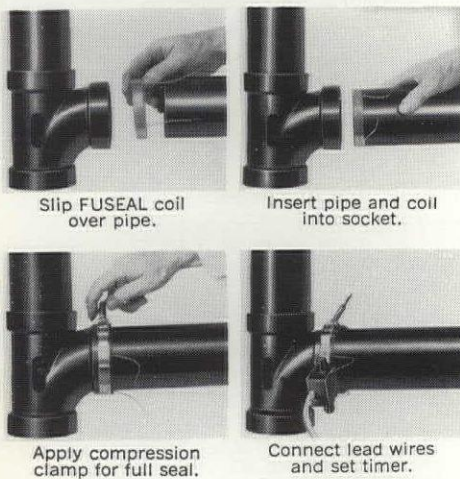
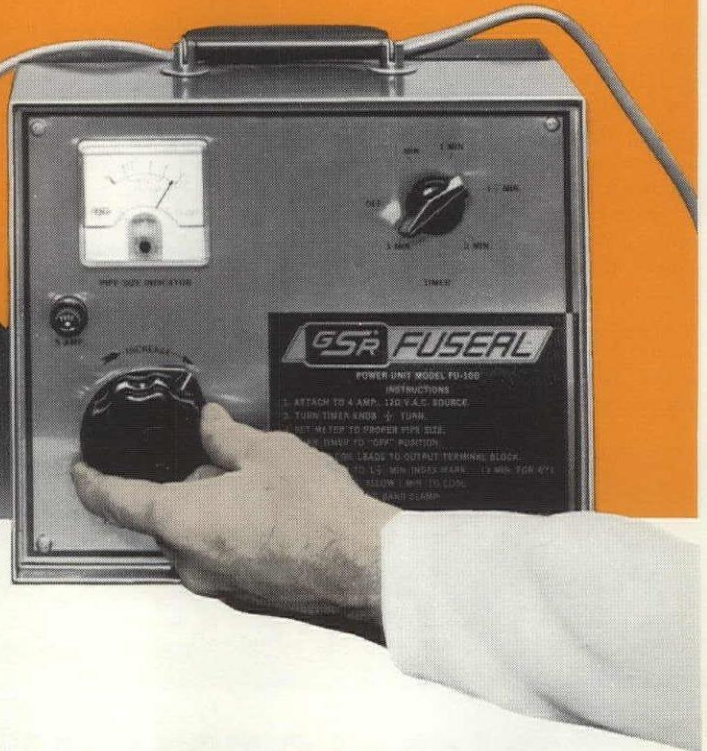
The guild view of the profession to keep outsiders from participating in a limited market for architectural services seems to have little application today in a world where there is an increasing demand for such services and in which the lines of demarcation have become fuzzy and the numbers of cooperating skills and disciplines required in the construction of a building have multiplied dramatically. In any event, however, if the architect is to gain the position of dominance which I think is essential, these restrictions must be erased from the laws and the professional canons.

I feel the reorganization of the firm and of the method of practice and the attempt by the architect to take a more enterprising role in the construction field are two notions which go hand in glove. Obviously, for example, the largest firms with 10 years of work built in at any time and some resource of accumulated surplus are much less concerned with the restrictive guild notion of the profession and more eager to embark on an exciting period of expansion and experiment in the next decade. □

ACID WASTE SYSTEM?

Join with **FUSEAL™**!

1½" TO 6"



You get double protection with a GSR® FUSEAL™ Drainage System: the superior chemical resistance of polypropylene pipe and fittings... and the assurance of strong, leakproof, distortion-free pipe joints. The exclusive, patented GSR FUSEAL Heat-Fusion Process joins the pipe and fitting into a completely homogeneous unit. Heated by the low voltage FUSEAL Power Unit, an electrical resistance coil imbedded in a polypropylene collar imparts a full circle of heat to fuse completely the interface between pipe and socket.

The complete line of FUSEAL fittings includes all standard configurations in 1½" to 6" pipe sizes, plus accessories such as drum traps, cup sinks, etc. FUSEAL resistance coils are included with all slip-joint fittings.

Write today for full information on the modern GSR FUSEAL method of handling corrosive wastes. R. & G. SLOANE MFG. DIV., THE SUSQUEHANNA CORP., 7606 North Clybourn Avenue, Sun Valley, California 91352.

GSR® FUSEAL POLYPROPYLENE PIPE AND FITTINGS

PLANT, WAREHOUSE AND SALES OFFICE: Fairfield Crescent, P.O. Box 625, West Caldwell, N.J. 07006 • Tel. (201) 228-1100 □ WAREHOUSES AND SALES OFFICES: 5144 West Idlewild, Tampa, Fla. 33614 • Tel. (813) 884-2576 □ 3216 Brinkerhoff Rd., Kansas City, Kan. 66115 • Tel. (913) 371-0412 □ 4918 East 154th Street, Cleveland, Ohio 44128 • Tel. (216) 587-0515 □ 3224 Peachtree Road, N.E., Room 218, Atlanta, Georgia 30305 • Tel. (404) 233-6205 □ "IN CANADA" CANPLAS INDUSTRIES LTD. (Reg. User) □ New Westminster, B.C. • (604) 526-2855 □ Toronto, Ontario • (416) 749-3818

There are many differences between the way urban blacks and urban whites live. Blacks don't need or want private psychiatrists, resorts, country club memberships, much less those pedestrian malls and parks that planners and architects always feel we should have.

Blacks don't need trips every summer, a winter and a summer house. We aren't hung up about tennis courts and golf courses planned into our neighborhoods; we don't live that way. You do!

Nor are we hung up about grand theaters, cinemas and operas. Not that anything is wrong with these, but because our communities should not have these things built in just because that's what Charlie does.

Black people want livable communities that have a decent core of housing, jobs and education. As a matter of fact, black people aspire to the American dream more than white people. Their only flicker of hope for survival is that out of these slums and decay must come something better.

White apathy toward the culture, lifestyle and the many and grim problems of blacks is due to a variety of causes, but there is one fac-

tor that sticks out above all others: White people have never had to understand black people because they had no reason to fear black people.

Whites woke up one morning and found their cities peopled with blacks—the realization of a nightmare! Now that we have become a real threat to the economic power of the "man," he feels he has to use the theory of inclusion on us. He would include us in the planning, rebuilding and development of our communities.

Has it ever occurred to him that we don't want to be included, that all we want is what every other ethnic group in this country has had: control—political, economic and cultural control. With control, we might talk of "including" him!

The architectural profession has much to understand about the black crisis and how we as a profession can respond to it. Again, certain causative factors bequeathed by history have to be acknowledged. We were trained in the credo that ego is more important than human commitment, and we have had a long record distinguished by self-expressionism rather than human accommodation.

But the direction the profession can move toward is more important

than the distance to be traveled if architects are seriously intent upon being relevant to the problems of black people.

Architects must recognize certain political realities that exist in any community. Politics, people and architecture are, in fact, integral components, and their relationships must be understood by white architects. Design for a black culture or lifestyle is not the problem, not in the light of the inability of this country's planners and architects to satisfy the fundamental human needs of black people—good housing, decent jobs, adequate income, etc. Architectural design is a level of sophistication applicable to those who have already had their fundamental needs met.

The relationship white architects have to black communities ought to be a positive, redefined one in which white architects are hired (or volunteer) on black peoples' terms. I would recommend the following as essentials for white architects:

1. Understand thoroughly the politics of a community and its various planning agencies, educational systems, city hall, etc. It is impossible to recommend any positive posi-

Continued on page 96

Just another Heat Transfer Coil? NONSENSE!



Type CH Hot Water Heating Coil

Smooth-fin design gets the credit. Its tapered shape puts every inch of transfer surface to work. There's room for more fins—more heat exchange per sq. ft. of compact space—higher air velocities with less turbulence are possible and practical.

Water coil drainage is positive— heating coil drainage and venting is greatly improved. Aero-fin coils are lighter even though framed in rugged pressed-steel casings.

But there's more. Aero-fin completely engineers coils to fit today's most

sophisticated heating and air conditioning fan-system applications. Complex mechanical and thermal calculations are made. Collateral factors are objectively evaluated: pressure drops—turbulence and velocity variables—stainless steel or copper tubes with correct diameter

and fin-spacing efficiencies—fluid fouling factors—and header designs for easy banking in stacks or connecting to duct work.

Specify dependable, true-rated Aero-fin Coils and get maximum performance. Comfort control of America's showcase structures offers testimony to that promise.

AEROFIN CORPORATION

Lynchburg, Virginia 24505

Aero-fin is sold only by manufacturers of fan system apparatus. List on request.

AEROFIN OFFICES: Atlanta • Boston • Chicago • Cleveland • Dallas • New York • Philadelphia • San Francisco

Ready to talk Electric Heat? Talk to an Electrical Contractor.

One reason: the qualified electrical contractor has plenty of experience with electrical heating systems. But that's only part of the story. Electric heat is an electric function and should be the responsibility of an electrical contractor. He's the one man who can furnish, install, connect and inspect electric heating equipment—and see the job all the way through

from plans to permit to operating guarantee. So talk to a qualified electrical contractor. Then put the heating specs into the electrical section of your building plan. That way your electric heating system will be furnished and installed by the man able to take single responsibility for the single best heating system.



Your Qualified Electrical Contractor

NECA—National Electrical Contractors Association, 1730 Rhode Island Ave., N.W., Washington, D.C. 20036



tions to a black community unless you are aware of its political problems.

2. Make available your technical services to black community groups interested in improving their circumstances. Many black groups simply have no technicians to make drawings and give presentations.

3. Support financially those community groups which do have black technical help but need funds to retain them.

4. Lobby and do research as an architectural/political body to effect

changes to those laws and regulations which exploit people in the black ghettos. The AIA could be extremely instrumental in this area. Existing housing laws, FHA regulations, zoning and building codes could undergo architect evaluation with a view toward modifications to make them more responsive to the ghettos.

The AIA is a vehicle for the collective activity of individual architects. Certainly the Institute, both nationally and locally, could become the main vehicle for channeling white architects into the urban ghettos while, at the same time,

maintaining a national drive to change those laws and regulations that exploit urban blacks.

The question of white involvement in black ghettos is no longer one of automatic black acceptance. Black people are now beginning to demand responsiveness of white experts who seek to "prey" upon them. The white architect can convince apprehensive blacks of the sincerity of his commitment, however—but only after he has convinced himself of his sincerity.

As architects, we work with design criteria. In many cases, we have done a very good job, and it is because of this that there is reason to believe we can do a better job in serving the ghetto—provided that we have appropriate design criteria. In the past, this has not been so, but it had better be true soon lest the flames of "Burn Baby Burn" assume holocaust proportions.

At this very moment, blacks are establishing their own "design criteria," a good portion of which dictates who is to do what and when. Obviously, these standards will insist on maximum involvement of blacks, from layman through professional. This is but one element of the insurance policy against the distrust that has mounted over centuries.

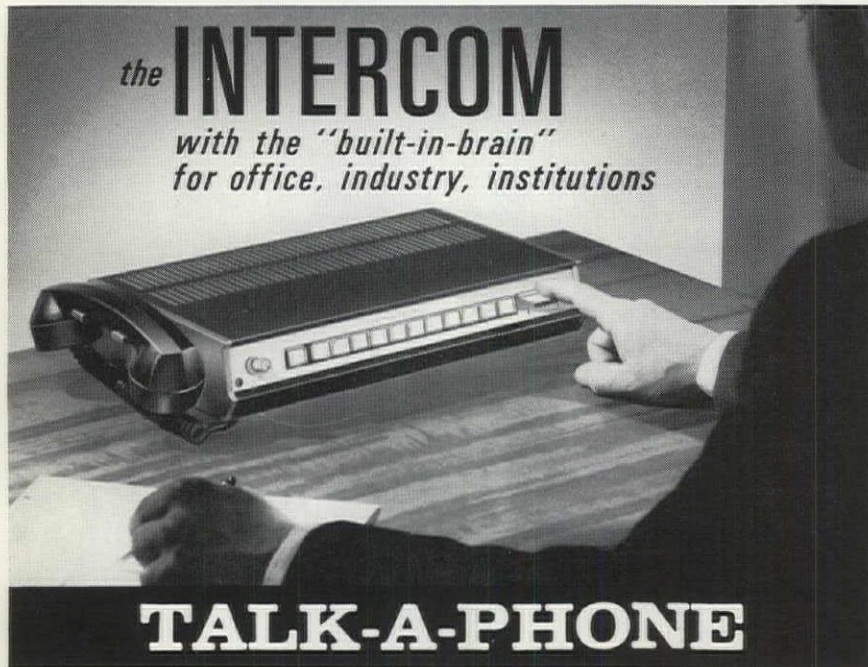
The rebuilding of our urban ghettos is probably the largest architectural task to be faced by the 20th century. A multidisciplinary team will be required to do the job. We will need sociologists, psychologists, urbanologists, etc.

But these specialties are only adjuncts to the true core of the kind of planning team necessary—a core constituted of team members who have readily available data about the real problem; team members who have lived the lifestyle, tested past systems and approaches and identified the flaws; team members who are prepared to suggest solutions that are real and meaningful.

It is essential that these knowledgeable community residents be included from the start of planning, because it is from them that the criteria for "planning and building for people" will come.

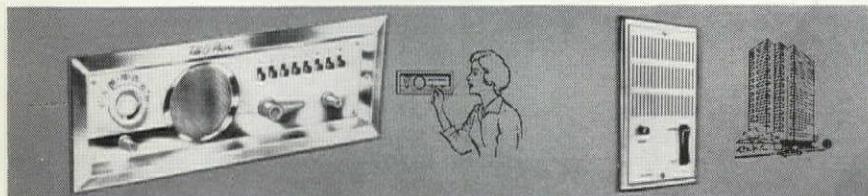
"Community participation" has become an empty slogan in most poverty programs. Its meaning is vapid now because of the lack of sincerity on the part of its users.

We as architects must use the phrase genuinely for it is the demands of the community that truly form the "guts" of our design criteria. □



A flick-of-a-finger gives you instant and direct 2-way conversation between any two points. Where desired, replies can be made at a distance without operating controls; yet other stations can have complete privacy. Designed to fulfill virtually every office, industrial and institutional Intercom need. TALK-A-PHONE sets a high standard of achievement in Intercommunication engineering. Proportioned like a book to lie flat on the desk . . . only 3 inches high. Combines the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray with brushed chrome panels. From 2 to 100 station systems, you can do it better and more economically with TALK-A-PHONE. Pays for itself many times over.

TALK-A-PHONE . . . "Has Everything, Does Everything." The accepted symbol of quality and dependability in Intercommunication for over a third-of-a-century.



Intercom for the Home. Enjoy comfort, convenience and peace of mind. You can: • Independently originate and receive calls to or from any other room • Answer outside doors from any room • Enjoy radio in any room • Listen-in on children, baby or sick room from any room, yet other rooms can have complete privacy. Distinctively styled. Easily installed.

