

Installation: Davison's Department Store, Columbia Mall Shopping Center, Atlanta, Georgia Architect: Toombs, Amisano & Wells, Atlanta, Georgia Floor shown: V-423 Autumn Haze

Creative styling: an inherent quality of Azrock floors.

Heavy traffic means good business. — and it's good business to move heavy traffic on durable, handsome floors of Azrock vinyl asbestos tile. Day in, day out Azrock's Premiere Series floors serve Davison's Department Store in Atlanta. Premiere's rich travertine styling puts beauty underfoot for extra-long service, because the patterning extends through the full thickness of the tile . . . another specific way in which Azrock imagination and resilient flooring craftsmanship serve the architectural profession. Now available in 12" x 12" modular size.

an original floor styling by **AZROCK** 

Consult Sweet's Catalog or write for samples. Azrock Floor Products, 500A Frost Building, San Antonio, Texas 78205.



# Fit all your needs!

## (WITH NATIONAL ELECTRIC'S WIDE RANGE OF SERVICE FITTINGS)

Service fitting problems in your underfloor wiring systems? Then National Electric has 162 good reasons why these problems can be solved easily. We fit all your needs perfectly! With 162 service fittings for high and low potential service . . . National Electric can meet any of your underfloor raceway applications.

Advantages? There are many with National Electric's service fittings. Each one is designed for *all* underfloor raceway systems . . . whether it be ours or our competitors. Available are: Flush Service fittings, Cast Aluminum, Brass, Special Telephone Application, Standpipe, Top Hat, Flushduct and others . . . all designed with streamlined appearance in mind. And most important . . . all are adaptable to both high and low potential.

When your demands are for a good service fitting, National Electric is your answer. For more information on our wide range of service fittings, see your electrical distributor. Or write for our catalog No. 751. Electrical Division, 432 Porter Building, Pittsburgh, Pa. 15219.



## ELECTRICAL DIVISION H. K. PORTER COMPANY, INC.

EDITOR Jan C. Rowan, AIA

MANAGING EDITOR Burton H. Holmes, AIA

SENIOR EDITOR James T. Burns, Jr. P/A Observer

ASSOCIATE EDITORS Ellen Perry Features C. Ray Smith Features and Interior Design Edward K. Carpenter News Report Maude Dorr Features Forrest Wilson Features Peter M. Green Materials and Methods

COPY EDITOR George Lubasz

ASSISTANT EDITORS Jean Hatton Duffy Assistant to the Editor Alis D. Runge Materials and Methods Ruth Helen Cheney Book Reviews

CONTRIBUTING EDITORS Norman Coplan It's The Law Bernard Tomson It's The Law E. E. Halmos, Jr. Washington/Financial William J. McGuinness Mechanical Engineering Critique Harold J. Rosen Specifications Clinic

#### GRAPHICS

Gary Fujiwara Art Director Elizabeth White Assistant Art Director Nicholas R. Loscalzo Chief Draftsman Paul R. Doran Draftsman

EDITORIAL PRODUCTION Abigail M. Sturges

EDITORIAL ASSISTANTS Phyllis C. Fleckner Suzanne L. Stephens Julia N. D. Owen

PUBLISHER Philip H. Hubbard, Jr.

ADVERTISING SALES MANAGER William R. Evans, Jr.

RESEARCH AND PROMOTION MANAGER Burchard M. Day

PRODUCTION DIRECTOR Joseph M. Scanlon

ADVERTISING PRODUCTION MANAGER Daniel H. Desimone

CIRCULATION MANAGER David N. Whitcombe

SUBSCRIPTION MANAGER Sue Feldman



Progressive Architecture ® September 1966

125 EDITORIAL

P/A's Editor discusses how resistance to change has historically affected the structure of environment.

COMMENTARY AND ANALYSIS

126 THE ARCHITECT'S OWN OFFICE

- 126 INTRODUCTION: A presentation of 10 offices, in which architects get the chance to convey a special image, as well as create a suitable working environment.
- 128 DISTINGUISHED NEIGHBORS: Richard Meier's small floor-through in a four-story Manhattan building has views of the Lever Building and the Racquet Club.
- 129 MINIMAL MAINTENANCE: Howard Barnstone & Partner, Eugene Aubry, and Burdett Keeland, Jr., design a compact office for their joint use at \$7.60 per sq ft.
- 130 MESSAGE FROM TELEGRAPH HILL: Lawrence Halprin's San Francisco office, in a converted warehouse, overlooks the Golden Gate Bridge.
- 132 DOWNTOWN DIGS: Vincent Kling's office, which takes in two-and-a-half stories of a downtown Philadelphia office building, has a two-story reception area.
- 133 DESIGN DISPLAY: George Nelson converts an East-Side Manhattan townhouse to give him the "unusual" office space he wanted.
- 134 COVERED COURTYARD: Office of George Pierce & Abel Pierce in Houston is turned inward to a landscaped courtyard.
- 135 TAILORED FOR ARCHITECTS: When Griswold & Rauma moved to a former tailor's shop on the outskirts of the Minneapolis business community, they made few changes in their new quarters.
- 135 FREEWAY LOFT: A spacious loft, partitioned to provide necessary working areas, is now the office of Gregory Walsh, Jr., and Frank Gehry.
- 137 MASONIC RITES: A former Masonic Temple that overlooks the Charles River in Watertown, Mass., provides Sasaki-Dawson-DeMay Associates ample space at a reasonable rental.
- 138 FLUID SPACE: A group of young architects—James Polshek, Walfredo Toscanini, Richard Kaplan, and Michael Zimmer—share the forty-seventh floor of a Manhattan skyscraper with a 15,000-gallon water tank.
- 140 IN SOUTH AMERICA: AFTER CORBU, WHAT'S HAPPENING? A comprehensive survey of the problems and directions of South American architecture, including an eyewitness survey of Caracas, Bogotá, Quito, Lima, São Paulo, Rio de Janeiro; interviews with Oscar Niemeyer and Carlos Raul Villanueva, among others; and the work and architectural preoccupations of the younger generation.
- 162 EARLY TEXAS GEOMETRY: A visual presentation that examines the anonymous buildings—the barns and small houses—of Texas.

166 THE PRAIRIE SCHOOL IN PUERTO RICO: Representative work of the little-known architect Antonin Nechodoma, whose designs place him with the "Prairie School" of architecture.

#### MATERIALS AND METHODS

- 170 EXTERIOR CORES GET LEFT RIGHT OUT: A conventional core design replaced a trussed-wall structure to economically accommodate small renting spaces.
- 172 NONDESTRUCTIVE TESTING IN BUILDING CONSTRUCTION: There are cheaper methods available for testing structural soundness than tearing down steel or concrete; four techniques are explained in detail.
- 174 LAMINATED LUMBER LIVENS LIBRARY: Laminated timber beams support timber roof panels of small Florida library.
- 176 STAINLESS STEEL UNTARNISHES ITS STRUC-TURAL REPUTATION: The capabilities of stainless steel as a structural material.