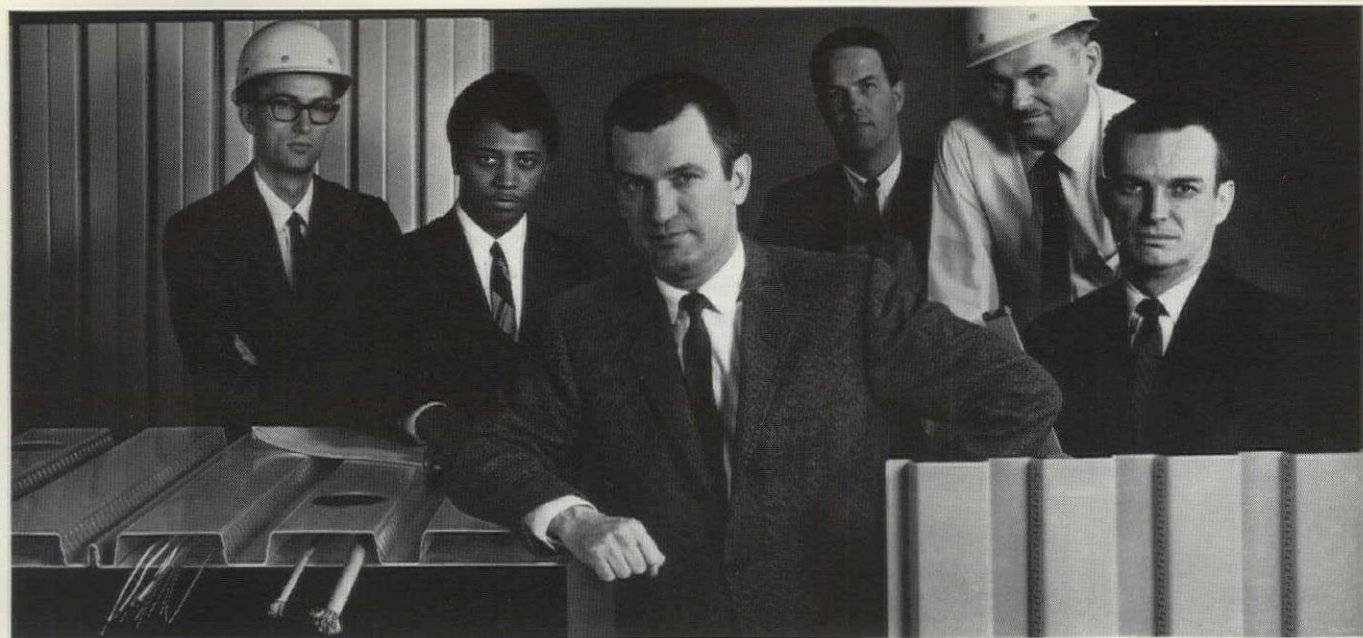
Intercom For Apartment House. Provides instant and direct 2-way conversation between any Apartment and Vestibules—in buildings of any size. Greater performance with these exclusive Talk-A-Phone features: • Ample volume without "boom" • Automatic privacy • Individual volume selection for each apartment • Built-in Buzzer • 1 or 2 talking circuits.

Send for Free Catalogs...

Dept. AI-10B

TALK-A-PHONE CO., 5013 N. Kedzie Ave., Chicago, Illinois 60625

Circle 225 on information card



These are the innovators and problem-solvers at Inland. They try to stay in step with you—to develop the steel building products, systems and applications you need, before you need them. The record speaks for itself.

When everyone in the industry offered steel roof deck dipped in a thin chalky primer, we went ahead and put baked enamel on ours. Same price. Better product.

We were also a pioneer in composite beam design. Inland was the first company to offer products to fit this new design specification. We've also had the hot hand in Acoustideck[®] (combination roof deck and acoustical ceiling) and in double coat, single pass panel finishing.

What can we do for *you*? Our developmental people are at work on new products, applications, and techniques involving steel floor, roof and wall systems. If you have a need in any of these areas, we'd like to help you with it. Contact your Inland sales engineer. Tell him to turn on the problem-solvers at Inland. For his name write Inland-Ryerson Construction Products Co. Dept. J, 4127 West Burnham Street, Milwaukee, Wisconsin 53201.

What can we do for you tomorrow?

*Formerly Inland Steel Products
Company and the structural
fabricating, reinforcing steel and
post tensioning divisions of
Joseph T. Ryerson & Son, Inc.*

Inland-Ryerson
Construction Products Company

HAVE YOU HEARD HOW COLBY COLLEGE TOPPED THIS ONE?



Right, new field house at Colby College, Waterville, Me.



Architect: Richard Hawley, Cutting and Associates, Cleveland, Ohio.
Ceiling and roof are combined in same system in 131' x 349' gymnasium.

With the BEHLEN Roof System...wide spans at new economy, versatility, design flexibility



Natatorium is 106' x 141'. Moisture condensation is no problem because of Behlen's all-steel Roof-Ceiling System. The steel ceiling is a highly efficient vapor barrier. Insulating materials are poured above the ceiling chord to provide superior thermal value.

More and more architects are discovering the many advantages of the lightweight Behlen Dubl-Panl System. Its principle is "stressed-skin." Two continuous steel chords of deeply corrugated, heavy gauge panels are joined by a lightweight, diagonal strut assembly. The top chord forms a finished, maintenance-free roof; the lower chord forms a clean, enclosed ceiling. Mechanical equipment, pipes, and conduit are hidden from sight between the chords. — Let us show you how with the Behlen System you can design unsupported flat spans up to 300' wide, and arched clear spans over 1000'. A complete technical manual, requested on your letterhead, is available. Write for your copy now.



BEHLEN
MANUFACTURING COMPANY
DEPT. A1-10 COLUMBUS, NEBRASKA 68601

Behlen Roof System and Load-Bearing Curtain Walls are further detailed in Sweet's 2b/Be 3a/Be, or write direct to factory.

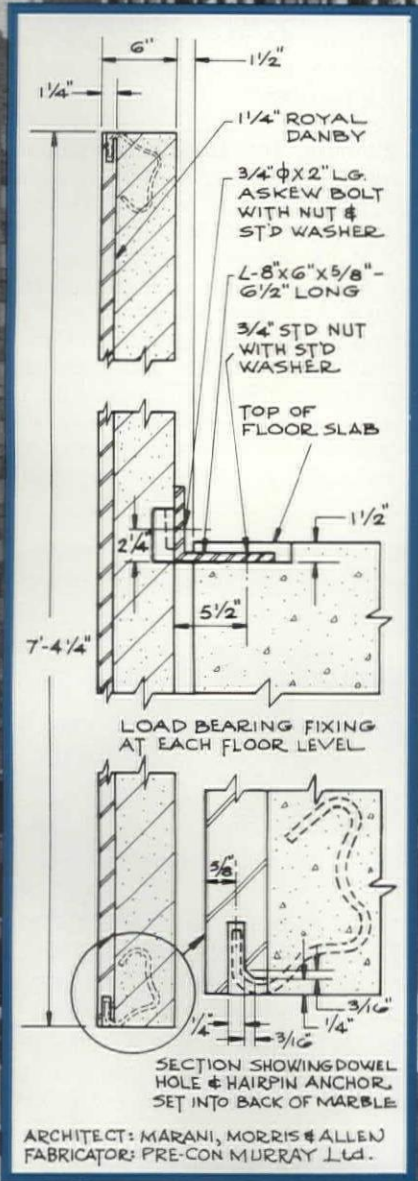
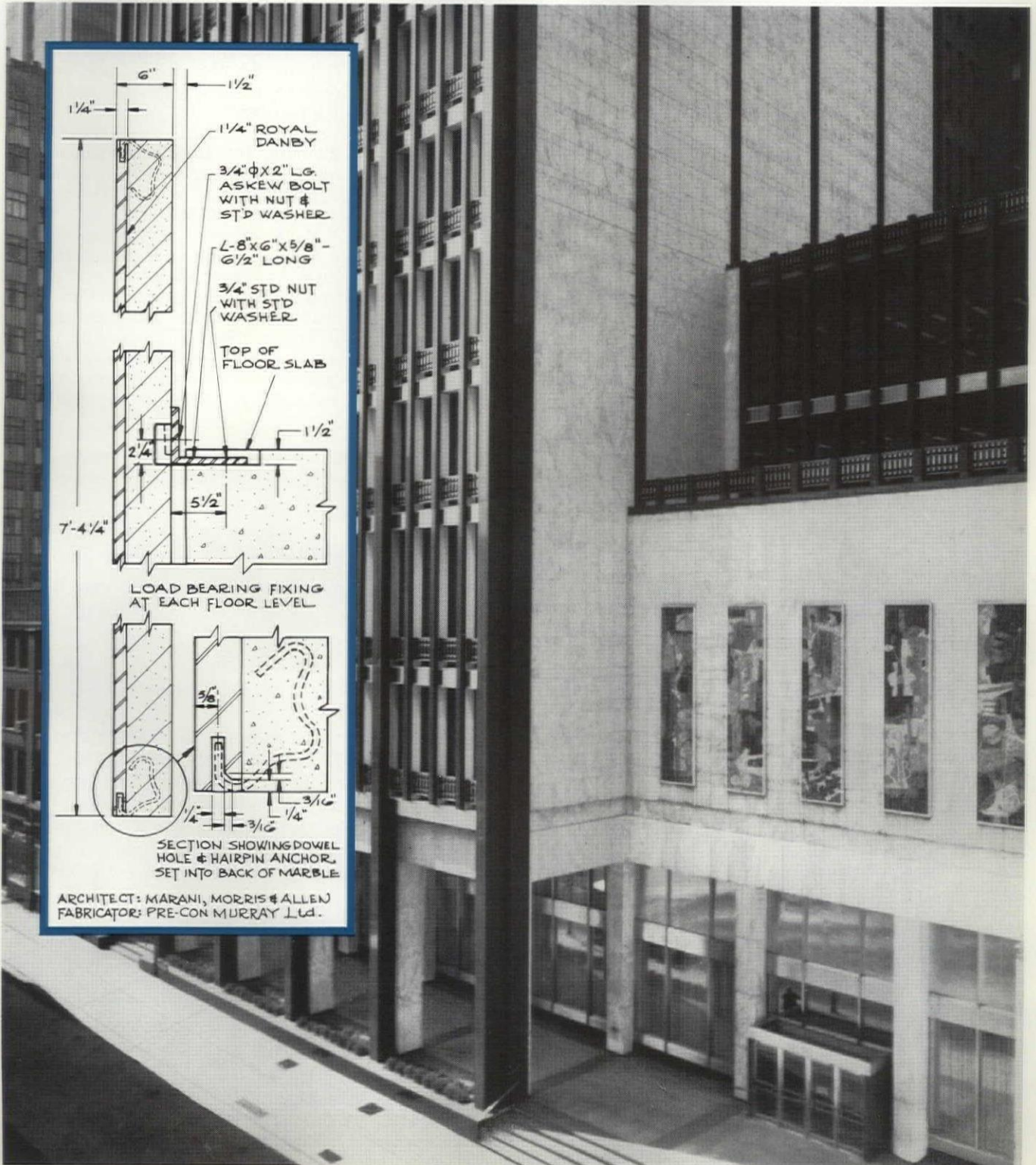
Marble, with its inherent beauty and durability, is now being combined with precast reinforced concrete to form a building panel which greatly reduces construction costs. The example illustrated is the Bell Telephone Building in Toronto. The basic units are 16' x 7', faced with 32 panels of Royal Danby marble. All preparation up to installation of the precast units was off-site work

— a vital concern in the face of rising on-site labor costs. . . For additional information on marble and its use in contemporary construction contact your Vermarco representative or write to the Vermont Marble Company, Proctor, Vermont 05765, Dept. A10.

Vermont Marble . . . naturally the best



Marble-faced precast panels . . . combine the enduring beauty of marble with the practicality of reinforced concrete



Books

Eero Saarinen on His Work: A Selection of Buildings Dating from 1947 to 1964, with statements by the architect. Edited by Aline B. Saarinen. Revised edition. New Haven: Yale University Press, 1968. 118 pp. \$17.50.

This book is really beautiful, composed in large part of superb reproductions of sensitively chosen photographs of the work of a master architect. At the time of the first edition in 1962, six of Saarinen's major works were being erected.

The present revision gives us current photographs of the completed buildings, and they bear renewed testimony to the fact that Saarinen was a giant. This edition keeps the construction pictures which have seemed to Mrs. Saarinen "to explain or illuminate with special cogency and vividness both Eero's intentions and the spirit or structural system of particular buildings." This is fortunate, for they are as revealing as the photographs of the completed structures. The text is from his own letters, speeches, articles and conversations.

Fairground Architecture: The World of Amusement Parks, Carnivals, and Fairs. David Braithwaite. New York: Praeger, 1968. 195 pp. \$12.50.

"Come, Come to the Fair!" This book is by an enthusiastic lover of the carnival and its magic and glitter and dazzle. A practicing architect, he created the Hall of Mirrors at Madame Tussaud's in London and was co-designer of a floating theater for children on a Thames barge. He has gone up and down the English countryside, gathering an amazing amount of information about traveling shows and their architecture, and having a good time, we feel sure, riding the sky wheels and the dodg'em cars.

Braithwaite traces the history of the fair from pagan festivals of ancient Greece on down to today's high-varnished amusement parks and fairgrounds. He describes the joy rides, the sideshows, the booths, the joints, commenting upon their strange names and histories. He tells how the shows are moved from one spot to another and gives details about the construction and decoration of the ingenious component parts of fairground architecture.

The author provides a glossary

of terms peculiar to the business of traveling fairs, biographical notes on the leading personalities mentioned in the text, a bibliography and a calendar of fairs for the British Isles. The book itself is gay, filled with photographs and drawings, some in color.


"Incorporating an extravaganza of pop idioms, masquerading as baroque, rococo or Byzantine, and geared to amusement and delight, carnival architecture is the perfect lampoon of ponderous styles. It transcends its setting, its time, and even its own reality." As John Smith says in a foreword, "Here is one of the few genuine forms of folk art, the precursor of pop, and one that remains vital even in this Batman age."

Planning for Hospital Expansion and Remodeling. Donald C. Carner. Springfield, Ill.: Charles C. Thomas, 1967. 112 pp. \$8.50.

Have you spent any time around a hospital lately as a patient or a member of a patient's family? If so, you will heartily agree with Carner that modernization and expansion of hospitals must be stepped up. He says "millions, even billions of dollars will be invested in this essential activity." *Continued on page 102*

Consult the Free

"BUYERS' GUIDE FOR CHAIRS"



Chairs, stack chairs, tables, lounges, coat racks, bar stools, counter stools.

Current Catalog 368

COMMERCIAL FURNITURE IN ADVANCED DESIGN

Fixtures Mfg. Corp.
1641 D CRYSTAL • KANSAS CITY, MO. 64126

Name _____
 Title _____
 Firm/Institution _____
 Address _____
 City _____ State _____
 Phone No. _____

Rush my Free copy of "Buyers' Guide for Chairs"

I would like a direct factory quotation.

We will be needing to purchase chairs by _____

Quantity will be approximately _____



show-ball

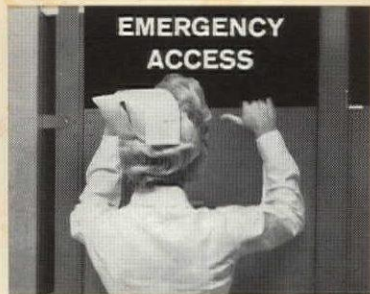
snow-ball

have a ball!

So beautiful for mood, spot, flood or special-effects lighting. All wattages, sizes in pendants, brackets, post-tops. Breakproof butyrate. Polished aluminum. LET STONCO HELP YOU SELECT.