## 51 P/A NEWS REPORT

Harvard starts work on Environmental Design program . . . Inside Fuller's dome: U.S. exhibit for Expo '67 . . . Cover proposed for Philadelphia expressway . . . Products . . . Data.

## P/A OBSERVER

- 179 SOME MODEST PROPOSALS: Prompted by the controversy surrounding the proposals for extending the West Front of the Capitol, P/A suggests ways of "beautifying" six architectural landmarks.
- 182 CASINO INTO CINEMA INTO CHURCH: A Harlem movie house is converted into a church building whose design has notably affected the life of its congregation.
- 185 EXPANDING ARCHITECTURE: Pratt Institute student designs proposed LSD research, treatment, and observation center that deserves study by the profession.
- 187 FUN CITY, FUN PARK, FUN CAFÉ: The new Café on the Terrace in Manhattan's Central Park respects its setting and adds a touch of fun and color for tired and hungry New Yorkers.
- 190 COLLECTOR'S CAVE AND ANDEAN AERIE: Accommodating showrooms for a fabric designer and art dealer within the same building has been achieved with style and elegance.
- 192 NEW TOWN=NEW HOPE IN MISSISSIPPI: The beginnings of a new town in the Mississippi Delta, Strike City, offers new hope to the economically distressed Negroes of the region.

## 196 **MECHANICAL ENGINEERING CRITIQUE** William J. McGuinness discusses implications of humidity on building design.

## 198 SPECIFICATIONS CLINIC Harold J. Rosen reviews techniques for texturing

and exposing aggregate for architectural concrete.

## 201 IT'S THE LAW

Bernard Tomson and Norman Coplan discuss a case that underscores the layman's lack of understanding of the role of the licensed professional.

## 204 BOOK REVIEWS

A cross-section of significant new books.

#### 6 VIEWS

Our readers' comments on the architectural scene.

## COVER

To persuade the reader that not all architects' offices are necessarily lavish, we show here the at-home, vest-pocket office of one young New York architect, complete with child (p. 126). Photo: Maude Dorr.

#### 124 FRONTISPIECE

Textile-covered scaffolding, Cuzco, Peru (p. 140). Photo: C. Ray Smith.

## 123 TITLE PAGE

From an address by Edgar Kaufmann, Jr., at the International Design Conference, Aspen, Colorado, June 1966.

### 268 JOBS AND MEN

#### 270 DIRECTORY OF PRODUCT ADVERTISERS

#### 273 READERS' SERVICE CARD

A monthly service to P/A readers who desire additional information on advertised products and those described in the News Report, who wish to order Reinhold books, or who want to enter their own subscriptions to P/A.



PROGRESSIVE ARCHITECTURE, PUBLISHED MONTHLY BY REIN-HOLD PUBLISHING CORPORATION, 430 PARK AVENUE, NEW YORK, N.Y. 10022. RALPH W. REINHOLD, CHAIRMAN OF THE BOARD; PHILIP H. HUBBARD, SR., PRESIDENT AND TREASURER; FRED P. PETERS, EXECUTIVE VICE-PRESIDENT; KATHLEEN STARKE, SECRETARY AND ASSISTANT TREASURER; C. M. BURNAM, JR., H. R. CLAUSER, PHILIP H. HUBBARD, JR., THOMAS N. J. KOERWER, HARRY J. MARTIN, JR., JAMES B. ROSS, VICE-PRESIDENTS. EXECUTIVE AND EDI-TORIAL OFFICES, 430 PARK AVENUE, NEW YORK, N.Y. 10022.

SUBSCRIPTIONS PAYABLE IN ADVANCE. PUBLISHER RESERVES RIGHT TO REFUSE UNQUALIFIED SUBSCRIPTIONS, SUBSCRIP-TION PRICES TO THOSE WHO, BY TITLE, ARE ARCHITECTS, ENGINEERS, SPECIFICATIONS WRITERS, ESTIMATORS, DESIGN-ERS, OR DRAFTSMEN, AND TO GOVERNMENT DEPARTMENTS, TRADE ASSOCIATIONS, ABOVE TITLE GROUPS ON TEMPORARY MILITARY SERVICE, ARCHITECTURAL SCHOOLS, ARCHITEC-TURAL STUDENTS, ADVERTISERS AND THEIR EMPLOYEES: \$5 FOR ONE YEAR; \$8 FOR TWO YEARS; \$10 FOR THREE YEARS. ALL OTHERS: \$10 A YEAR. ABOVE PRICES ARE APPLICABLE IN U.S., U.S. POSSESSIONS, AND CANADA. ALL PRACTICING ARCHI-TECTS AND ENGINEERS OUTSIDE THESE AREAS: \$10 FOR ONE YEAR; \$16 FOR TWO YEARS; \$20 FOR THREE YEARS. ALL OTHERS: \$20 A YEAR. SINGLE COPY: \$2, PAYABLE IN ADVANCE.

© REINHOLD PUBLISHING CORP., 1966, TRADE MARK REGIS-TERED, ALL RIGHTS RESERVED. INDEXED IN ART INDEX, ARCHITECTURAL INDEX, SECOND-CLASS POSTAGE PAID AT NEW YORK, N.Y., VOLUME XLVII, NO. 9.

What's on your drawing board for our **18 million senior citizens?** 

Maybe a self-contained retirement community. Or a housing project that gives them a special place alongside their juniors. Either way, you want to surround them with more comfort. More warm when it's cold. More cool when it's hot. Barrett Urethane Roof Insulation can help.

It's thinner. Twice as thin as any other insulation with low K factor 0.13. Extends your design to the roofline. And gives maximum thermal efficiency. Through all the Decembers.

Interesting? It gets more so. Write us at: Barrett Division, Dept. PA-9, 40 Rector St., New York, N.Y. 10006.



Building products for home & industry: Acoustical Materials Ceilings DIVISION Urethane



# VIEWS

## More Reactions to P/A Ugliness Issue

Dear Editor: Belatedly, I have read your Editorial in your comprehensive June 1966 P/A, "The War on Ugliness." Just because sometimes we have not seen eye to eye, I feel urged to tell you that I am much impressed by the broadness of your approach and the imagery of your writing.

#### WALTER GROPIUS Cambridge, Mass.

Dear Editor: I should like to commend you on the June issue. I found the cover amusing and stimulating. Four of us in the office worked on its meaning for quite a while and deduced, before reading your Editorial, that its main point related to our "umbilical" interdependence.

As one who programs for other architects, I found the article on consultants timely. I hope it will help temper the long-standing resistance by the profession to "specialists."

I'm still not sure whether I liked the typography. I read more of this issue than of most other issues. Did the type stimulate me?

#### ISIAH EHRLICH New York, N.Y.

Dear Editor: Having a few moments relaxation (in a jet traveling 635 mph), I've had a chance to read your programming article in the June issue. It produces such a rousing response that, while Pennsylvania is pulled past thousands of feet below, I must write of my enthusiasm.

(Aside: I think this time the jazz boys have victimized your good words by all that visual wallpaper. P/A has not improved the newspaper format, only misapplied it.)

Surely the central thing here is the possibility that programming is design. Any good factory or bridge proves this. If Lady Bird finally so corrupts the word "beauty" that architects are foolish enough to use it at all, then the 19th Century may finally be laid to rest sufficiently for us to let our environment be shaped by those who see all of it. These people must not only have vision beyond that of a pattern manufacturer, but must accept full responsibility for the outcome of their work. If they are not called "architects" or "artists" or "designers" and instead are known as Industrogrammers—so what?

> HUGH HARDY New York, N.Y.

Dear Editor: Since the AIA Convention in Denver, I have had the time to thoroughly study the June issue of P/A, including its penetrating statement on the "War on Ugliness."

As you know, I belive that basic issues, not mere beautification, must be faced and resolved to insure final success in this "War" and I welcome your keen appraisal of many of these basic issues.

In fact, the AIA is, in a way, a victim of its own semantics in calling its campaign a "War Against Community Ugliness." What the Institute is really striving for is not just the negation of ugliness but the creation of a better, more livable, and more beautiful urban environment for every American.

We won't get it until we have persuaded the American public that it can and should be their goal as well. We must further persuade them that this is a profitable goal in economic as well as human and aethetic terms.

It all boils down to a choice between the "quick buck" and the "slow buck," between overnight profit and long-term investment. Good environmental architecture, in the full scope of the term, is the only worthwhile long-term investment. Those whose dollars go into building are beginning to realize this; only fly-bynight investors prefer a policy of senseless, wasteful exploitation of the country's resources in land, air, water, and human values.

This may well be a hundred years "war," but it must be won. It is my belief that the AIA, and the profession it represents, will continue the fight—now and in the years to come.

MORRIS KETCHUM, JR. New York, N.Y.

Dear Editor: I cannot tell you how thrilled I was with the June issue. Ugliness, I suppose, is one of the most dramatic manifestations of environment pollution, although I doubt that it is the lethal one. The problem about ugliness, I guess, is that one man's ugliness is another man's par for the course, or even beauty. (Lady Bird certainly put the hex on that word; it's practically passed into the realm of the comic by now.)

However, with air pollution, it's different: people died in Donora, Pa., and in London because of various kinds of garbage in the air, gases and fumes mixed together as if in a giant test tube. And just let a temperature inversion such as the ones we keep getting in New York last for 20 or more days, which it well might, and see what happens.

I'm gratified that publications like P/A are giving more and more attention to the ramifications of this environment pollution issue. It is, in my opinion, the issue —much more important than civil rights, and even Medicare. You'd need less Medicare if the air and water weren't polluted in the first place, and you'd have more strength and a clearer vision with which to fight for civil rights and even beauty if you didn't have to grope your way through smog. You would also need less air conditioning and less bath water. (And what happens when the bath water itself gets polluted?)

It should be plain to everyone that pollution spoils everything. What good is a beautifully designed building in a smog-infested city? What good are all the balconies in Manhattan right now? Even in this city of banks and real estate, there are a few plazas where I suppose you could have outdoor restaurants—but who wants soot in their soup? It can't be said too often: pollution spoils everything. Hence, pollution, which is at the bottom of ugliness, spoils beauty too.

So I feel that your next big socio-think blast should be on *pollution*—air pollution, water pollution, soil pollution, livestock pollution, and pollution of garbage itself with containers that do not easily and quickly decompose. Why, you could have a whole issue on garbage alone composing systems (or the lack of them), the piles and piles of it at the rim of every city, and the piles getting higher and higher, etc.

PERCY SEITLIN Aetna Steel Products Corp. New York, N.Y.

Dear Editor: I have just finished the June issue of P/A; as with Jane Jacob's Death and Life of Great American Cities, it should be read by all professional park and recreation people.

WILLIAM L. LANDAHL Director of Parks Jackson County Park Dept. Kansas City, Mo.

Dear Editor: We wish to congratulate your Maude Dorr on the excellent and most penetrating analysis she made of the developing trends on Martha's Vineyard in the June issue.

Now entering our third season as summer residents in Katama, we share the concerns expressed regarding the forces threatening to destroy the natural beauty now existing.

The article deserves a most careful reading by all parties either residing or developing properties on the Island.

MR. AND MRS. THOMAS E. BURKE Edgartown, Mass. Continued on page 8



# A new family of prismatic lens luminaires offering fresh esthetic, performance, and economic values

Indigo is a unique blend of shallowness, clean lines, fresh new styling touches and highly efficient, comfortable lighting performance. It is offered in three widths; for surface or pendant mounting. All Indigo units are competitively priced to meet budget limitations.

Black finish on end caps, and on sides of channel provide distinctive options for decor planning... accentuate the look of shallowness.

The two and four lamp versions are ideal for lighting stores, offices, classrooms, hospitals, laboratories, hotels, and public building areas. Indigo-1, the companion single lamp unit, is particularly well-suited for corridors, stock rooms, and utility areas.

Plastic closures employ the exclusive, Miller M-1 Lens Pattern on bottom exterior and linear, interior prisms along sides. Utilization is high with most of the light directed downward to the work plane or merchandise. Lamp concealment is good and sidewall brightness is low. Result is a uniform, pleasing lighted appearance. Indigo units also available with closure that satisfies *I.E.S. Scissors Curve Requirements*.

For complete information on this outstanding new fixture family — write Dept. 966, or contact your Miller Representative.



THE miller COMPANY . MERIDEN, CONN. . UTICA, OHIO . MARTIN, TENN.

#### Continued from page 6

Dear Editor: Your excellent article, "An Urban Problem: The People Object," is a superb job.

The Village community is united as never before against the NYU library on this site. A total of 26 organizations (two of them citywide) are opposed to this library project. If the City Planning Commission hearing was indeed a hearing, I don't see how such community unison could fail. The Washington Square Park is meaningful to New Yorkers the city over; to Villagers, it is without question pure necessity.

Not one of us disputes NYU's need for a library. But we were a community of unique character and talents long before NYU began its march to the river, and we are not about to become anything less. We are of one voice on this issue. MARGARET MARKS President, Assoc. of Village Home-Owners New York, N.Y.

Dear Editor: Our commendations to you on the June issue, which demonstrates that our environmental problem is more than skin deep, and concludes on the



INTERNATIONAL STEEL COMPANY 1725 Edgar St., Evansville, Ind. 47707 DIVISIONS: STRUCTURAL STEEL • REVOLVING DOOR AND ENTRANCE • LINDSAY STRUCTURE • RAILWAY SUBSIDIARIES: Extruded Alloys Corp., Bedford, Ind. • Engineering Metal Products Corp., Indianapolis, Ind. Photo shows: Texas Gas Transmission Corporation, Owensboro, Kentucky Architects: Skidmore, Owings & Merrill

On Readers' Service Card, Circle No. 363

note that the architect can be "a major soloist, perhaps even the conductor in isolated cases, but he can never hope to perform... single-handedly." Since your audience consists of architects, this message is courageous and can hopefully lead to improved interprofessional collaboration.