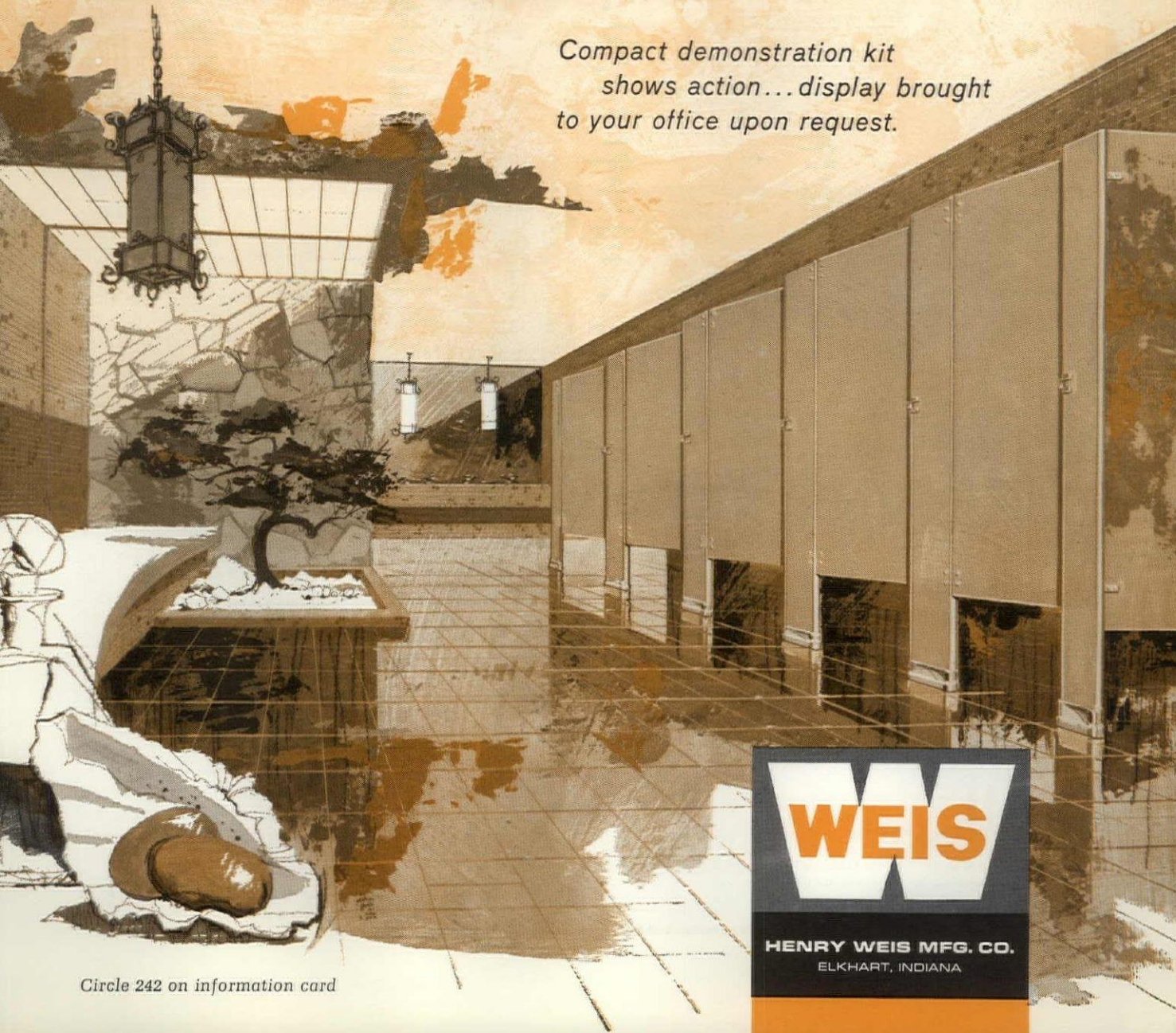
STONCO ELECTRIC PRODUCTS CO.
KENILWORTH, NEW JERSEY 07033 © 1968

Weis solid brass recessed latch releases by merely lifting door upward. No delay in reaching an emergency situation fast.



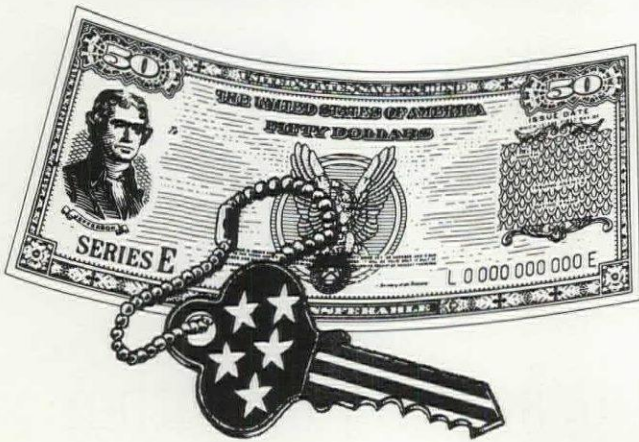
This Weis feature is especially important in hospital, school, and other institutional locations.

Compact demonstration kit shows action... display brought to your office upon request.



Circle 242 on information card

Star-spangled key to a home of your own



**Buy
United States Savings Bonds**

Books from page 100

This book is presented as a guide for those who will be responsible for the utilization of these monies. Carner does not focus on the physical plant primarily; he is more concerned here with controlling costs and providing more complete hospital services.

The book is of interest to the architect because it will help hospital trustees and administrators achieve better hospital facilities as a result of intelligent planning. The book considers concisely and clearly such factors as the hospital's function, design, equipment and staff. It gives advice on pitfalls to avoid and money-saving tips to employ. Carner gives information on such financial matters as voluntary fund drives, hospital bond issues, mortgage loans and long-term fund development.

The final chapter on "Tomorrow's Hospital" is certainly one for the architect to consider. Carner believes the trend is toward fewer and larger hospitals. He says the hospital is in transition and compares the situation with another segment of our economy—food marketing. Just as the corner grocery store has lost out to the supermarket, small hospitals are being forced into larger units. The small hospital cannot afford the new expensive equipment, nor can it draw the personnel necessary to operate such equipment. This is a brief but provocative chapter, and one that is certainly related to the architectural design of future hospital building.

Vertical Transportation: Elevators and Escalators. George R. Strakosch. New York: John Wiley, 1967. 365 pp. \$15.

Unless one just wants to boast that he has climbed to the top of such structures as the Statue of Liberty or the Washington Monument, he will admit readily that the success of any tall building is dependent upon vertical transportation. Many are the gruesome stories told about how people got out of skyscrapers during the blackout in New York in 1965, underscoring our usually unquestioning faith in elevators and escalators.

This book emphasizes that vertical transportation is to serve people. Strakosch has been associated with Otis Elevator Company since 1946 in both engineering and sales positions. He develops in a logical way passenger service require-

Continued on page 104



The Duluth, Minnesota, Symphony Orchestra

**Hear the Total Beauty of
Every Performance**
with an Acoustical Shell by Wenger

Wenger
CORPORATION

57P WENGER BUILDING
OWATONNA, MINNESOTA 55060
507-451-3010

*Designers and builders of
distinctive equipment
for the performing arts*

CALL OR WRITE TODAY

Circle 250 on information card

Since **HOPE'S** 1818
ALUMINUM WINDOWS



**GENERAL TELEPHONE COMPANY OF PENNSYLVANIA
STATE HEADQUARTERS BUILDING, ERIE, PENNSYLVANIA**

Architects: Hallgren, Restifo and Loop

Builders: E. E. Austin & Son, Inc.

Tastefully coordinated in the handsome design of this new structure are 366 Hope's Series 450 Aluminum Grid Frames, color anodized in Duranodic* black and light bronze. All finishing was executed in Hope's own expanded anodizing facilities. Rigid inspection and control through manufacturing, finishing and erection helped to assure a satisfactory installation with the quality and durability synonymous with the name "Hope's"

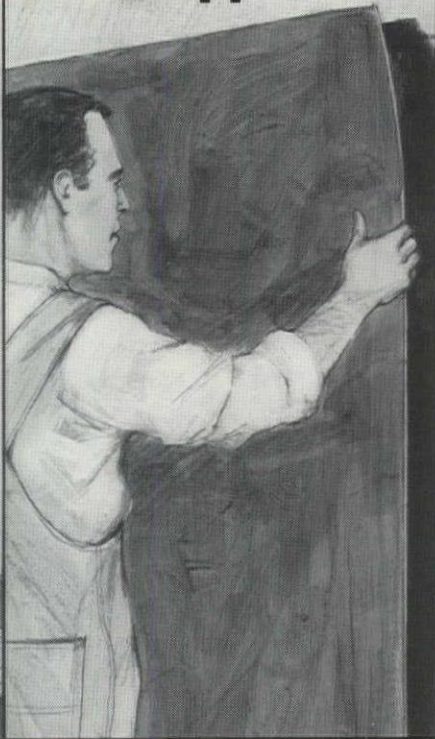
Our catalogs are filed in Sweet's Architectural file and our sales offices and representatives are located in principal cities.

*Trade name of Aluminum Company of America

HOPE'S WINDOWS, INC. Jamestown, N.Y.

HOPE'S WINDOWS ARE MADE IN AMERICA BY AMERICAN WORKMEN

once specified ...and applied

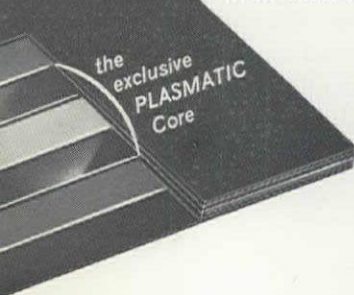


...you can forget moisture problems

with **SEALIGHT** *Premoulded Membrane*

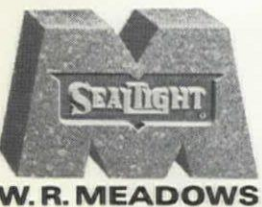
VAPOR SEAL with *Plasmatic Core*

Functionally effective for the life of the building, this vapor seal maintains its Water Vapor Transmission rating of 0.003 grains/hr./sq. ft.—stopping the vicious cycle of vapor movement that damages otherwise sound structures. It's rugged yet flexible—will not deteriorate or rot—is easy and economical to install—on tamped grade or sub-grade vertically—reducing maintenance, adding comfort—expanding and contracting with concrete without breaking bond. Permanently blocks every entrance through which moisture originating in the site could enter the structure.



PREMOULDED MEMBRANE with PLASMATIC CORE provides a build-up of seven elements in a single sheet. The exclusive PLASMATIC CORE consisting of two layers of specially formulated pure blown asphalt between which is suspended a scientifically formulated PVC sheeting offering superior flexibility and tensile strength. The PLASMATIC CORE is then sandwiched between super-saturated felt liners, and an additional asphalt weather coat is applied during manufacture.

For complete information request Catalog No. 756.



W. R. MEADOWS, INC.
15 KIMBALL STREET • ELGIN, ILLINOIS 60120

W. R. Meadows of Georgia, Inc.
4765 Frederick Drive, N.W.
Atlanta, Georgia 30336

W. R. Meadows of Canada, Ltd.
130 Toryork Drive
Weston, Ontario, Canada

Circle 262 on information card

Books from page 102

ments and gives a great deal of consideration to the flow of incoming and outgoing traffic. He deals with space and physical requirements; service elevators; special elevator applications; the modernization of elevators; special problems of elevating commercial, residential and institutional buildings; and finally the economics of elevating.

Strakosch makes no claim for his book as the final answer to a particular problem or building. It is a guide "to the ideas and practices that presently form the basis of elevator and escalator application to buildings." He warns that the problems of elevator application are too complex and specialized to be undertaken without the help of experts. The book's usefulness to the architect will lie in its help to him in planning the basic requirements for vertical transportation. It will enable him to use the advice of experts more intelligently.

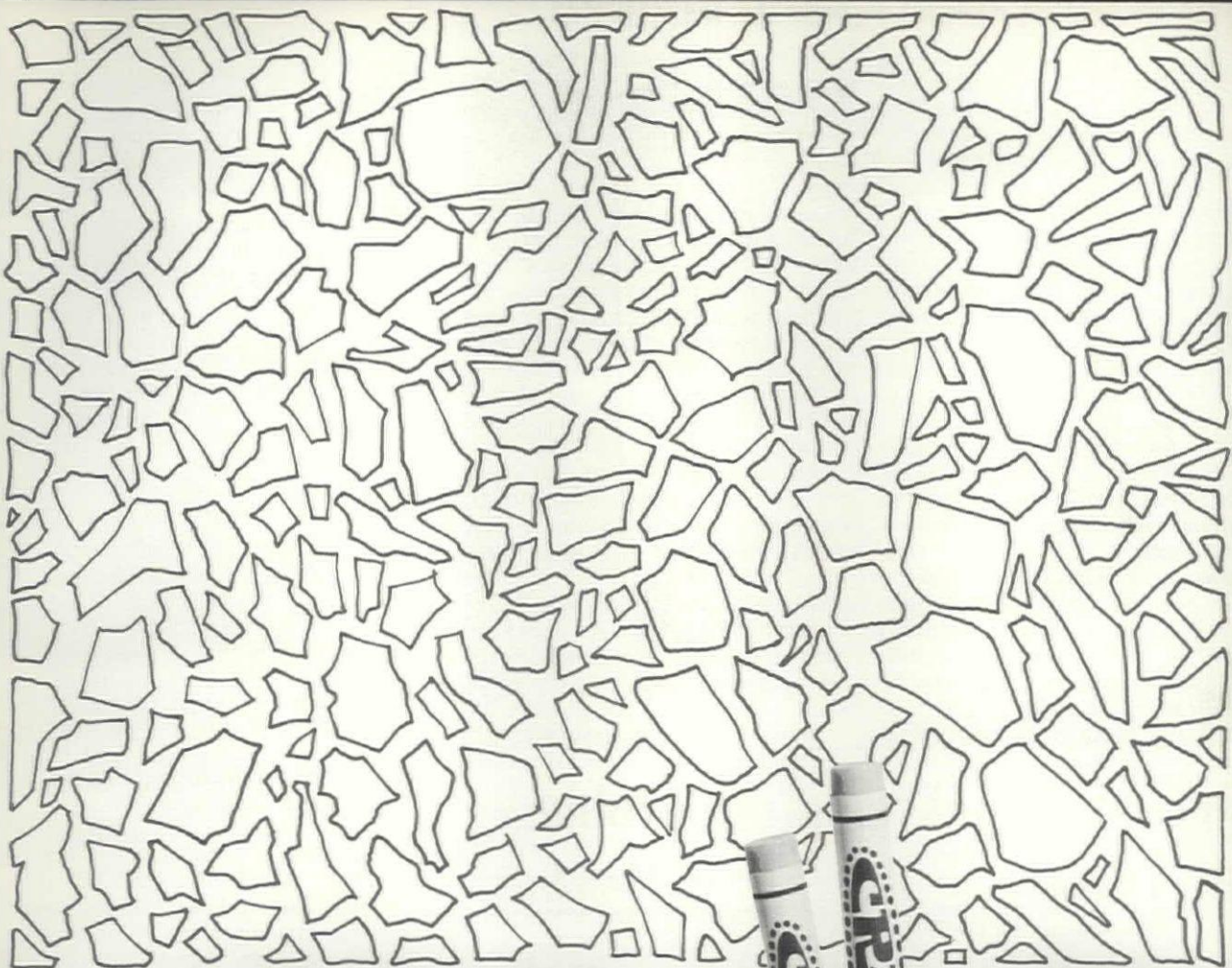
New French Architecture. Maurice Besset. New York: Praeger, 1967. 235 pp. \$17.50.

It is Besset's contention that the Ecole des Beaux-Arts has a strangle-hold on French architecture that makes innovation and research almost impossible. The public accepts what he calls "an incredible mediocrity" without protest.

Moreover, this indifference on the client's part keeps from the architect that essential stimulation of informed and interested opinion. According to Besset, the handicaps of French architecture are "unbalanced education, Malthusianism of an omnipresent oligarchy, ill-informed clients and public [and] false liberalism of a superannuated code." These things have to be reckoned with when one appraises the achievements of the progressive movement in French architecture.

Since 1955, this progressive movement has been a beam of hope. The disciples of Le Corbusier are working to bring about a change. Besset outlines the debates that go on and describes the approaches and techniques of the *ateliers de synthèse*, or multi-disciplinary offices, that have come into being and that are endeavoring to consider architectural problems in the light of a total humanism. Besset presents here the works of many French architects

Continued on page 106



color me terrazzo

... be as creative as you wish, with almost unlimited color effects. That's the beauty of Terrazzo ... subtle shades, captivating colors in an endless array of hues that impart beauty and distinction to whatever the application. Colors never fade, never change. Let the NATURAL BEAUTY of Terrazzo go to work for you.

Send for free colors . . . from raven black to alabaster white, with limitless color combinations in between. Swatches will be promptly sent when requested on your business letterhead.



 **THE NATIONAL TERRAZZO & MOSAIC ASSOCIATION INC.**

1901 N. FORT MYER DRIVE
ARLINGTON, VA. 22209
PHONE: (703) 525-0447

and these affiliated Regional Associations

FLORIDA TERRAZZO ASSOCIATION
P.O. Box 852
Clearwater, Florida 33517
(813) 446-8813

LOUISIANA TERRAZZO CONTRACTORS
ASSOCIATION, INC.
1440 Sherwood Forest Boulevard
Baton Rouge, Louisiana 70815
(504) 926-2492

MICHIGAN-OHIO TERRAZZO CONTRACTORS
ASSOCIATION
21990 Greenfield
Detroit, Michigan 48237
(313) 543-1433

NORTH CENTRAL TERRAZZO ASSOCIATION,
INC.
Room 830, 25 E. Washington Street
Chicago, Illinois 60602
(312) 782-3131

NORTHWEST TERRAZZO ASSOCIATION
2583 University Avenue
St. Paul, Minnesota 55114
(612) 646-8761

TERRAZZO CONTRACTORS ASSOCIATION
OF PHILADELPHIA
Suite 1111, 1405 Locust Street
Philadelphia, Pennsylvania 19102
(215) 735-3520

THE TERRAZZO & MOSAIC CONTRACTORS
ASSOCIATION OF GREATER NEW YORK
Room 100, 104 E. 40th Street
New York, New York 10016
(212) 986-3580

TERRAZZO & MOSAIC ASSOCIATION OF
NORTHERN CALIFORNIA
201 Golden Gate Avenue
San Francisco, California 94102
(415) 863-3071

TEXAS TERRAZZO CONTRACTORS
ASSOCIATION, INC.
1966 Terbet Lane
Fort Worth, Texas 76112
(817) 451-1994

who are responsible for the emerging style. The buildings illustrated include houses, apartment buildings, schools, hospitals, churches, industrial buildings, engineering structures, as well as town-planning schemes. Besset is professor of the history of art and architecture at the University of Besançon.