We long ago rejected the image of the planner described by Tom Hodne as "an individual inclined to compile a lot of data (mostly meaningless) and to go through innumerable analyses finding need for additional data, by which time the decision has been made by the politician." The planner's role is more generously and accurately described by Hodne in his very next paragraph, when he says that the architect must "...interact with, in the design process, the economicsocial-political frameworks that the generalist-planner and the specialist (economist, sociologist, geographer, etc.) can adequately provide for him." As should be clear to everyone except the most blatant egotists, the job of saving our cities-and, with them, our civilization, sick as it is-is going to have to harness all available relevant talents, working as a team. We count our group of 30 professionals at Raymond & May Associates as one such team. One of our three partners graduated Columbia University's School of Architecture with the AIA Medal. We also have two very talented registered architects, and, in addition, four other, equally talented, architecttrained persons. Those of the myriad decisions we make every day, which may involve "spaces" in general, or future architectural programs, are made by these members of our team. Simply because they happen to be members of a team without a registered architect at the head is no reason to question their qualifications. As for the results of their work, we think it should be judged on the basis of merit rather than on the basis of what team they happen to be on.

The article on "The Need Experts" displays a parochial attitude that belies the constructive character of the issue's over-all message. It is perhaps unfortunate that city planners have been grouped with management and design consultants, who perform very different functions in the preparation of building programs. The planner does not usually engage in the preparation of programs for the interior spaces in buildings, but is concerned with safeguarding minimum standards by assuring proper manageable gross bulk and adequate spacing of buildings in relation to one another. He is also concerned with the relation-

Continued on page 12



# there are some wall coverings we don't make

Cliff dwellings do pose problems for wall beautifiers, and not even Laminating Services is much help. But we're more help than anybody when you need to create impressive interiors for restaurants, offices, meeting rooms, bank lobbies, and the like.

No other manufacturer offers you such a broad range of quality wall coverings as Laminating Services. One unique material is Pliant Wood, shown below, a genuine wood veneer with fabric backing. Pliant Wood can be applied directly to existing walls, requires no furring strips, no alteration of existing woodwork. It's available in over 50 species in matched or random grade, including many exotic varieties.

There are many more: Vin-L-Fab, offering hundreds of colors, textures and patterns, such as Vin-L-Fab "22", a tough, solid vinyl that even comes in stripes in widths you specify ... Wovan, for the soft beauty of woven cloth ... and velvety Vin-L-Suede, of washable nylon.

No other manufacturer can answer so many of your wall covering needs.

For details write for Brochure No. 100(P). SEE US IN SWEET'S



LAMINATING SERVICES, INC. 4700 Robards Lane, Louisville, Ky. 40218





# It's hard to top Xerox when



But Wheeling has.

Eleven times. Eleven roofs of Super-Rib Roof Deck on eleven Xerox buildings in the past two years.

And every piece of that Super-Rib Roof Deck—all 651,436 sq. ft. of it is an exact duplicate of every other piece. No variation. If that's not duplication, what is? For quality, nothing tops our Roof Deck. Why? For one reason, we have control over the whole business, from ingot to installation.

Our ribbed steel sections, when covered, form a permanent steel roof. Sections are made from structural Grade



# it comes to duplication.

"C" steel.

Comes in up to 50 foot lengths.

Comes galvanized, painted with a primer coat, and non-galvanized primer-painted.

For normal to extra-heavy weight loads.

In gauges from 16 to 22.

And we even make a sound-absorbing roof deck.

So if you'd like to buy a few million square feet of our Roof Deck (like the few inches shown to your left) let us know.

We'll be happy to start duplicating our Xerox record for you.

On Readers' Service Card, Circle No. 419

Have you looked at Wheeling lately? Wheeling Corrugating Co. Div. Wheeling Steel Corp.

## They'll love Reserv-A-Roll with its new Fash'n-Front



## RESERV-A-ROLL, THE AUTOMATIC DISPENSER THAT SOLVES TISSUE CONTROL PROBLEMS

For the discriminating architect, Reserv-A-Roll tissue dispensers now have a new Fash'n-Front to give your project's restrooms a note of creative individuality. The compact, recessed dispensers, available in a variety of handsome Fash'n-Fronts, and utilizing standard  $41/2'' \times 41/2''$  rolls, will solve your client's tissue problems; and, by compelling the use of all the tissue, reduce his restroom maintenance costs.

What's more, Reserv-A-Roll dispensers are completely automatic. Just press the release bar. The empty core disappears into the fixture and the reserve roll locks into place. For a complete color folio on the new Fash'n-Front models and all Reserv-A-Roll dispensers, write today or see our listing in Sweet's Catalog 26e/Re.



602 Sul Ross/P. O. Box 66069/Houston, Texas 77006 On Readers' Service Card, Circle No. 441 12 Views

## Continued from page 8

ship of buildings to the facilities serving the site: vehicular and pedestrian access and movement, parking, public transportation, public spaces such as parks, etc. If all this is urban design, then, 'as you point out, it involves more than purely architectural skills. To be successful, it must be done with consideration and understanding of the social, economic, and political factors involved, and in spite of frequently negative and always devious administrative procedures.

Your "Case Histories" demonstrate that success in urban design is more than a matter of specific professional background. How else explain the substantial body of opinion that opposes one of Philip Johnson's own magnificent creations as being detrimental to the public interest ("An Urban Problem: The People Object")? It is clear that design decisions must be judged by more than strictly architectural criteria.

One of Jane Jacobs' most trenchant observations was that the city is not a work of art, but much, much more. One could cite city after city where some of the architects whose names appear most often in your pages tried to create works of art in the design of renewal projects, but where, partly as a result of their single-minded concentration, the current social revolution is ripest. Ugliness, you suggest, is a product of who writes the program and how well it is written. We would be the first to agree, if the term "program," in the case of city planning, were expanded to include justice, opportunity, peace, cooperation, civic discipline, and control over the unbridled forces of private greed, and a bureaucracy dedicated to the achievement of all of these. This program must be written by all of us, irrespective of specific professional background.

GEORGE M. RAYMOND RICHARD MAY, JR. White Plains, N.Y.

Dear Editor: May I congratulate you on your excellent issue on ugliness. It is high time that the professional architectural magazine began to tap the enormous vitality of our new younger generation. They are the least hypocritical, the least money-oriented, and the most socially conscious of any generation this country has ever produced. Let us hope that you will continue to direct a large part of your magazine toward them, so that the rest of us can benefit from their ideas.