Catalogo Bolaffi dell'Architettura Italiana, 1963-1966. Pier Carlo Santini and Giuseppe Luigi Marini, editors. Torino: Giulio Bolaffi (American distributor: Wittenborn), 1966. 633 pp. \$45.

This reference work is a veritable gold mine for any architectural library confronted with the problem of finding information about some of Italy's leading contemporary architects. The catalog gives specific information about more than 300 architects—date and place of birth, education, titles, honors, publications, major works and bibliography.

The arrangement is alphabetical by name of architect. Included are only those architects who designed structures between the years 1963 and 1966. The expectation is that

the catalog will be brought up to date at some future time.

The editors declare that they made every effort to be objective in making decisions about those who would be included. In some cases it was not hard to identify the architect who had produced works of merit, for time has been a factor in recognition and in appreciation. But in other cases the decision has been more difficult, for the editors have tried to extend the selection to architects who show promise as well as to those who already have won acclaim. As the editors confess, it will be interesting to check their selection at some future time to see if the promise is fulfilled.

An essential part of the book are the great number of portraits, photographs and plans—more than 2,000 in all. The text is in Italian.

Living Architecture: Baroque. Pierre Charpentrat; **Living Architecture.** Raymond Oursel. New York: Grosset & Dunlap, 1967. 192 pp. each. \$7.95 each.

These two books are part of a series on great architectural epochs of the past. Other volumes have covered Egyptian, Mayan, Roman and Ottoman architecture (AIAJ,

July 1967, p. 84). The two new additions to the series continue the same standard set by the previous volumes.

The authors set the stage with a historical introduction to the period and endeavor to show the peculiar characteristics and problems of the style under scrutiny. They examine afresh some of the existing masterpieces.

Both authors try to relate the era to present-day architecture, and in the process they demonstrate that there is a continuity in architectural history with one period dependent upon contributions of other times.

The books are well illustrated with striking photographs and plans, and both contain chronological tables and bibliographies.

Cottage Residences, Rural Architecture & Landscape Gardening. A. J. Downing. Watkins Glen, N. Y.: Century House, 1967. 200 pp. \$15.

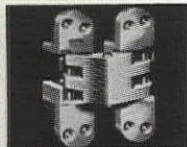
Downing's first book was one on landscape gardening, published in 1841 under the title *A Treatise on the Theory and Practice of Landscape Gardening, Adapted to North America*. The book established him as America's first great

Continued on page 108

interior elegance

HINGES ON ... SOSS

Soss Hinges are called "invisible" because when doors are closed, the hinges tuck themselves neatly out of sight. Where doors meet walls, space gaps and doorjambes are eliminated. Flowing, unbroken lines are created that please the eye and add custom richness to the room. Leading architects have been recommending Soss Invisible Hinges for over fifty years because the touch of elegance they add makes buildings and homes so much more "livable".



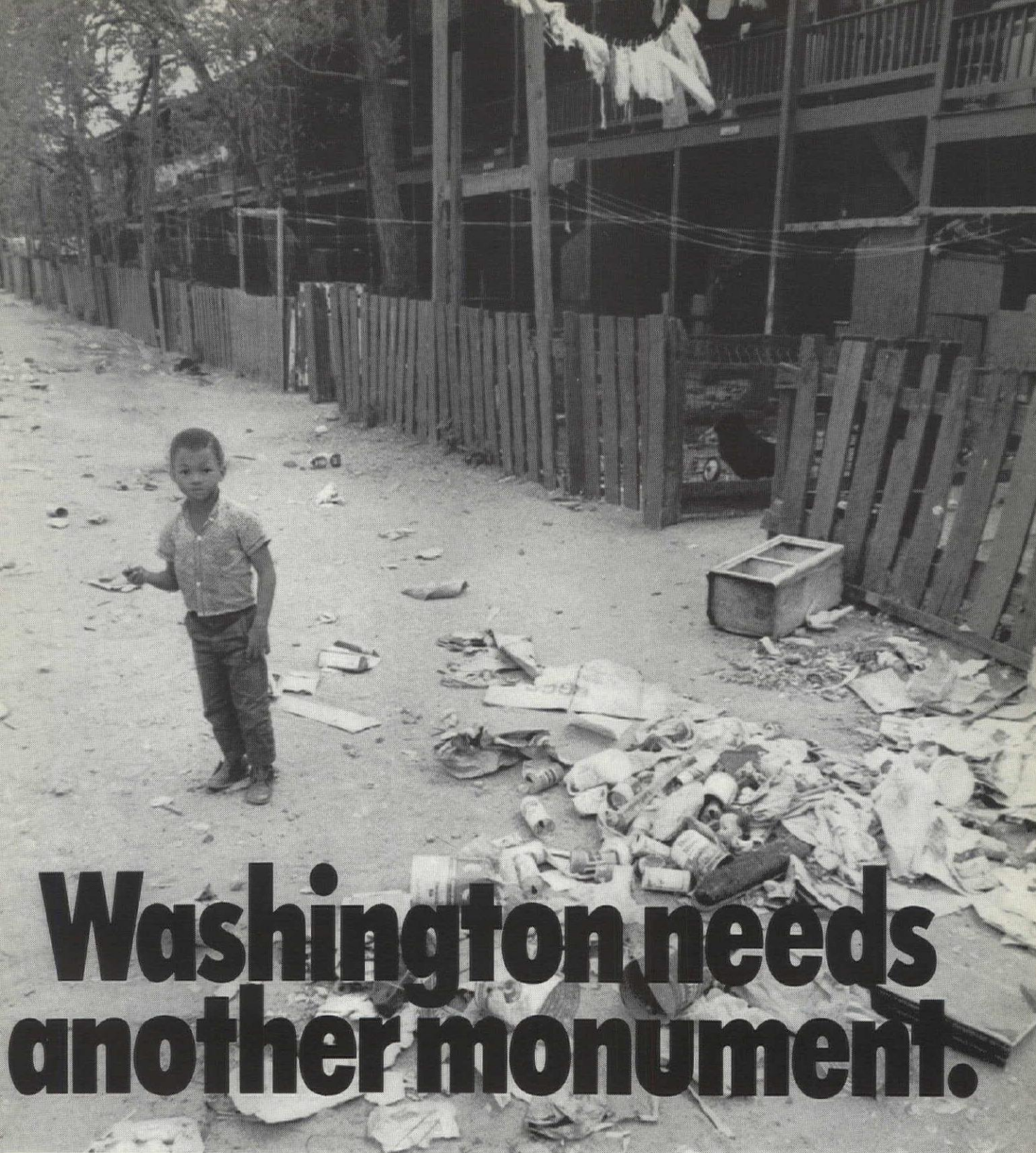
See Our Listing in Sweets Catalog

SOSS INVISIBLE HINGES

For full information and prices, send name, address and zip code

SOSS MANUFACTURING CO.
DAI-2 • P.O. Box 8200,
Harper Station—Detroit, Michigan 48213





Washington needs another monument.

As you cross Memorial Bridge from Virginia, an awe-inspiring sight greets you. Wide, tree-lined avenues. Majestic buildings faced by graceful Grecian columns. A classic, grassy mall extending to the domed capitol. A monumental city.

But, take the tour the tourists don't take. See the Washington no one wants to see. The pockets of poverty. Rats. Rubble. Almost unbelievable living conditions. Yet people live here.

The city is a paradox. Because the unemployment rate is considerably below the national average. And in

income per household, the Washington metropolitan area ranks first among the 8 largest U.S. cities. So why the persistent slums?

Truly, Washington needs another monument. Against ugliness, poverty, deprivation, slum conditions. A monument to living.

What would you do to solve Washington's riddle? To build what would provide help where help is needed?

We'd like to stimulate some thinking. About Washington and other cities. So we've established the Eaton Yale & Towne Urban Design Fellowship.

The award, administered by the A.I.A., provides for one year of graduate study in urban design at an American university and a follow-up tour of urban developments abroad.

It's a small thing, we know. But it could lead to something big. For over 100 years, we've never stood for ugliness in anything we make. Now, we find we can't stand for it in anything.



CREATIVE POOL DESIGN CALLS FOR



QUALITY POOL PRODUCTS-plus



For instance, specific engineering and installation data on all important pool equipment; specification sheets; scale drawings; experienced technical consultation to aid in the design of the most dramatic, yet practical, commercial, institutional or residential pools. In addition, Paragon expertise in custom fabrication and product innovation can give you a "plus" advantage in your overall effort. Why not put our depth of experience to work on your next project? Check our Sweet's Catalog File insert 36c/PAR or write for additional copies. We're glad to be of service.

Paragon Swimming Pool Co., Inc.
Dept. AIA
Pleasantville, N.Y. 10570

Mfrs. of Quality Pool Products

Please send me a copy of Sweet's
Arch. Catalog File 36c/PAR.

NAME

ADDRESS

CITY..... STATE..... ZIP.....

Circle 302 on information card

Books from page 106

landscape gardener and created a tremendous interest in country estates and horticulture. The book appeared in several editions.

In 1842, Downing published another book called *Cottage Residences; Or, A Series of Designs for Rural Cottages and Cottage-Villas, and Their Gardens and Grounds*. The second book applied the principles of his first treatise to less pretentious rural estates.

This present book, published as one in a projected series of 20 books in a series called *Library of Victorian Culture*, is a reissue of one of the editions of the second book by Downing.

The book has been given a slightly revised title. New materials have been added, including a biographical essay by Michael Hugo-Brunt, who is associated with the department of city and regional planning at Cornell University. There are bibliographies added as well; one, prepared by John and Judy Freeman, lists Downing's writings in books and periodicals.

Although he profoundly influenced Victorian architecture, Downing was not an architect. He was aware of the value of an architect, however, and in an addenda to the later editions of *Cottage Residences* (not included in the present reissue), he cautions his readers: "Every man may be his own lawyer or his own architect, but he usually has to pay much more dearly for the privilege, when he has any business of importance in hand, than he supposes; and we cannot counsel him to undertake the perplexity and vexation that generally result from it, if he can find a professional man of integrity and ability to perform the task so much more satisfactorily for him."

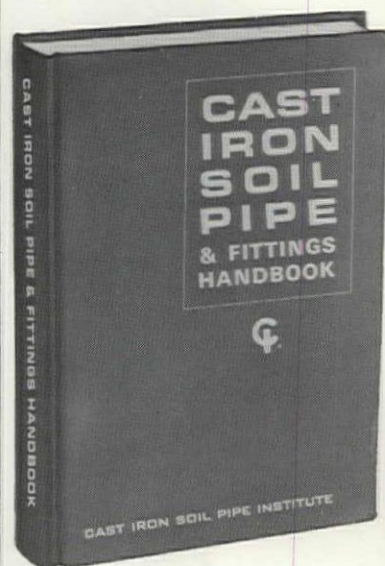
Building Law Illustrated: A Guide to Practice. B. G. Phillips. London: E. & F. N. Spon, 1967 (distributed in the US by Barnes & Noble). 249 pp. \$8.

This is a practical, concise and understandable digest of the legislation affecting building construction in England. Since the first edition appeared in 1953, the work has provided an authoritative source of information on British building law. Phillips died just before the work of revision of this fourth edition was finished, and the text was completed by H. Fellows.

Continued on page 114

ARCHITECTS ENGINEERS

This valuable
new book
is yours for
the asking!



CAST IRON SOIL PIPE & FITTINGS HANDBOOK

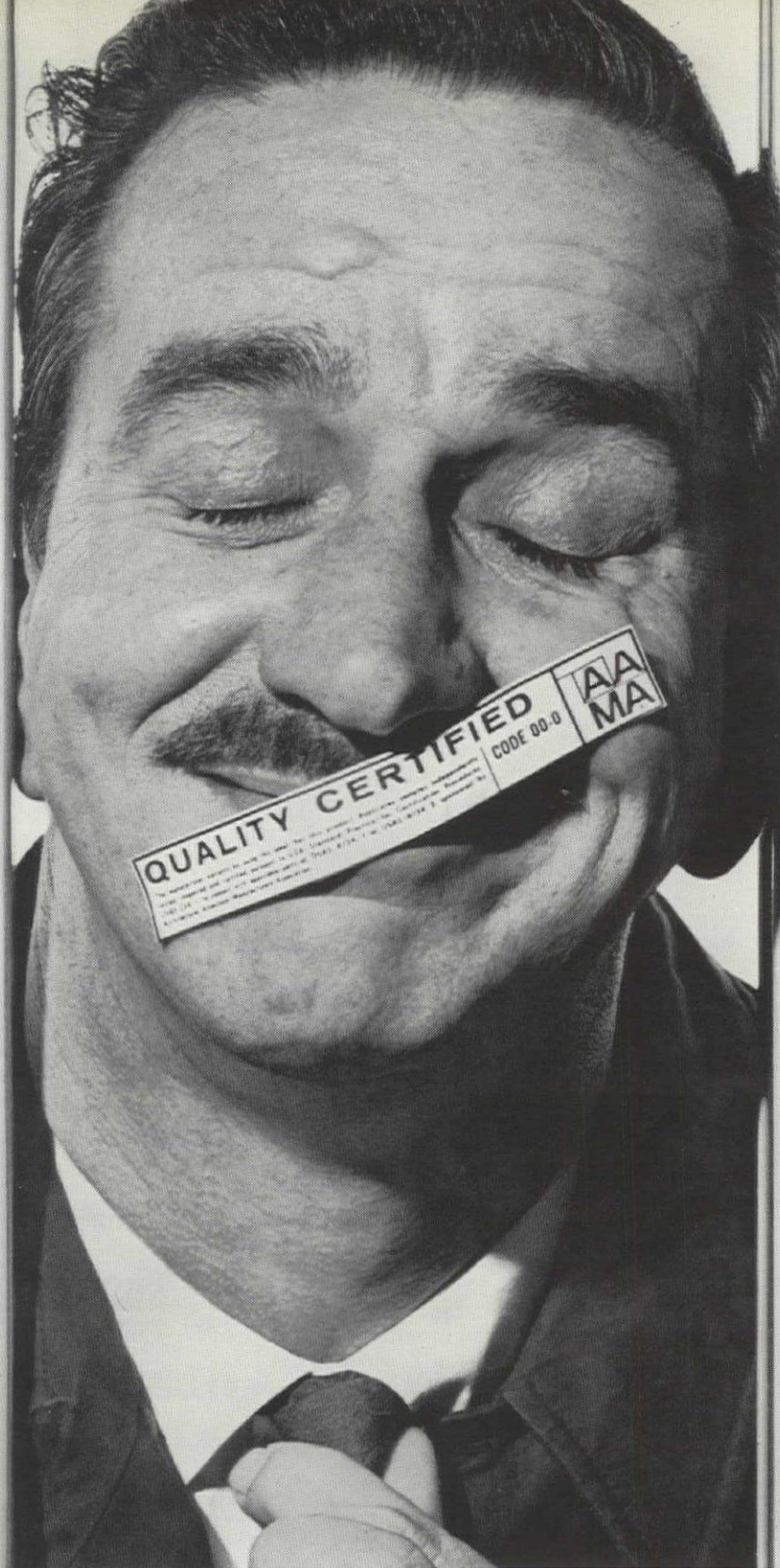
A comprehensive, authoritative textbook, fully illustrated, complete with statistical tables, calculations and charts, giving abbreviations, definitions and recommended symbols.

Invaluable if you design, estimate or install plumbing systems. A \$5 value, FREE to qualified architects and engineers.