DESMOND MUIRHEAD Santa Ana, Calif.

Continued on page 14



## What's so special about Da-Lite's new Executive Electrol?

## See for yourself!

First of all, it's completely automatic-goes up and down at the touch of the switch. In fact, the sensational Da-Lite<sup>®</sup> Executive Electrol<sup>®</sup> goes completely out of sight because it recesses into the ceiling and provides its own automatic ceiling closure. Plenty of other features, too, including heavy-duty gear motor; aluminum roller with die-cast metal end caps; and choice of Da-Lite's magnificent White Magic<sup>®</sup> "Chemi-Cote"<sup>®</sup> glass beaded surface, or nongloss mat white. Sizes? From 50" x 50" up to 12-feet square. No wonder Da-Lite's Executive Electrol is the ultimate in projection screens for executive suites, conference rooms, small auditoriums and fine homes. Write for specifications, prices and name of nearest franchised Audio-Visual dealer.



On Readers' Service Card, Circle No. 430 SEPTEMBER 1966 P/A



Royal Insurance Building, Liverpool, England. By William Grellier, 1846-49.

# Are you still specifying a roof insulation of the type used on this building?

Many otherwise forward-looking architects continue to specify roof decks that would have been up-to-date on the structure you see above.

This despite the fact that Air Products has come up with a vastly superior insulating material which inherently resists heat — without the wicking action of fiber board, or the 70% void of fiber glass.

It's called APACHE®, rigid urethane foam.

APACHE foam is the most efficient roof insulation on the market today. It can provide the **same** protection of other materials with only **half** the thickness (or less).

Closed-cell APACHE foam doesn't absorb moisture. Or permit moisture to pass through. So APACHE insulation keeps its insulating efficiency year after year. Tight joints stay tight, even under the most severe freezethaw cycling.

Our new folder compares the performance, permanence and installation of APACHE foam with other common roof insulating materials. Write for your copy today.



APACHE FOAM PRODUCTS A DEPARTMENT OF

DEPARTMENT P 1005 McKinley Avenue, Belvidere, Ill.

ir Products and Chemicals

On Readers' Service Card, Circle No. 450

### Continued from page 12

Dear Editor: I found the article on N.Y.U., as the others, profound and understanding of the problem. As you know, I certainly agree with you that change, as an expression of the dynamic society we have created, is the newest and strongest contender our traditional need for continuity and permanance has vet met.

Your critical essays are always an asset to me in my work.

> RAI Y. OKAMOTO an Francisco, Calif. San

Dear Editor: Your June issue was one of your finest. I wish it could be circulated to every possible client, secular and clerical.

As one of the architects for Washington Square's last plan, your reporting was fair and almost complete. The J.M. Kaplan Fund provided seed funds during our darkest moments. We gave many thousands of dollar's worth of our time free to the community.

The Church building article is interesting, for it may be this force that will be able to put some heart into the mass-



ive housing they are about to start. Certainly the government has let public housing down in the area of aesthetics. EDGAR TAFEL New York, N.Y.

Dear Editor: From "Throw Something Lovely Away Today" [the frontispiece], right straight through the book, you are to be congratulated on your issue on ugliness. I enjoyed it immensely. As a responsible publication it is good to see you take a stand on everything from remodeling the Capitol to the NYU Library.

Your art department also deserves credit for its fine layouts and typography.

This is the kind of magazine that makes Magee proud to be an advertiser. I can only say that I hope we will see more of this vitality in the issues to come.

RICHARD N. KRESSLER Advertising and Sales Promotion Manager The Magee Carpet Co. New York, N.Y.

## Making Hospital Patients' **Rooms** More Livable

Dear Editor: I was most gratified to read your complete and detailed article on Hospital Patients' Rooms (JULY 1966 P/A). Naturally, I was delighted as well to be quoted as an authority.

It is only too seldom, alas, that a magazine considers both the practical as well as the aesthetic elements in hospital interior design. I hope that your excellent comments will make a strong impact on the plans of tomorrow's institutions.

EMILO MALINO New York, N.Y.

Dear Editor: Your Patients' Room Design story is excellent. Even the couple of cracks about design will be most helpful to funny old Simmons Company.

JEANNE PETERSON Simmons New York, N.Y.

## Architectural Psychology Conference: Room for Improvement

Dear Editor: The recent National Research Conference on Architectural Psychology (p. 53, JULY 1966 P/A) posed some interesting problems:

• Why are conferences held in unsuitable environments? With all due respect to the natural beauties of Utah, the advantages of geography are quickly lost if seeing and hearing the proceedings are made major problems, and if chairs are uncomfortable. I would suggest that a suitable subject for the next conference on Architectural Psychology be an exploration of a suitable environment for such conferences.

• It is essential to assume that every-

Continued on page 18

14 Views



## An Important Reference for Architectural Firms by the World's Largest Producer of Central Vacuum Systems

Get your free copy—"How to Design A Central Vacuum Cleaning System"—for commercial, institutional, educational or industrial buildings.

It is the most complete design manual of its kind ever published. It details—step by step—the entire procedure for the design and layout of different types of central vacuum cleaning systems.

The manual includes a sample layout, charts and tables, complete data, specifications and importantly, a "Summary Work Sheet" that simplifies the entire design procedure.

Now you can design a central vacuum cleaning system with all the information you need at your elbow.

For your free copy of Spencer's Central Vacuum Cleaning Design Manual, send in the coupon or write on your letterhead.

	486 New Park Ave., Hartford, Conn.
	Please forward, by return mail, a free copy of the new Spencer Central Vacuum Cleaning Design Manual.
,	NAME

-----

COMPANY		
ADDRESS		
CITY	STATE	718



## TIRED OF THE SAME OLD THING?

Want something instead of "a light on a pole"?

## **Revere's Concept Series provides:**



...design harmony by day ...efficient lighting by night

Concept Series with its daring new design may be just the thing for that new shopping center, schoolyard, parking area, building approach, or re-lighting project. It can add the final satisfying touch and complement a modern new building. Concept Series provides complete mercury luminaire outdoor lighting systems . . . including matching poles and accessories. Break out from the traditional.

Mix or Match—Concept 5 features a triangular acrylic diffuser; the all new Concept 6 a trapezoidal acrylic diffuser. Concept 7 has an oval, prismatic glass diffuser. Concept 8 has a flat, glass diffuser for shielded light source. Concept Citation has a pyramidal, glass diffuser. Wattages: 175, 250, 400, 700, or 1,000 watt (mercury). Concept Citation ... 100 watt mercury or 200 watt incandescent. All available in choice of 8 decorator colors.