To receive your free copy, address a request on your company letterhead to:

 **CAST IRON SOIL PIPE INSTITUTE**
1824-26 Jefferson Place, N.W.
Washington, D. C. 20036

Allow 4 weeks for delivery



THE SILENCER

Aluminum sliding glass doors that carry our Quality Certified labels are nothing to holler about. Nothing to write nasty letters about, either.

The label means

- (1) that these sliding glass doors meet specifications approved by the USA Standards Institute,
- (2) and that they are continually tested for sound construction, water leakage, structural strength, air infiltration and wind load in compliance with the specs.

Specify them and enjoy peace, blessed peace. For a complete list of aluminum sliding glass doors and windows that carry these labels, write for AAMA's CERTIFIED PRODUCTS DIRECTORY.



Architectural Aluminum

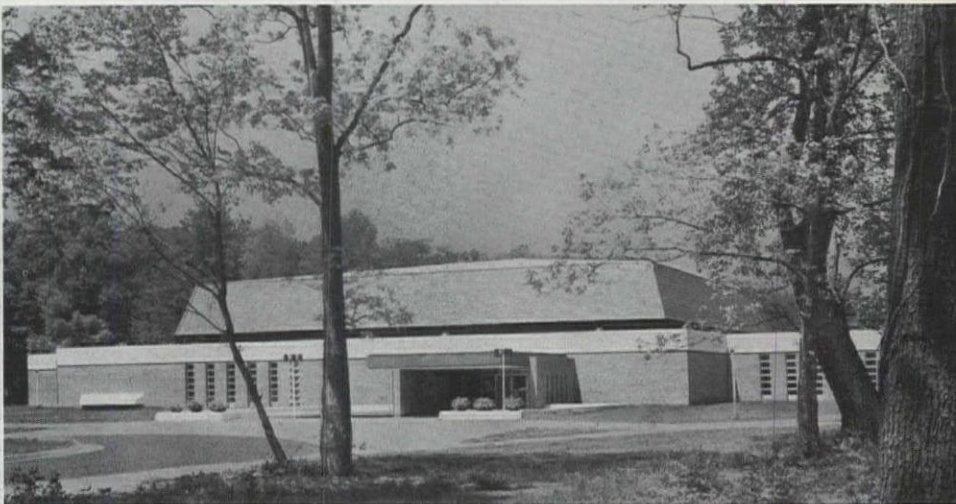


Manufacturers Association

One East Wacker Drive, Chicago, Illinois 60601

DEPT. F108

Circle 307 on information card



A winning design uses Buckingham[®] Slate...naturally

Buckingham Roofing Slate, Facia Panels, Exterior Paving and Interior Flooring combine as design features to compliment the total design of Forrest Coile & Associates Christopher Newport College building. This outstanding Virginia building was awarded a certificate of merit at the 1968 Virginia Museum of Fine Arts bi-annual Architects, Designers and Photographers Show. Buckingham Slate Catalogs are in Sweet's Architectural File and the Building Stone Institute's Stone Catalog.

Photo by: Taylor Lewis

BUCKINGHAM-VIRGINIA SLATE CORPORATION

1103 EAST MAIN STREET • RICHMOND, VIRGINIA 23219 • TELEPHONE 703-643-8365

"Sit tight she tells me! How tight can a guy sit when he's had the hiccups for six days?"

"Tommy, quit jirming in your e chair."

"But Mommy, I lost my frog."

"Hmmm. Beautiful new furniture. Same old magazines."

"It's a good thing these seats are comfortable. I've been waiting to see Dr. Russell for two hours."

"Dr. Russell? Lady, this ain't Dr. Russell's office."

Cushions are four-inch foam.
Backs are spring-supported.
Prices are remarkably low.

Write for the Sturgis Modular 300 Catalog.

Dept. AI,
The Sturgis Company,
Sturgis, Michigan 49041.

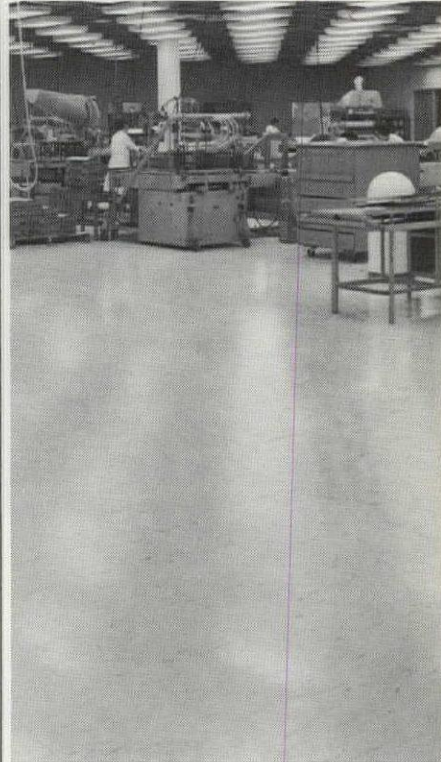
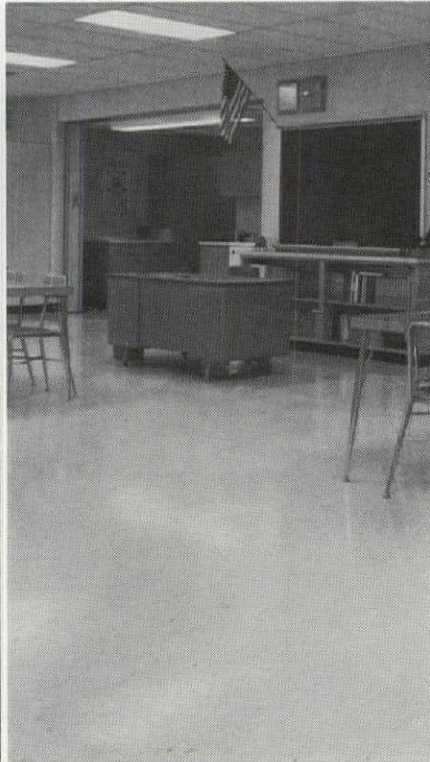


Sturgis will make just about any arrangement you want. Choose from many seat or seat-and-table units, starter units, add-ons, drop-in arms, panel inserts, fabric or vinyl upholsteries, black, white or wood grain laminated tops.

Circle 289 on information card

Specify floor beauty, protection that lasts long after final acceptance

Hillyard Hil-Brite® (prime No. 1 Carnauba Wax)



PRODUCT DESCRIPTION — *Basic Use:* To provide a protective, slip-resistant, wear-resistant surface coating that enhances the appearance of any floor for which waxing is recommended.

Limitations: Do not wax a conductive floor. Not recommended for treatment of terrazzo flooring.

Composition and Materials: A buffable water-emulsion floor wax, containing 100% Prime No. 1 Carnauba. The hardness of carnauba improves the lasting qualities of the wax emulsion. Protects against rubber marking. Eliminates frequent rewaxing necessary with ordinary waxes.

Sizes: Packaged in new, sealed 1-gallon, 5-gallon, 35-gallon and 55-gallon metal, lined containers.

Applicable Standards: Conforms to Asphalt and Vinyl Asbestos Tile Institute Specifications for water emulsion floor polishes for use on asphalt and vinyl asbestos tile floors. Approved by Rubber Manufacturers Association.

TECHNICAL DATA — *Nonvolatile Matter:* 12.5%-13.5%; *Ash Content of NVM:* 3% maximum; *Refractive Index:* 20°C: 1.3616-1.3631; pH, 25°C: 9.0-10.0; *Sediment:* 0.05% maximum; *Odor:* non-objectionable at any time; *Alcohol Solubility:* clear;

Film Properties: film on black glass—clear; drying time at 25°C, 50% R.H.—20 minutes maximum; tackiness—none.

Test Results: U/L listed for "slip-resistance." Approved by Institutional Research Council. All test information is available on request.

APPLICATION: Onto a perfectly clean and dry floor apply two thin coats of Super Hil-Brite® carnauba wax with lambs-wool applicator or clean rayon mop. Allow first coat to dry thoroughly before applying second coat. Let wax cure over night. Then buff for added lustre.

AVAILABILITY AND COST — *Availability:* Marketed in all states and in over 20 foreign countries by direct manufacturer's representatives located in principal cities. Complete stock available in Hillyard Distribution Centers and Warehouses throughout the United States.

Cost: Approximate 0.3¢ (three tenths of a cent) per coat per square foot.

GUARANTEE: When applied in accordance with manufacturer's directions, it is guaranteed to meet all claims made for it. Any unsatisfactory performance should be reported to the St. Joseph Office and a review of the complaint will be promptly made by an authorized representative.

MAINTENANCE: Sweep daily with properly treated dust mop. When surfaces become soiled, mop with Hillyard Super Shine-All® neutral chemical cleaner, at proper cleaning dilution. After floor is dry, buff for added lustre.

REFERENCES: Sweet's Architectural Files.

A.I.A. File No. 11

TECHNICAL SERVICES: Over 200 trained, professional, architectural consultants are located in and near principal cities. Write or call collect for our representative in your area. We will have him contact you immediately. He will recommend the proper, approved treatment for the floor you are specifying and supervise application procedures at job site.

HILLYARD
FLOOR TREATMENTS

ST. JOSEPH, MISSOURI U.S.A.
Totowa, N.J. San Jose, Calif.
Dallas, Tex.

IN CANADA: Calgary, Alberta
Sarnia, Ontario

SINCE 1907

The most widely recommended and approved treatments for every surface



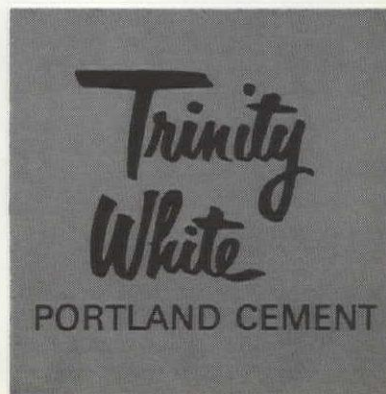
precast white concrete screen that fools the sun

The solar screen on this new office building in Mobile, Alabama illustrates the highly imaginative results that can be developed with precast white concrete. The screen, made up of 21,000 8" x 16" units, is set the width of a narrow balcony out from the windows. This provides good visibility to the surrounding area yet maintains full protection from the sun in all seasons.

Precast white concrete solar screens, window walls, and curtain walls of out-

standing beauty are available in all parts of the country today—thanks to TRINITY WHITE portland cements and the capable products' plants who can translate your design into practical, economical building materials.

CREDITS: #1 Office Park, Mobile, Alabama. Architects: Woods & Steber & Assoc. General Contractor: Martin Builders. Solar Screen by: Underwood Concrete Products Co. Masonry: W. J. Van Arsdale.



A product of GENERAL PORTLAND CEMENT COMPANY, P.O. Box 324, Dallas, Texas 75221
Offices: Houston · Tampa · Miami · Chattanooga · Chicago · Fort Wayne · Kansas City, Kan. · Fredonia, Kan. · Los Angeles

We have nothing to hide but our products!

... AND WE'LL GO TO ALMOST ANY LENGTH TO DO THAT



RONAN & KUNZL, INC.

Marshall, Michigan 49068

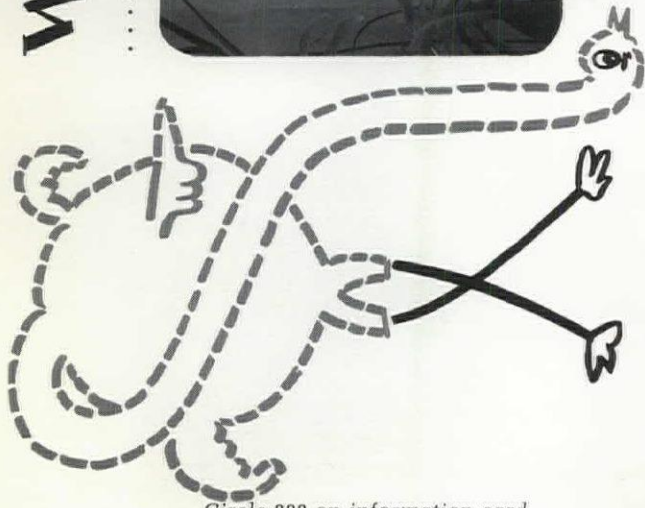
We always insist on smooth, safe, dependable performance but never, never do we want our product to show.

R&K door controls are ultra-compact in design... concealed with no ugly projections to mar the clean, trim architectural lines of entrance facades.

- Hydra-Slide — Automatic Sliding Door Control — Hydraulic.
- Electro-Slide — Automatic Sliding Door Control — Electric.
- R&K Pittcoatic — Automatic Swinging Door Control — Floor Mounted.
- Hydra-Swing — Automatic Swinging Door Control — Overhead Concealed.
- R&K Series 10 Pittco — Floor Mounted Closer.
- R&K Concealed Overhead Closer.

Special Announcement

The R&K Pittcoatic® and R&K Series 10 Pittco® are now available direct from Ronan & Kunzl, Reg. T.M., Pittsburgh Plate Glass Co.



Circle 333 on information card

Books from page 108

Relocation in Urban Planning: From Obstacle to Opportunity. Paul L. Niebanck, with the assistance of Mark R. Yessian. Philadelphia: University of Pennsylvania Press, 1968. 123 pp. \$4.95.

In our time there have been tremendous urban renewal projects undertaken for the general welfare, and many people have had to give up their homes and familiar surroundings as a result. What does this relocation do to the elderly?

They are the most vulnerable segment of the dislocated population. Not only do they suffer more from physical disabilities, but they also are less able to bear social and psychological problems. As this book points out, the elderly are generally not only the weakest but also the poorest, and they pay the highest price for urban renewal, highway and other projects that uproot them.

This book is based on several years research into the relocation of elderly persons conducted by the Institute for Environmental Studies in cooperation with the National Association of Housing and Redevelopment Officials. It is a careful documentation of what relocation means to the poor sectors of the urban population, with attention focused on persons in their later years.

Best of all, however, the authors make some definite and concrete recommendations toward a relocation policy which will insure positive values, and the hope is that the relocation program "narrowly conceived" will change into "a rehousing program broadly conceived." It is a worthwhile book for anyone concerned about fragile humanity.

Urban Core and Inner City: Proceedings of the International Study Week, Amsterdam, 11-17 September 1966. Leiden: E. J. Brill, 1967. 577 pp. No price given.

In September of 1966 the sociographical department of the University of Amsterdam was responsible for convening a conference of scholars to consider in depth the problems of the European inner city.