> Write for new Concept Series Bulletin

## REVERE ELECTRIC MANUFACTURING CO.

7420 NORTH LEHIGH AVENUE · CHICAGO, ILLINOIS 60648

FORWARD THINKING IN OUTDOOR LIGHTING



## Beautiful arrangement for privacy.



So simple. Just put an L·O·F patterned glass ''original'' into a partition. And stand back. We have 12 patterns for you to choose from. The one shown here is Grassweave<sup>®</sup>. Each is designed to add a distinctive decorative touch. Want to make privacy beautiful? Call your L·O·F Distributor or Dealer. He'll help you make all the arrangements.

Libbey · Owens · Ford Glass Co.



### Continued from page 14

thing has equal weight and should therefore have equal time? Pedestrian studies (literally) on tracking visitor paths in a single museum room have (to me) little importance within the subject area of this conference. In any event the matter could have been exhausted by a threeminute stop-action film. Yet this topic received the same conference time as the infusion of psychology in the education of the architect.

• Is it possible to exclude the irrelevant? Why should this conference be the

province of discussion on computers, on mobile homes, or on how a good and clever nursing dean outwitted space allocating powers to get himself some offices? I by no means suggest that computers. portable buildings. and space allocation are not suitable and even essential areas for discussion, but unless they are discussed solely in terms of architectural psychology, the irrelevance becomes a distraction and encumberance on this type of conference.

• Why was such little investment made at this conference in actual architectural



On Readers' Service Card, Circle No. 417

design using the resources of the psychological disciplines? The work of Field and Berenson is particularly impressive in this area, and others are deeply involved in it, but little time was given to the former, and the latter were hardly represented at the conference.

• If the foregoing are earnest protests, it is because the participants who did make contributions in the field of architectural psychology were severely limited, and undoubtedly distracted, by the limitations of time and irrelevance -to the loss of the conference as a whole.

• Nonetheless, I commend the initiators of the conference for bringing together some of the disciplines concerned with the human environment. Hopefully, these conferences will be strengthened and broadened to include resources from the fields of ecology and sociology, and made regular and frequent events.

> GEORGE AGRON Stone, Marraccini & Patterson San Francisco, Calif.

## Note from Argentina: **P**/A Is Improving

Dear Editor: I always read your Editorial before any other article in the magazine. You are doing quite a good job from your post reminding the practitioners what their main goals are. First we are men, then we are architects. We create Human Environment. To a great extent, we "make" men through our architecture. Therefore, we have to have in mind a particular image of man. And what man's needs are -physically, intellectually, morally, and spiritually. Then we design. Isolated works of art may suppose personal satisfactions, but they do not fullfill our necessity of serving the urban community as a whole.

P/A is improving. It is improving in what it publishes and what it writes about. Not long ago P/A was a sort of memorandum about what the Wonder Technique of the latter half of the 20th Century was able to achieve. There were a lot of marvelous elevators and automatic control systems and highly developed materials, enclosed by structures that hardly added any good to American architecture, to say it as sweetly as possible.

Now I can refer to P A to see the work of Rudolph or Pei or skillful Miesians or many others not-so-well-known architects whose work is of first quality. And, most of all, I can read articles such as the one about Chatham Towers, or the Bedford Stuyvesant playgrounds full sociological and psychological essays in themselves. To put it in a few words, P. A used to be concerned more with

Continued on page 24

# Decorator, FINISHES

FROM THE

.



COLLECTION



WHEREVER THERE IS A DOOR TO OPEN, THE INFINITE VARIETY AND DECORATIVE QUALITY OF HAGER DESIGNS MAKE THE ACTION

0

0

0

01 10

0

0

0

0

.

0

0

0

0

•

-

•

0



End embellishment for Brasscraft, the heavy gauge hinge of solid brass by Hager.





Patterned surfaces in modified bas relief or brushed highlights on smooth surfaces in Modele' hinges with finials that emphasize slim vertical lines.





## BCOLOTAIL SYSTEMS NEW DIMENSIONS FOR RAILING DESIGN

The originators of the popular **Colorail** plastic handrails now offer complete **Colorail Systems** of railings, including colorful plasticclad aluminum posts, plus mounting and railing-support hardware. Colorail systems in five attractive colors are available through local fabricators.

Colorail plastic components are of tough durable material in permanent maintenance-free colors. Smartly styled systems include selection of shapes and installations for striking custom effects. Easily assembled stock components. Ask for literature or see Sweet's Architectural File 6e/BL or Industrial File 6b/BL.

**New–elements of section data** provided for all JB system components make truly engineered railings practical. Another exclusive first for Blum . . . computer-derived for accuracy.

JULIUS BLUM & CO., INC. CARLSTADT, NEW JERSEY *THE MOST COMPLETE SOURCE FOR ARCHITECTURAL METALS* PHONES: CARLSTADT, (201) GE 8-4600; Phila., (215) MA 7-7596; New York, (212) OX 5-2236; TELEX 1-25961; TWX 710-485-7673



# Haws gives you a world of design possibilities...



HAWS Model 7R aluminum wall fountain

Consider the exceptional elliptical design of Haws Model 7R cast Tenzaloy aluminum wall fountain. It's a standout in any setting, yet projects only 13<sup>1</sup>/<sub>2</sub>" from the wall. Durable? The finish is permanent hard anodized to an abrasion-resistant, muted bronze color. And both fountain head and push-button valve assembly are vandal-proof. Write today for detailed information, available in the free Haws catalog. HAWS DRINKING FAUCET COMPANY, 1441 Fourth Street, Berkeley, California 94710.



For details and information on other Haws products—see your Haws catalogs on drinking fountains, emergency eye/face-wash fountains, drench showers and decontamination equipment; and dental fountain/cuspidor units.



#### Continued from page 18

the "hows." Now it tries to discover the "whys" and "what for's."

I notice new winds are blowing. Not only in P/A, but also in some other American institutions, as in colleges. It seems that a great number of Americans are proving themselves large enough to reconsider what is meant by the "American way of life." These Americans are putting their nation in the proper paths of history, in the place history demands the U.S. to be—history that leads us toward a society that we, as architects, must collaborate in creating and in which we should play our rightful role.

> JORGE R. ERRECONDO Buenos Aires, Argentina

## **Prickly Mountain Newsletter**

Dear Editor: My point for writing is to give you some feedback regarding the article you wrote on us ("Architecture Swings Like A Pendulum Do," MAY 1966 P/A). I've waited till now to collect everything that was around in terms of comments:

There was a disparity of understanding as well as appreciation in regards to it. Some people thought it was terrific, well written, and complimentary. Others felt that it left the impression that we were merely hacking around and had little depth or wisdom behind us. One student proudly showed the article to this father, who advised him to stay away from us, as we were obviously out to swindle people. Of course, one can expect a general misunderstanding of anything by the public. I felt that you covered the subject quite thoroughly, with a fair explanation of the design process we're developing here. For me, your technique (from the tapes) began to capture some of the feeling of ambiant air temperature also. The photography was good; the full page color shot excellent.