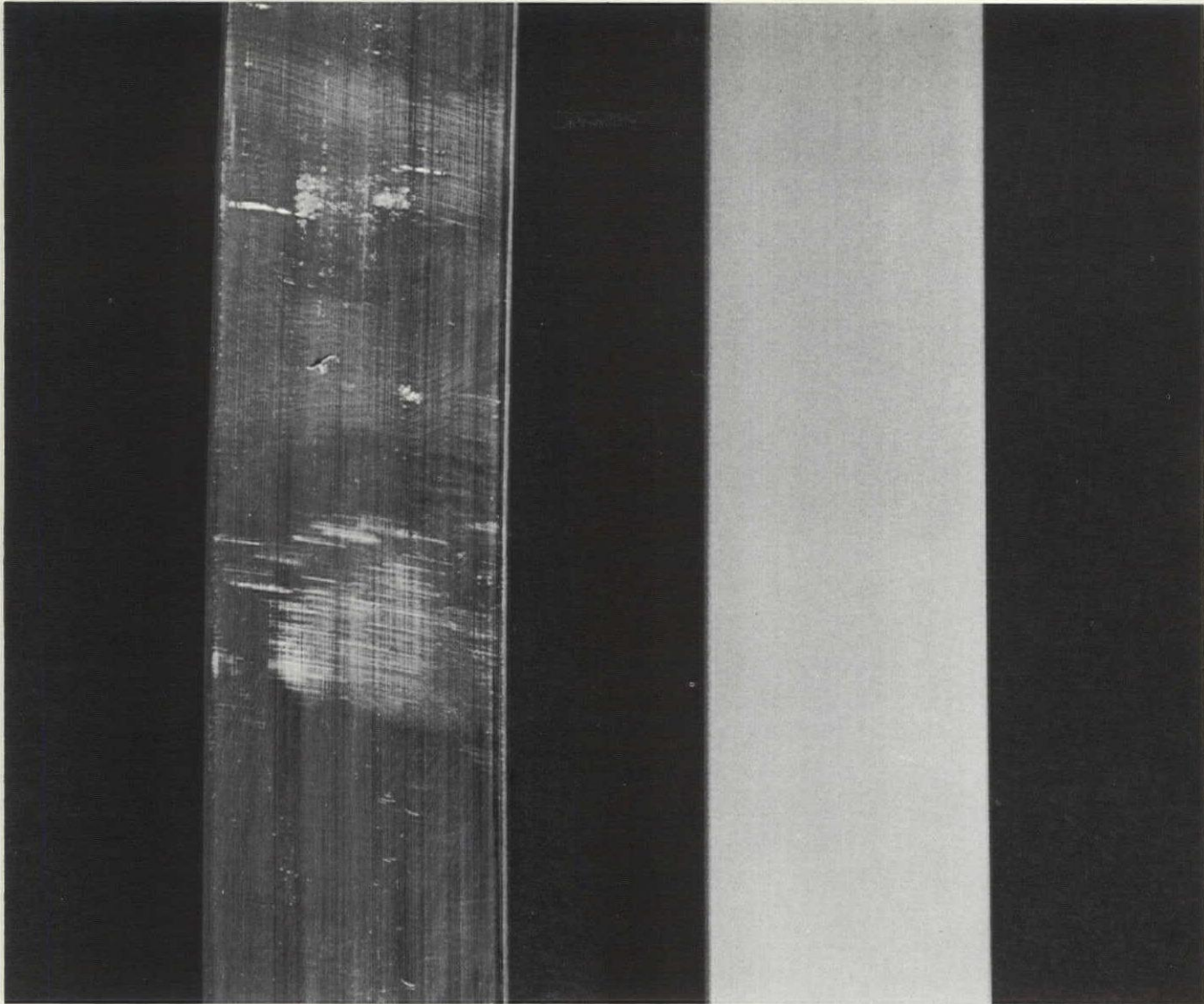
The term "inner city" is defined as being that part of the city which is enclosed by the former city walls, that is the historical part of the city. The term "urban core" is considered as a functional concept, as opposed to the geographical meaning of inner city. The urban core is a broader term than what we call the central business district.

The main themes developed by the participants in the symposium were 1) basic concepts of the urban core and the inner city and their major functions; 2) delimitation, inner tensions and shifting of the urban core; 3) static forms versus dynamic functions; 4) application of research findings to the planning of urban cores; and 5) research methodology and techniques.

The participants were European, except for Allan Pred of the University of California's geography department, and the problems discussed relate primarily to the European city. The papers appear to be scholarly and carefully documented and to probe the issues in considerable depth.

Pred is responsible for a chapter at the end of the book called "Impromptu Impressions and Reactions." He says that the conference did not live up to his expectations, but he did think that each participant must have extended the horizons of his own individual ignorance. The proceedings doubtless will be read in their entirety in the United States only by the experts; and, as Pred comments, the book is bound to teach them some things.

Continued on page 116



Finishing a Natcor Door is what we do first.

We don't mean to sound enigmatic. It's just that the face we put on our door is going to be an important part of the face of your building. So the finish on our doors is very important to us—and to you.

We finish the metal *before* we make it into doors. And we're very meticulous about it. The standards we apply to our polishing, hardening and finishing processes are among the most critical in the industry. And we carefully inspect each piece of metal after each step to see that it measures up to these high standards.

In short, Natcor will put a smile on the face of your buildings . . . by *looking beautiful* for a lifetime of trouble-free operation.

For full information on Natcor's complete line of doors and entrances, see our catalog in Sweets, or write:



THE NATCOR COMPANY

SINCE 1920

P.O. BOX 9321, NASHVILLE, TENNESSEE 37204

Member NAAMM

Pelikan Technos



UNIQUE DRAWING INK FOUNTAIN PEN WITH 2 NEW UNIFORM-FLOW FEATURES

Now, a new concept in drawing ink fountain pens—the Pelikan Technos with built-in features to provide uniform ink flow. "Thermic" ink regulator instantly, automatically balances atmospheric and internal-pen pressures. Delivers to the point precise amount of ink needed for uniform, continuous lines of any selected width, even at high drawing speeds. Specially designed "Liquimatic" system keeps ink-feed channels clear at all times. One shake of the pen plunges a spring-controlled ink-feed wire completely through point channel to clear any residue. Wire instantly retracts into barrel, never touches drawing surface.

Pelikan system of interchangeable points offers 30 different point styles and sizes for ruling, lettering, drawing and writing. Maximum versatility at low cost. Points replace easily without special tools. Detached points can be thoroughly cleaned with water-filled blow-flask or wire-loaded plunger. Fast, clean filling with black or colored ink cartridges. Clear-view plastic cap hermetically seals ink-flow system.

New Technos, designed by the manufacturer of world-famed Pelikan inks, is available individually and in sets for students, professional artists, and draftsmen. Sets include point-cleaning plunger and blow-flask, six black-ink cartridges, a selected range of points and pens.

See the Pelikan Technos at your dealer, or write for descriptive literature.

KOH-I-NOOR

EXCLUSIVE **Pelikan** REPRESENTATIVE

KOH-I-NOOR, Inc., 123 North Street, Bloomsbury, N.J. 08804
Circle 299 on information card

One very useful feature of the book is a list of terms given in four languages: English, French, German and Dutch. The list is based on one alphabetical order (English), and the number of definitions is kept to a minimum. Those who compiled the list state that a more complete compilation, containing definitions, based on alphabetical order in all four languages and arranged both alphabetically and systematically is greatly needed. They hope that this present list of terms will be the first stage toward that goal.

Construction of Structural Steel Building Frames. William G. Rapp. New York: Wiley, 1968. 340 pp. \$12.95.

This is a comprehensive book intended for use by anyone concerned with the safety, economy and efficiency of structural steel building frame erection. There is detailed information on every step from office procedures and estimating to setting up, administration and dismantling of erection schemes in the field.

The use and servicing of tools and equipment are described, and there are special chapters on the guy derrick and accessory equipment, the stiffleg derrick and travelers, and cranes and miscellaneous equipment. Rapp, a professional engineer with years of practical experience, is well qualified to write about his subject. He has been engaged in structural steel erection since his graduation from MIT in 1922.

Space Grid Structures, Skeletal Frameworks and Stressed-Skin Systems. John Borrego. Cambridge: MIT Press, 1968. 200 pp. \$12.50.

There are three major parts to this book which is "intended to be an exchange of information about what has been done recently in the development of flat space grid structures." The models, experimental projects and built structures featured in part 1 include two-, three- and four-way systems and give a cross section of flat double-layer space grid structures.

Part 2 covers stressed-skin space grids and includes tetrahedral, pentahedral and hexagonal pyramids, elongated tetrahedra and space trusses. Part 3 supplies an index to the space grid geometries, cataloged pictorially.

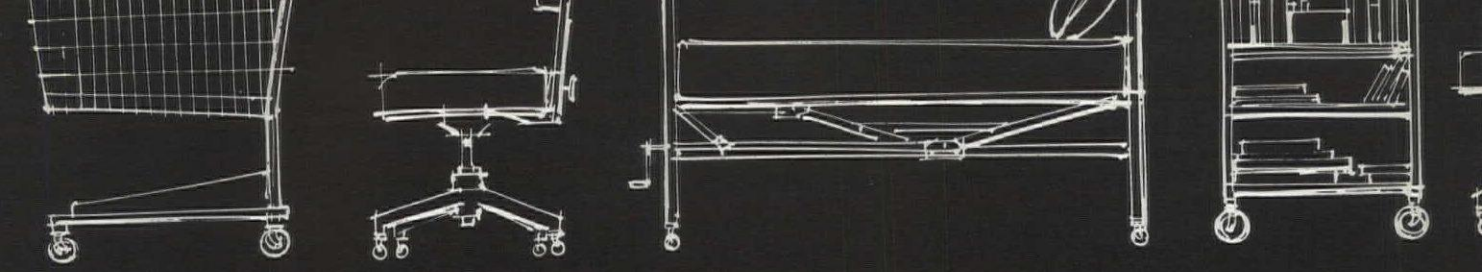
Fundamental Foundations. W. Fisher Cassie. New York: Elsevier Publishing Co., 1968. 226 pp. \$10.50.

There are three parts to this book, the first of which is about soil and water and their properties. Part 2 is concerned with loadings and tests and covers stress in a loaded soil, shear strength and compressibility, and exploration of the site. The last part, which the author says contains "the information most architects want to have at hand," is on design for stability. The topics discussed are ultimate bearing capacity, limitation of settlement, and allowable bearing pressure. Cassie is professor of civil engineering, University of Newcastle upon Tyne.

Construction Lending Guide: A Handbook of Homebuilding Design and Construction. John L. Schmidt with Walter H. Lewis and Harold Bennett Olin. New York: McGraw-Hill, 1966. 638 pp. \$26.

Produced by the United States Savings and Loan League, this is a comprehensive reference work on design, construction, appraising and finance with over 2,000 photographs, drawings and tables. □

Circle 100 on information card for addresses of publishers whose works are reviewed.



Proven perfect answer for specifiers for carpeting areas with wheel activity... Direct glue-down installation of double Jute-backed carpets

Nothing could be simpler. Double Jute-backed carpet cemented directly to the floor . . . new or old concrete or wood. Or over previously installed resilient flooring. No cushion back on the carpet. No padding under it.

Works perfectly, as Ford Motor Co. proved in a two-year test in Dearborn. Ford is now practically standardized on this technique in new office building construction and for replacements in existing structures.

Benefits

The acoustical qualities, esthetics, luxury and thermal advantages of carpet . . . plus easy wheel and caster movement. Conventional wheels and casters can be used. Pads are unnecessary under chair casters if carpet pile is of good commercial grade.

Savings

Double Jute-backed carpets cost substantially less than cushion-backed carpets with equal pile specifications . . . or equivalent carpets plus separate underlayment. Installation is greatly simplified.

Jute's function

Jute secondary backing is vital because it provides maximum floor bond. This quality also guards against delamination of the secondary backing from the basic carpet. Jute's greater stability prevents carpets from shifting, which can misalign floor outlets with cut-outs in carpets.

Applications

Use in any location where free movement of conventional wheels and casters is desired. General

offices, hospitals, libraries, supermarkets, computer areas, restaurants, etc.

Taking up

When replacement is necessary, Jute backing comes off easily with solvents or fast-operating scrapers. None of the removal problems common with cushion backing, such as crumbling and sticking.

Write for complete copies of editorial features shown, plus outline of glue-down installation technique and additional material.

Installation specialist
The National Magazine for Floor Covering Installers

CONVENTIONAL CARPET GLUED-DOWN

FLOOR PREPARATION: Concrete: Floors should be sealed against moisture. Wood: Floors should be sanded and sealed.

TOOLS REQUIRED: 1. Fastener

Left, from Installation Specialist
Below, from Floor Covering Weekly

WHAT'S NEW IN CONTRACTING

New Technique Employed in Big Carpet Installation at Ford Motor Co.

A new technique for carpeting commercial areas that combines the best features of soft and hard surface floor coverings has been developed for Ford Motor Co. and built as an experimental project after 18 months' experience with an initial installation of 15,000 sq. yds.

The technique, developed by Maurice O. Powell, president of Lansing, Mich.-based Matrox Carpet, is in cooperation with the manufacturer of the carpet, under the use of jute-backed carpets with a thick, dense pile.

The Ford research lab gave birth to this development, which consisted of a concrete floor or, in some instances, a previously installed asphalt tile.

The Ford research lab gave birth to this development, which consisted of an initial floor covering for an office and parking garage.

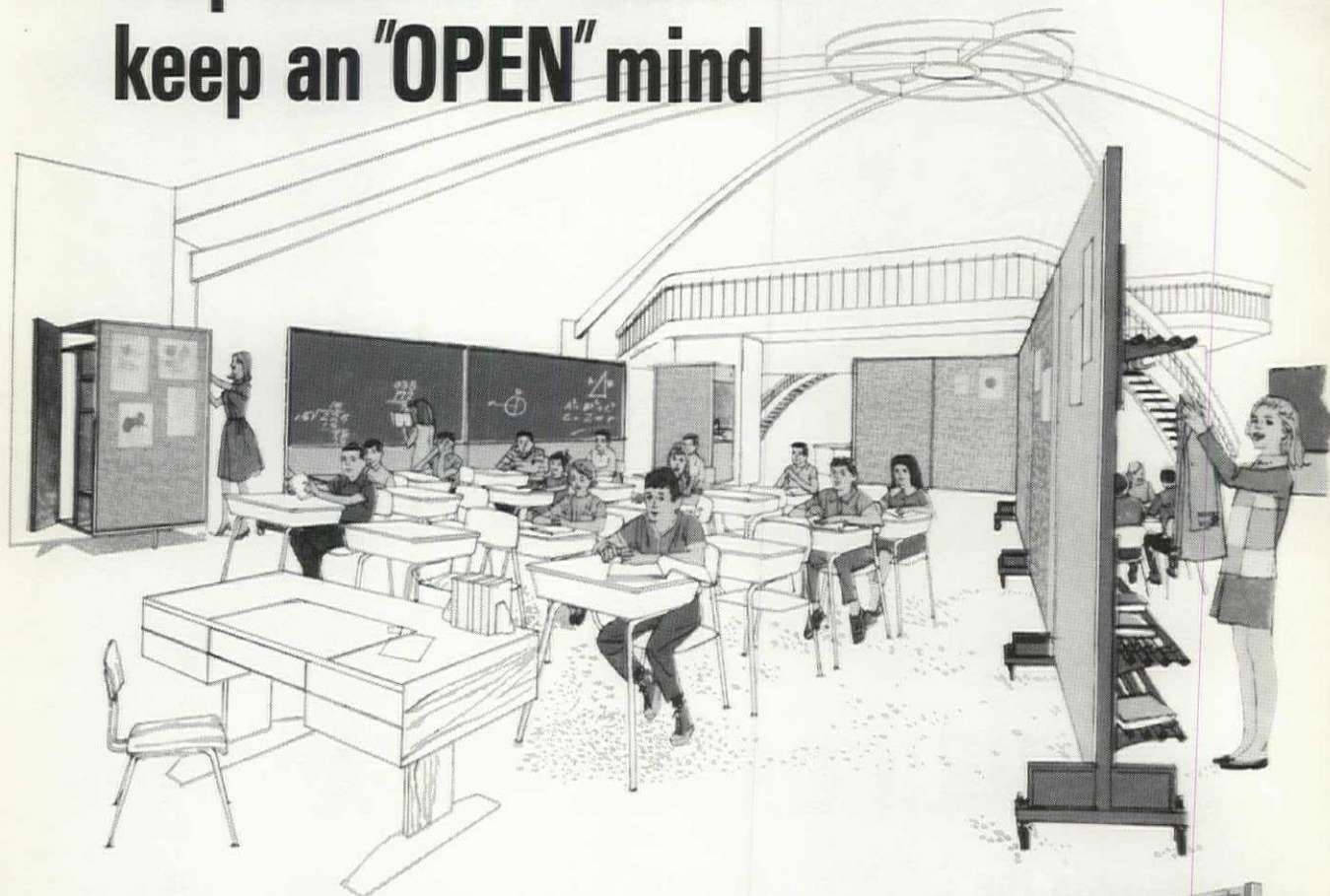
State Gough, manager of Ford Motor Co.'s building services department, says the new technique is a major advance in carpeting.

Mr. Powell said the new technique is a major advance in carpeting.

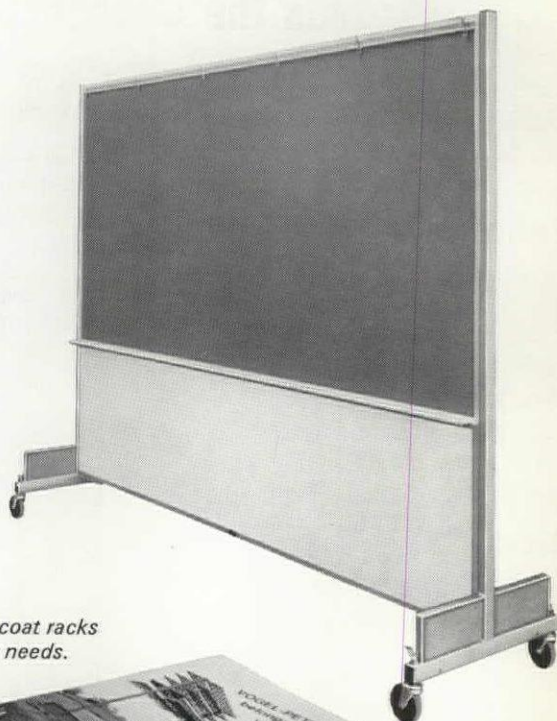
JUTE CARPET BACKING COUNCIL, INC.

- 25 Broadway, New York, N.Y. 10004 • American Industries, Inc. • Bemis Co., Inc. • BMT Commodity Corp. • C. G. Trading Corp. • Delca International Corp. • Dennard & Pritchard Company, Ltd. • A. de Swaan, Inc. • Robert F. Fitzpatrick & Co. • Gillespie & Co. of New York, Inc. • Hanson & Orth, Inc. • O. G. Innes Corp. • Iselin-Jefferson Co., Inc. • Jute Industries, Ltd. • Lou Meltzer Co. • Pak-Am Inc. • William E. Peck & Co. of N. Y. Inc. • R. L. Pritchard & Co. • Revonah Spinning Mills • Stein, Hall & Co., Inc. • White Lamb Finlay Inc. • Willcox Enterprises, Inc.

Vogel-Peterson RDF's help School Planners keep an "OPEN" mind



One moment they're handsome wardrobe racks, chalkboards or tackboards . . . a few seconds later they've converted an open plan school room into efficiently arranged classrooms to accommodate any size class or teaching requirement! Trust Vogel-Peterson to bring you the room-making magic of dual purpose RDF (Schoolline Room Divider Wardrobes) . . . 6 or 8 feet long sections that move silently and effortlessly on large rubber-tired casters . . . sturdily made, beautifully detailed and finished in colors that complement the most modern decor. Have them in any combination you wish—tackboard both sides, chalkboard both sides, or tackboard/chalkboard combination or tackboard side can be accessorized with wardrobe racks and book or boot shelves. School planners welcome their versatility . . . teachers like their efficiency and kids can't hurt them. Look into these versatile units—they're designed with you in mind.



The RDF's are just one of a most complete line of coat racks and wardrobes designed to meet today's changing needs. Write for our complete catalog SL-920



Vogel-Peterson COMPANY
"The Coat Rack People"
ELMHURST, ILLINOIS



© 1968 V. P. Co.



PRO BASKETBALL

**demands the best in hardwood flooring . . . and that's
MFMA HARD MAPLE**

Playing basketball is one of the toughest ways to earn a living. And the pro teams don't gamble on the basketball floor they use!

It's a fact—each NBA and ABA team competes on a hardwood floor—either a permanent or portable installation. A hardwood floor—such as a MFMA hard maple floor—has greater resiliency for faster “live” action, assures better footing, helps minimize injuries, provides greater peripheral vision for better accuracy in shooting and passing.

It pays to join the pros when choosing your next basketball floor — and get savings too with annual routine maintenance costing about 7¢ a square foot per year.

Look for the trademarked MFMA millmark impressed on the underside, and imprinted on the face that identifies genuine MFMA hardwood flooring of maple, birch, or beech. For details see Sweets Catalog or write . . .



Maple Flooring Manufacturers Association
424 Washington Avenue
Oshkosh, Wisconsin 54901

SPECIFY

ZIG ZAG



ON YOUR PROJECTS

**IT IS USED IN
SO MANY
WAYS**

Interior plaster

Produces an easy-working finish coat for smooth, white durable walls.

Mortar

Creates a strong, moisture-proof, self-healing mixture.

Stucco

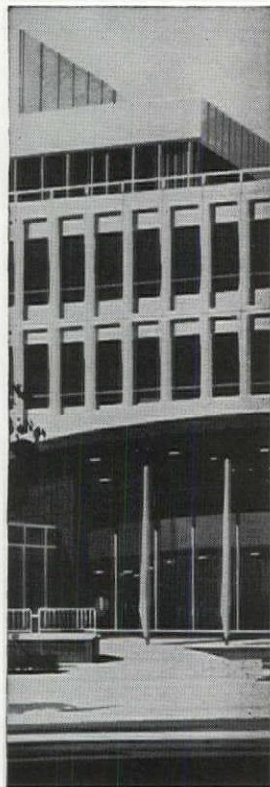
Creates a finish which endures weather and vibration stresses.

Concrete

Forms a mixture which is very placeable and homogeneous.

Grading and Landscaping

Conditions the soil for better lawns and gardens.



Ohio® Lime products meet all existing Federal and A.S.T.M. Specifications.



Literature is available to help you.

For complete specification data write to:

OHIO® LIME COMPANY
Woodville, Ohio 43469

Subsidiary of GENERAL REFRACTORIES COMPANY
Circle 247 on information card

Calendar

National

- Oct. 13-16:** National Apartment Association Annual Convention, Flamingo, Dunes and Caesar's Palace Hotels, Las Vegas
- Oct. 17:** Building Products Executives Conference, Statler Hilton Hotel, Washington, D.C.
- Oct. 30-Nov. 1:** Architectural Woodwork Institute Annual Convention, Sheraton-Boston Hotel, Boston
- Nov. 3-8:** American Concrete Institute Convention, Sheraton-Peabody Hotel, Memphis, Tennessee
- Nov. 9-13:** Structural Clay Products Institute Convention, Puerto Rico Sheraton Hotel, Puerto Rico
- Nov. 12-13:** Interprofessional Conference on Education for Environmental Design, University of Notre Dame, Notre Dame, Ind.
- Nov. 12-15:** National Plastics Conference, Conrad Hilton Hotel, Chicago
- Nov. 23-27:** ASC/AIA Student Forum, University of Michigan, Ann Arbor

AIA Regional and State Conventions

- Oct. 23-25:** Indiana Society of Architects, Stouffers Indianapolis Inn, Indianapolis
- Oct. 25-28:** Florida Region, Daytona Plaza, Daytona Beach
- Nov. 6-8:** Texas Region, Driscoll Hotel, Corpus Christi
- Nov. 7-10:** New England Region, Park Plaza Hotel, New Haven, Conn.

International

- Oct. 14-16:** Congress of International Council for Building Research Studies and Documentation, Sheraton Silver Spring Hotel, Silver Spring, Md., and Skyline Hotel, Ottawa (Oct. 9-11)
- Oct. 20-25:** Interamerican Planning Conference sponsored by the Sociedad Interamericana de Planificacion, Lima, Peru
- Nov. 14-15:** International Seminar on the Durability of Insulating Glass, National Bureau of Standards Building, Gaithersburg, Md.

Continuing Education

- Fellowships for 1969-70 and summer stipends for 1969 for persons under 40 who have completed their professional training, with particular emphasis on proposals for such national problems as the urban crisis. Contact: National Endowment for the Humanities, 1800 G St. N.W., Washington, D.C., 20506. Applications due Oct. 14.
- Competition for grants for academic study or research abroad and for professional training in the creative and performing arts. Contact: Information and Reference Services Division, Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017. Submissions due Nov. 1.

Awards Programs

- Design in Steel Award Program, including architects for the first time. Contact: American Iron and Steel Institute, 201 E. 42nd St., New York, N.Y. 10017. Submissions due Jan. 17.

Tours

- Mexican Architecture and Interior Design Seminar-Tour, meeting Mexico City Feb. 9-22 and Sept. 14-27, 1969. Contact: T. H. Hewitt, P.O. Box 2292, San Francisco, Calif. 94126. □



The Un-spoiler goes underground

Montreal's urban revitalization program put seven architectural firms to the test of creating durable beauty in a utilitarian, multi-station metro system.

Among the main problem areas were the easily vandalized, usually hard to maintain, subway walls along the passenger terminals. One of the architects for the Montreal Transportation Authority specified Rigid-tex[®], the Un-spoiler. These Rigid-tex wall panels are resistant to banging,

marring, scratching, denting and have a graphic, textured look.

The Un-spoiler was equal to the task. Rigid-tex pattern 1-NA, 2D finish in .016" gauge Stainless is a design strengthened texture that withstands the kind of abuse that ruins plain stainless, laminates, and other untextured wall materials. Rigid-tex is the Un-spoiler. Let us show you the 60 plus patterns that can be Rigidized in all ferrous and non-ferrous metals.



For literature & samples, write/wire/call.



RIGIDIZED METALS CORP.

658 OHIO STREET, BUFFALO, N.Y. 14203

TELEPHONE 716 856-9060

Circle 318 on information card

AIA JOURNAL/OCTOBER 1968 121

Letters

A Bow to Clarence Stein

EDITOR:

Robert Riley's article in August on the passing of Tyrone should have expressed some stronger protest at this cultural desecration, an asset the more valuable in its New Mexico setting.

In the AIA JOURNAL, I also would have thought it obligatory to recognize that AIA Gold Medalist Clarence S. Stein, as chief designer in Goodhue's office, was in charge of the planning of Tyrone. The project thus assumes its proper place in urban design history, not as an exotic aberration but as one of the hinges connecting the Beaux Arts tradition with the rise of contemporary interest in housing and urban planning, as exemplified in the work of the City Housing Corp., the Greenbelt towns and Virginia's Reston.

FREDERICK GUTHEIM, HON. AIA
Consultant on Urban Affairs
Washington, D.C.

Air Rights and Human Habitation

EDITOR:

The lead article by John Eberhard in the July issue will be, I hope, the beginning of more extensive discourses on architectural methodology.

The plethora of "intuitive" and preconceived notions that pass for solutions without verification of pertinent factors is all too evident. This is glaringly demonstrated in the article on air rights by Thomas Galvin.

To excuse "bridge apartments" as having no worse noise and fume problems than any other similar solution is setting up mediocre criteria and appears to lack concern for the environment which is supposed to be one of the *raison d'être* of the architect. I appreciate that there are "agonizing challenges" in air rights problems. These are technologically well solved, but what about user reaction?

Air rights may be a "rich harvest" of space, but are some of these spaces fit for human habitation? Or will built-in mental health clinics be provided for those who cannot stand the stress?

JOSEF VAN DER KAR
Associate Professor
Department of Architecture
Pennsylvania State University
University Park, Pa.

Mr. Galvin Replies

EDITOR:

Professor Van der Kar's quarrel is not so much with the air rights concept as with the problems of environmental control. This in turn boils down to the problem of site selection, a factor which is largely predetermined by the client, private or public.

In an urban area, the problem of shielding any building from city noise, dirt and fumes is basically the same. There simply is not enough space to create buffer zones of open areas unless the client is willing to absorb the extra costs for additional land. Obviously, in metropolitan areas where land costs are high, this would render most projects economically unfeasible.

In the case of buildings erected in the air rights over highways, the problems of noise and fumes can be considerably reduced, if not eliminated altogether, by decking over the open spaces between a multibuilding complex and carrying exhaust vents to the roof. This is a practical solution in planning such a facility—if the economic realities permit this added expense.

The fact is that the air rights principle makes possible the construction of desperately needed housing and essential facilities such as schools, where other approaches would not be possible solely because the funds were lacking.

THOMAS F. GALVIN, AIA
New York, N.Y.

In Defense of Travel Tours

EDITOR:

Mention the word "tour" in connection with travel and most Americans will turn up their noses. My wife and I, however, early this year joined the "Around South America Architectural Trek" sponsored by the AIA and conducted by the US Travel Agency, and we found it most rewarding.

While I recounted our experiences in some detail in the newsletter of the Northern Virginia Section of the Washington-Metropolitan Chapter AIA which I edit, I would like to repeat a couple of observations here.

Brasilia is an astonishing example of constructing a city from scratch in the middle of the wilderness. Nine years ago there was nothing and today it is about one-fourth completed, with 250,000 inhabitants. It is really an architect's dream and about one-third of the government offices already has been moved to Brasilia.

Presently, more housing goes up in Sao Paulo than anywhere else.

On the border between Brazil, Paraguay and Argentina, where the Parana, Iguacu and Acarey Rivers come together, are the great Iguacu Falls. They are bigger than Niagara but still totally undeveloped for power and recreation, lying buried in the forest in unspoiled beauty. Brazil has now started construction of a road in to the falls.

We met for about an hour with President Belaúnde of Peru. He is an architect and for 10 years was dean of architecture at the University of Lima. He described his plans for the country's development, which include an international architectural competition for housing the middle-class people of Lima.

His countrymen have constructed a road down the east side of the Andes to open up for the first time the rich Peruvian jungle area near the head of the Amazon. He has two projects underway for damming up rivers in that area and diverting the water through tunnels to the west side of the mountains to irrigate the arid coast.

There are undoubtedly great opportunities to be found in South America as well as high adventure, and if a person wanted to try to do work in that country, I would make three suggestions: 1) learn the language—go at least half way in this regard; 2) accept the things which are done differently there; 3) get the local information from the American Consul or Embassy. After meeting with the cultural and economic attaches in all the countries we visited, I have a very high regard for our foreign diplomatic service.

So much of what one sees in foreign travel is man-made and related to architecture that I believe architects and engineers, by the nature of their training, profit more than most. So I urge my colleagues to take all the trips possible—when they get the kids and business to the point where they can leave them.

EARL B. BAILEY, AIA
Fairfax, Va.

ED. NOTE: Having participated in the "Mexican Architecture and Interior Design Seminar-Tour" last fall, I concur in general with Mr. Bailey about the value of such specialized jaunts. However, the AIA JOURNAL as a matter of policy does not personally endorse the tours which are listed from time to time on the Calendar; we do so as a service to our architect-readers.

The AIA JOURNAL encourages expressions of opinions from its readers but reserves the right to edit for length and style. Address letters to the Editor at the Octagon.



A library designed for today *and* tomorrow demands classic simplicity and enduring craftsmanship in library furniture

... that's NORDRA 900

Styled in either American black walnut or hard white maple, all-wood NORDRA 900 offers the same *complete* range of matched and co-ordinated pieces included in all Sjöström series. Study tables, carrels, tables, chairs and card catalogs . . . circulation desks in many arrangements, and Sjöström-designed NORDRA Lounge Furniture.

Countless functional features attest Sjöström's intimate knowledge of library needs.*

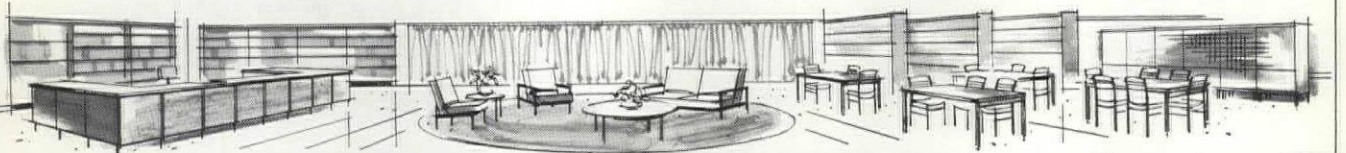
Compare NORDRA 900 furniture with any other. A critical examination of structural details will prove that you cannot compromise on value.

Be sure to see NORDRA 900. Though a look may convince you, only time will prove its true superiority.

* For example, a choice of card trays that are the ultimate in style and convenience. New wood trays give greater card capacity, have improved follower and rod-locking arrangement; or there is the one-piece tray, molded of unbreakable plastic, light in weight, with the rod-knob flushed into the non-marring surface of the tray-front.