We now have thirteen architectural students working here this summer: eight from Yale; three from Penn; one from Columbia; and one from the University of Illinois. We opened the film emporium in Warren with Marlon Brando in *The Wild Ones* (plus Charlie Chaplin, of course). We're holding seminars on painting, architecture, the future of society, etc. etc. (All of this is relatively primitive, but at least no one else knows what they're doing either.) Your article was helpful to us in another way too. It gave us encouragement to expand our scope even farther.

DAVID SELLERS Warren, Vt. Gas Energy produces all the electricity, cooling and heating this inn needs.

**BILLI** 



and to the public rooms through a four-pipe arrangement. With both systems, heating and cooling are available simultaneously between 45° and 65° outside temperature. Above 65° only chilled

water is circulated and below 45° only hot water. Three-way control valves for guest room fan coil units provide fully automatic modulation from heating to cooling. Result: each guest can maintain the temperature he desires.

## **Big 12-month Savings**

Do the dependability and flexibility of Gas Total Energy cost a lot? The figures below tell the operating cost story, month by month. The owners saved \$9400 a year, *after* provision for full maintenance, labor and materials. Is Gas Total Energy feasible for your next project? Your local Gas Company Sales Engineer can tell you in detail. AMERICAN GAS ASSOCIATION, INC.

## Gas makes the big difference



## Read these actual cost comparison figures: Gas Total Energy vs. purchased electricity.

Month	Conventional System (Purchased Electricity and Gas)	Total Energy System (total gas required)	Gross Annual Energy Savings in Favor of Total Energy System
July	\$ 2,292.12	\$ 1,004.71	\$ 1,287.41
August	2,459.15	1,092.44	1,366.71
September	2,356.82	942.09	1,414.73
October	2,441.14	1,170.82	1,270.32
November	2,544.04	1,197.47	1,346.57
December	2,428.09	1,213.05	1,215.04
January	2,287.18	1,179.02	1,108.16
February	2,176.93	1,065.86	1,111.07
March	2,335.01	1,153.60	1,181.41
April	2,264.34	1,042.08	1,222.26
May	2,481.97	1,121.21	1,360.76
June	2,436.54	896.83	1,539.71
Totals	\$28,503.33	\$13,079.18	\$15,424.15
	Т	otal Operating Expense .	. 6,006.00
	A	nnual Utility Saving	.\$ 9,418.15



# **Q.** Why does Laclede load its joists so carefully? **A.** To keep their built-in quality unharmed

How important is extra care in loading and unloading open web steel joists in their journey from plant to jobsite? Laclede feels it is highly important, and has actually conducted research to determine the best way to handle joists for maximum shipping ease and safety. At the Laclede plant, as the joists come off the line, an automatic loading system nests them into bundles and picks them up along their entire length for transfer to the shipping docks. To promote careful handling at the receiving end, Laclede includes detailed unloading instructions with each shipment.

This special attention to handling techniques is Laclede's way of helping to keep the built-in quality of Laclede open web steel joists intact from plant to you.



On Readers' Service Card, Circle No. 366



# Pick a wall. <u>Any</u> wall.



Wallpackette is available, as shown here, with optional Prismascope® automatic on-off control, and a complete line of other accessories.



# Then specify the new Holophane Wallpackette, the luminaire styled to complement every wall.

Holophane's new family of outdoor luminaires for mercury and incandescent lighting is designed to be an integral part of contemporary architectural settings.

Wallpackette has the crisp lines, the smoothly modeled planes, the boldly *sculptured* look that blends so well with today's architecture. To achieve this elegantly uncluttered look, all unsightly ballast, latches, hinges and controls have been tucked away *inside* the luminaire. Wallpackette is trimmer, more compact, less obtrusive. And for even greater design flexibility, Wallpackette is available in standard aluminum finish, or in colors custom-mixed to match your sample. There are five Wallpackette models: two for standard incandescent, two for mercury, and one for iodinequartz lighting. All provide uniform fan-shaped illumination over wide areas. And all are engineered to traditional Holophane standards of dependability and efficiency.

Ask your Holophane representative or distributor to show you the Wallpackette family of luminaires. Or for complete information, write to: Dept. **G-9**, Holophane Company, Inc., 1120 Avenue of the Americas, New York, N. Y. 10036.





Everything's up but your Building!

> Did the final "in wall" masonry price on your project come in higher than you expected? There's a good chance labor costs made the difference. By specifying HANLEY Jumbo Norman Brick you can realize substantial savings.

Here's why: The HANLEY Jumbo Norman Brick unit  $(11\frac{5}{8}'' \times 2\frac{3}{4}'' \times 3\frac{5}{8}'')$  gives you 75% more surface area than standard size brick (8'' x  $2\frac{1}{4}'' \times 3\frac{3}{4}'')$ . This means one-third fewer vertical joints, one-sixth fewer horizontal joints and less labor and material.

Jumbo Norman Glazed Brick and Face Brick are available in a variety of shades and textures. Considering everything, shouldn't you check the "in wall" price of HANLEY Jumbo Norman Brick? It could get the costs down . . . and the building up.

HANLEY COMPANY

# 

Yale. Under all that beauty, there's one tough lock. **VALE** LOOKS AS GOO

THE FINEST NAME IN LOCKS AND HARDWARE

On Readers' Service Card, Circle No. 434





# The \$10,000 typewriter.

It's a better bargain than a 20¢ eraser.



The new IBM Magnetic Tape Selectric<sup>®</sup> Typewriter, (MT/ST for short), costs ten thousand dollars.

And it's worth every penny.

Before, when a typist made a mistake, she had to stop typing and erase it. Or maybe even start all over again.

But with the new IBM<sup>®</sup> MT/ST, she simply backspaces, retypes, and keeps on going.



Themistakeischangedonmagnetic tape, where all typing is recorded and played back correctly at incredible speed. (Roughly 15 characters per second.)

That's not all.

Suppose you've had second thoughts about some words. And you want to make changes. No problem.



Only your changes are retyped. The rest is automatic.

Now for the \$10,000 question: What does the new IBM MT/ST mean to you? For one thing, a girl who types 80 words per minute won't end up averaging a slow 20 wpm because of constant retyping or restarting.

For another, the IBM MT/ST shortens the time gap between your first draft and the finished document.

In fact, you'll be able to handle correspondence, contracts, proposals, and building estimates more than 50 percent faster. (With less proofreading, too.)

The new IBM MT/ST: more power and more productivity. Ask your IBM Representative for the complete story.

Remember, you have to stop typing to use a twenty-cent eraser.

And that's the rub.





## Church opens outward through a soaring prow of glass

From beneath its sweeping canopy, a ship-like bow of ASG's Lustracrystal<sup>®</sup> sheet glass opens this modern church to woods and sky.

The towering facade was originally intended to shield an inner wall of stained glass. But so inspiring was the effect with clear glass alone that architect and pastor decided to forego the interior wall.

Now, the entry to the church is bright, open, pleasantly in touch with the world around it. At the rear of the church, another wall of Lustracrystal (below) bathes sanctuary and altar in light.