SJÖSTRÖM USA

LIBRARY AND SCIENCE ROOM FURNITURE
1717 NORTH TENTH ST., PHILADELPHIA, PA. 19122



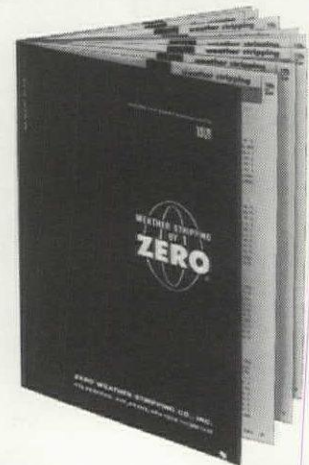
NORDRA 900

Advertisers

Aerofin Corporation <i>Richards & Weiss, Inc.</i>	94
Altec Lansing <i>Gumpertz, Bentley & Dolan</i>	31
American Seating Company <i>Ross Roy, Inc.</i>	10-11
Architectural Aluminum Manufacturers Association <i>Fuller & Smith & Ross, Inc.</i>	109
Azrock Floor Products <i>Glenn Adv., Inc.</i>	Cov 4
Behlen Manufacturing Company <i>Robert K. Sanford, Adv.</i>	98
Bradley Washfountain Company <i>Hoffman-York, Inc.</i>	24
Buckingham-Virginia Slate Corp. <i>Riddick Advertising Art</i>	110
Philip Carey Corporation <i>Northlich, Stolley, Inc.</i>	88
Cast Iron Soil Pipe Institute <i>David Olen Adv.</i>	108
Chicago Metallic Corporation <i>Trnka Advertising, Inc.</i>	92
Dover Corporation, Elevator Div. <i>Greenhaw & Rush, Inc.</i>	2-3
E. I. du Pont de Nemours & Co. <i>N. W. Ayer & Son, Inc.</i>	85
Eaton Yale & Towne, Inc. <i>Fuller & Smith & Ross, Inc.</i>	107
Eggers Hardwood Products Corp. <i>Van Handel Company</i>	89
Elkay Manufacturing Company <i>The Biddle Advertising Co.</i>	4
Emhart Corp., P.&F. Corbin Div. <i>Wilson, Haight & Welch, Inc.</i>	15
Fixtures Manufacturing Corp. <i>Sher & Jones, Inc.</i>	37, 100
Follansbee Steel Corp. <i>George Hill Co.</i>	83
Georgia Marble Company <i>Lowe & Stevens</i>	38
Haws Drinking Faucet Company <i>Pacific Adv. Staff</i>	17
Hillyard Chemical Company <i>Ayres & Assoc., Inc.</i>	112
Hope's Windows, Incorporated <i>The Moss-Chase Co.</i>	103
Inland-Ryerson Construction Products Company <i>Hoffman-York, Inc.</i>	97
Jones & Laughlin Stainless & Strip Division <i>Bozell & Jacobs, Inc.</i>	7
Jute Carpet Backing Council <i>Bauer, Tripp, Hening & Bressler, Inc.</i>	117
Kawneer Company <i>Petscher, Janda Assoc., Inc.</i>	18-19
Kentile Floors, Incorporated <i>Benton & Bowles, Inc.</i>	8-9
Koh-I-Noor, Incorporated <i>Persons Adv., Inc.</i>	116
LCN Closers <i>Alex T. Franz, Inc.</i>	32-33
Libbey-Owens-Ford Glass Co. <i>Fuller & Smith & Ross, Inc.</i>	27
R. C. Mahon, Bldg. Prod. Div. <i>Gray & Kilgore, Inc.</i>	90-91
Maple Flooring Manufacturers Association <i>The Rutledge Co.</i>	119
Marble Institute of America	1
Marlite Division of Masonite Corporation <i>Howard Swink Adv., Inc.</i>	Cov 2
D. A. Matot, Incorporated <i>Ross Llewellyn, Inc.</i>	126
McGraw-Edison, Power Systems Div. <i>Connor-Sager Assoc., Inc.</i>	22-23
W. R. Meadows, Incorporated <i>Trnka Adv., Inc.</i>	104
Medusa Portland Cement Company <i>Will, Inc.</i>	28
Mo-Sai Institute, Incorporated <i>David W. Evans & Assoc.</i>	20-21
The Nateco Company <i>Buntin, Crook, Harmon, Smith, Inc.</i>	115
National Electrical Contractors Association <i>Henry J. Kaufman & Assoc.</i>	95
National Terrazzo & Mosaic Association, Incorporated	105
Ohio Lime Company <i>Thwaites-Younglove Adv.</i>	120
Paragon Swimming Pool Co. <i>Taube, Violante, Inc.</i>	108
Potlatch Forests, Inc. <i>R. G. Williams Company</i>	25
Potter-Roemer, Incorporated <i>Reeds and Farris</i>	125

Prestressed Concrete Institute <i>Scott & Scott Adv., Inc.</i>	87
Rambusch Decorating Company <i>Persons Advertising, Inc.</i>	35
Rauland-Borg Corporation <i>George Brodsky Adv., Inc.</i>	26
Richards-Wilcox Manufacturing <i>Connor-Sager Assoc., Inc.</i>	14
Rigidized Metals Corporation <i>Russell Baker, Inc.</i>	121
Rixson Closers <i>Motivation Dynamics</i>	16
Ronan & Kunzl, Incorporated <i>Columbia Adv., Inc.</i>	114
Sargent & Company <i>Hepler & Gibney, Inc.</i>	28A-28D
Shaw-Perkins Mfg. Co. <i>Charles P. Evans</i>	34
John E. Sjostrom Company <i>Richardson, Thomas & Bushman, Inc.</i>	123
R. & G. Sloane Mfg. Div., The Susquehanna Corp. <i>Dan Ebberts & Co., Adv.</i>	93
Soss Manufacturing Company <i>Harry H. Goldberg, Jr., Adv.</i>	106
Stonco Electric Products Co. <i>Serge Loukin</i>	100
The Sturgis Company <i>Ketchum, MacLeod & Grove, Inc.</i>	111
Talk-A-Phone Company <i>N. N. Johnson, Adv.</i>	96
Trinity White, General Portland Cement Company <i>Alex T. Franz, Inc.</i>	113
United States Plywood Corp. <i>Young & Rubicam, Inc.</i>	29-30
Vermont Marble Company <i>Knudsen-Moore, Inc.</i>	99
Vogel-Peterson Company <i>Ross Llewellyn, Inc.</i>	118
Henry Weis Manufacturing Co. <i>Ash Advertising, Inc.</i>	101
Wenger Corporation <i>Jack Wenger Adv., Inc.</i>	102
Woodwork Corporation of America <i>Garfield-Linn & Co.</i>	13
World Carpets, Incorporated <i>Douglas D. Simon Adv., Inc.</i>	Cov 3
Zero Weather Stripping Co., Inc. <i>Lawrence Peskin & Edrick, Inc.</i>	124

Most complete, authoritative guide



- WEATHER STRIPPING
- SOUND-PROOFING
- LIGHT-PROOFING
- THRESHOLDS



Request Copy on Your Letterhead

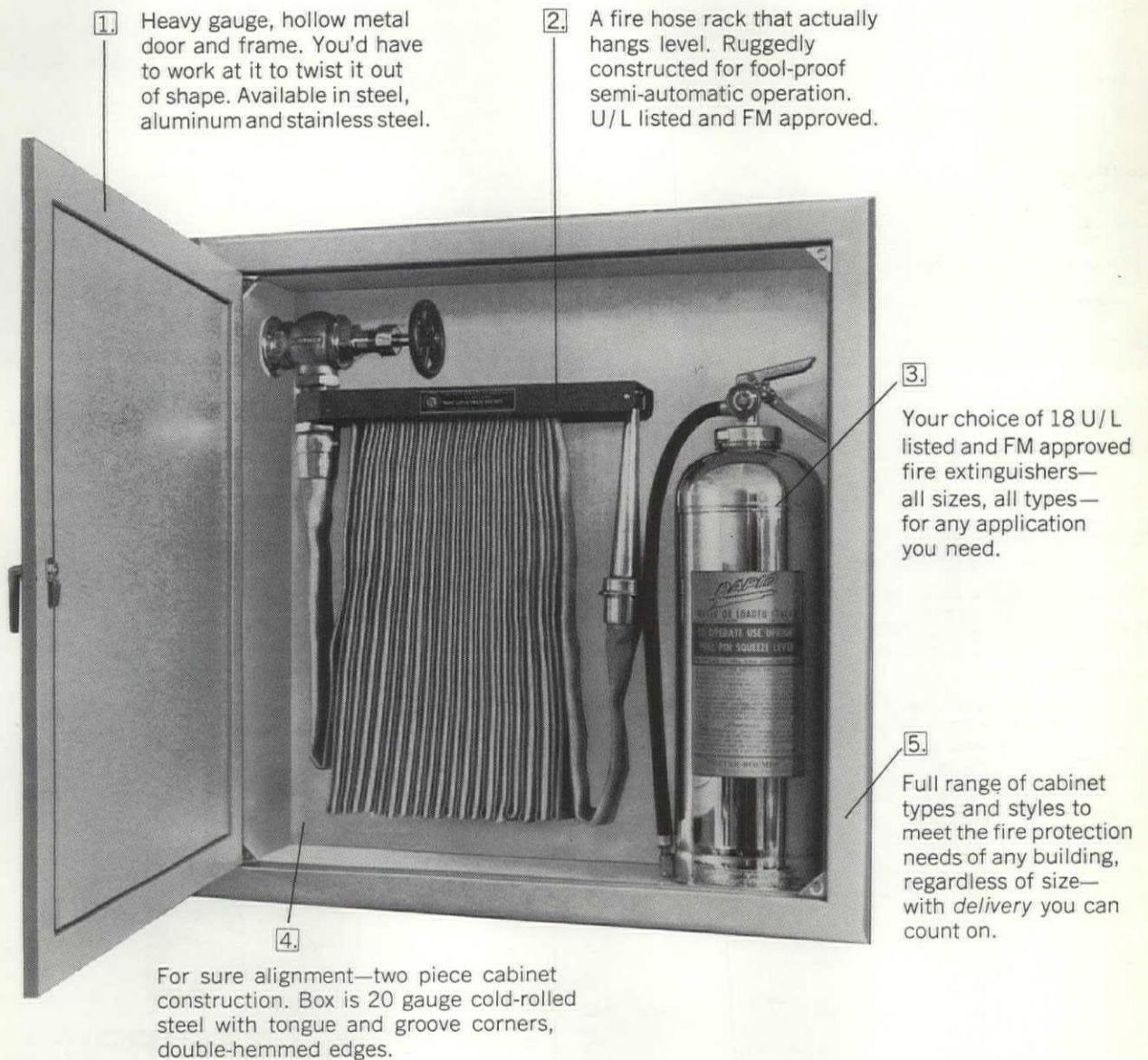
Our 44th year of service to the architect



ZERO WEATHER STRIPPING CO., INC.
415 Concord Ave., Bronx, N.Y. 10455 (212) LU 5-3230

Sooner or later, you'll have to pass judgment on Potter-Roemer fire hose cabinets.

Here are six reasons why it should be sooner:



1. Heavy gauge, hollow metal door and frame. You'd have to work at it to twist it out of shape. Available in steel, aluminum and stainless steel.

2. A fire hose rack that actually hangs level. Ruggedly constructed for fool-proof semi-automatic operation. U/L listed and FM approved.

3. Your choice of 18 U/L listed and FM approved fire extinguishers—all sizes, all types—for any application you need.

5. Full range of cabinet types and styles to meet the fire protection needs of any building, regardless of size—with *delivery* you can count on.

4. For sure alignment—two piece cabinet construction. Box is 20 gauge cold-rolled steel with tongue and groove corners, double-hemmed edges.

6. A practical, readable, full-line catalog that lets you quickly design your job . . . rather than spend your time figuring out the catalog. It's free. Send for it.

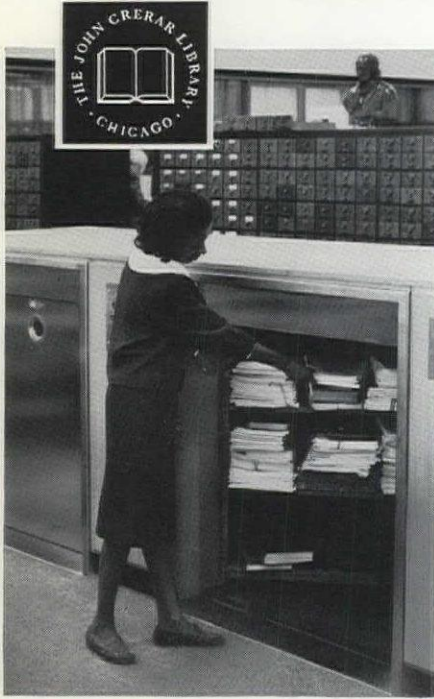


POTTER-ROEMER, INC. 2856 Leonis Boulevard, Los Angeles, California 90058

Fire Hose Cabinets, Hose Racks, Extinguishers, Valves and Standpipe Systems.

At Crerar Library...

**Matot lifts speed
400 requests daily**



Located in a new building on the campus of the Illinois Institute of Technology, Crerar Library averages 400 reader requests daily for technical research material.

PROBLEM: To locate and make requested material available to the check-out desk as quickly as possible.

SOLUTION: Two Matot truck-in book lifts and a pneumatic tube system. *First*—requests are sent by tube to one of three employee-stations located on the first floor. *Second*—an employee takes the request, locates the book and puts it on one of two centrally located lifts. *Third*—the material arrives on the lift under the counter-top of the main desk where the librarian verifies it and checks it out. The entire operation takes 5 minutes. Up to 30 requests can be handled at one time. Returned material is loaded onto carts and trucked-into dumbwaiter for return to shelves.

Matot designs lifts for many uses: money lifts, food lifts and record carriers. Write for free information on how Matot can make a building and its employees operate more efficiently.

D. A. MATOT, INC.

1533 W. Altgeld Avenue · Chicago, Illinois 60614
312 Lincoln 9-2177

Specializing in Dumbwaiters since 1888

See our catalog in Sweet's

23a
Mat



Circle 312 on information card

Architects Information Service

To order single copies of items listed: circle number on card that corresponds to number beside each of the listed items you want. Send no money now. The charge, if any, for a single copy is noted for each item, and you will be billed for this amount. Minimum billing for reprints is \$1.

To order manufacturers' technical data: Circle number on card that corresponds to the number beneath or beside each product advertisement for which you wish additional specific printed technical data sent to you. Information will be sent from the appropriate producer.

Current Issue Reprints

single copies free

- 1 A No-Nonsense Approach to Practice—p. 59
- 2 Radiation Shielding: An Architectural Primer 1—p. 68

Previous Issue Reprints

single copy prices as noted

- 10 The Architect and Housing—8 pp.; no charge
- 17 Liability Insurance—6 pp.; 25¢
Down-to-earth look at the architect's status
- 20 Modular-Jointed Education of Joe's Boys —4 pp.; 25¢
Progress report on the Princeton Project

104 Expo 67—16 pp.; 50¢
A Canadian architect's critique

105 Planning the Powder Room—3 pp.; 25¢
A workability tour of an impenetrable area

106 Art/Architecture—13 pp.; 25¢
• *Art as an Architectural Element*
• *A Few Thoughts and Criticisms*
• *A Bank as an Art-Architectural Patron*

107 Practice Profile: Pancoast/Ferendino/Grafton of Miami—6 pp.; 25¢
An unusual contract with a school board

108 Practice Profile: Wallace K. Harrison, FAIA—6 pp.; 25¢
Study of the 1967 Gold Medalist

109 Designing a Church: An Act of Risk—3 pp.; 25¢
Appraising today's religious symbols

110 From Three Emerged One—24 pp.; no charge
Jury report of the first Reynolds Award for Community Architecture

111 How to Make the Most of Your Models—3 pp.; 25¢
A clever photographic technique

112 An Architect's Sketchbook—8 pp.; 25¢
Drawings from Japan and India

113 The Immediate Environment—36 pp.; \$1
Seven viewpoints on the architect's role and responsibility in housing

114 The Big Ground Wave—5 pp.; 25¢
Challenge of supersonic travel

117 Adventures in the Pursuit of Excellence—5 pp.; 25¢
A review of the controversial Bard Awards

118 "Let's All Go Down to the Jail and See Andy Warhol"—4 pp.; 25¢
Finding room for the arts in resourceful communities

Special Offers

33 AIA JOURNAL subscription information and prices. For registered architect rates, see subscription card.

34 Binders for AIA JOURNAL, information and prices

35 AIA JOURNAL Annual Index, 1967, single copy free

36 Reprints in quantity, information and prices

39 The House and Its Design, slide kit sponsored by the AIA and United States Savings and Loan League, information and prices

40 Clearinghouse for Federal Scientific and Technical Information, subscription price

41 Uniform Plans for Stock Schools, annotated bibliography

43 1966 Design Award Program (HEW-AIA-EFL), brochure of higher education facilities

44 Your Building and Your Architect, 18-page booklet for clients

45 Checklist for Cities, a working guide for urban analysis

46 NACA Ceiling Systems Handbook, order form