Clear, brilliant Lustracrystal is one of the complete line of plate, sheet and patterned glasses made by American Saint Gobain. For more information on Lustracrystal and the ASG family of architectural glasses, write to: Dept. E-9, American Saint Gobain Corporation, P.O. Box 929, Kingsport, Tennessee 37662.

Saint Elizabeth of Hungary Roman Catholic Church, West Acton, Massachusetts Architect: D'Orsi & Company



© American Saint Gobain 1966




## If you plan ceilings, you should see this film.

NECA has prepared a film which shows how the integrated ceiling has given you new freedom in interior design. You are free to design a ceiling that heats, cools, lights, communicates, controls sound and beautifies just the way you want it to. Then you can depend on a qualified electrical contractor to install it—and guarantee its performance, too.

Why an electrical contractor? Because most of the functions of an integrated ceiling are powered or controlled by electricity . . . and electricity is the electrical contractor's business. He has plenty of experience in coordinating the efforts of carpenters, sheet metal men, plasterers, plumbers, heating and refrigeration men and other specialists—and has available to him established and recognized procedures through which jurisdictional questions can be settled without delaying the job.

Put the integrated ceiling into the hands of your qualified electrical contractor by putting it in the electrical specifications. He'll guarantee the performance, not only of the electrical function, but of the entire job.

## Your Qualified Electrical Contractor

NECA-National Electrical Contractors Association, 610 Ring Building, Washington, D.C. 20036



	°	
	a strange of	
	CA MA	
0		
	And the second s	
1. 2.1.	and a construction of the second seco	_
	Autoritation and a state of the second state o	/
	And the state	
	o ma un	
	inet	
F	Madadian Division	
	Marketing Division National Electrical Contractors Association	
	610 Ring Building, Washington, D.C. 20036 Yes, I'd like to see your film on integrated ceilings.	
Hundreds of architects and	Name	
architects and   ngineers have seen   this film.	Title	
To arrange a showing, fill out	Firm Name	
and mail coupon today.	Address CityStateZip	
	PA 96	

e





### (in its new 15%" NF Hi-Bond Celluflor')



One million square feet of Inland 15%" NF Hi-Bond Celluflor will be erected in the new 60-story First National Bank Building, Chicago.

Architects and Engineers: C. F. Murphy Associates and the Perkins & Will Partnership.

General Contractor: Gust K. Newberg Construction Company.

New 1%" NF Celluflor has big 9-sq. in. cells; each 24"-wide. 15%" NF panel provides greater total raceway capacity. Large 4"-diameter hand-holes make it easy to feed electrical power and communications wires into the raceways-easy to pull wires up to connect to service outlets installed anywhere along the length of the Celluflor.

New NF panels are a full 15%" deep - and can be blended with any standard Inland 15%" deck profile. Space between floors is reduced; savings in building height and weight often are significant.

Hi-Bond lugs formed into the webs

of 1%" NF Celluflor panels provide a positive lateral and vertical mechanical bond between steel and concrete. producing an exceptionally strong floor system. It is fire-rated by Underwriters Laboratories, having withstood ASTM standard E-119 floor tests, including both optional hose stream and double-loading tests. Adding Inland shear connector straps provides the extra strength and economy of composite slab/beam construction.

For more information about new Inland 15%" NF Celluflor, write today for catalog 273 to Inland Steel Products Company, Dept. I, 4069 West Burnham St., Milwaukee, Wis. 53201.

On Readers' Service Card, Circle No. 360





Title: Ensign Fire Extinguisher Artist: The Ansul Company, Marinette, Wisconsin Medium: Fiberglass

On Readers' Service Card, Circle No. 330

SEPTEMBER 1966 P/A

\*



EXTRUDED ALUMINUM LINEAR REGISTERS & GRILLES



DESIGN ORIENTED ..... THE COMPLETE QUALITY LINE



MEMBER OF THE AIR DIFFUSION COUNCIL WATERLOO REGISTER CO. - DIVISION OF DYNAMICS CORPORATION OF AMERICA



# If you're specifying switches that only turn lights on and off...





### LIGHTED HANDLE AC QUIET SWITCH #700LH

Neon lamp in the ivory handle glows softly when current is off. Baby has a friendly light to comfort him... without a click to disturb him. Useful as night light or off-indicator. Also available as red handle pilot light to indicate power on. A convenience and safety feature.





#### TOUCH PLATE SWITCH #780

A light tap or a mere brush with the shoulder or elbow and this switch is activated. Handy when someone has an armload of parcels. Spec grade, heavy duty design permits convenient control of motors and machines that are turned on and off frequently during operation.





ROTARY DIMMER #RDCP-600 Adjust room lighting to suit the activity...or create atmosphere with lighting that can change the mood of a room. Slater offers a complete line of electronically controlled dimmers—in full range 0 to 100% adjustment—that mount in standard boxes. For residential or commercial applications. Incandescent and fluorescent, single pole and 3-way models.





TIME DELAY SWITCH #TD-100 You can turn off the switch in the garage and walk into the house before the lights go off. Or you can turn off the bedroom light and be in bed before the lights are out. Time delay activates switch automatically. A convenience and safety feature for halls, stairways, bathrooms, basements, exits, etc.

## they're doing only half the job!





Ceramic tile by American Olean for solid, practical jobs? Sure. For making surfaces fade-proof, stain-proof and easy to clean? Certainly. But that's not all. = In this inviting skycraper restaurant, deep blue ceramic mosaics put the color of the midnight sky into the floor and make a rich setting for the flare of crimson tablecloths. Scored tiles and textured crystalline tiles in white and soft grays transform plain-jane structural columns into sprightly plaid accent areas. Bands of blue, white and black ceramic mosaics on the brazier hood repeat the major colors and integrate the serving area into the overall design. = Making interiors good to look at and easy to live in is what ceramic tile is all about. Write today for American Olean's booklet "Ceramic Tile in Architectural Design." It's filled with design ideas. American Olean Tile Company, 1016 Cannon Ave., Lansdale, Pa.

On Readers' Service Card, Circle No. 456





Secaucus Treatment Works, Town of Secaucus, New Jersey • Engineers: Mayo Lynch & Associates, Inc. • General Contractors: Kuchar Brothers

## The Otisphere can be very down-to-earth.

You don't need a multi-story monument to qualify for the Otisphere.

Even if it's only a few floors high, we're interested in your building. Wherever it is.

And we'll put at your disposal the world's most efficient elevatoring system to solve the problem. We'll custom-design an answer to meet your particular building's needs. No more than it needs. And no less.

That includes anything from a low-rise hydraulic or electric elevator to the newest Otis electronic advance: "INSTANT ELEVATORING."\*

So whether you're 3 stories - 30 - or even get up to 300-call your Otis man. He can help.

And you'll find he can be very down-to-earth.

R

Electric and Hydraulic Passenger and Freight Elevators • Escalators • Moving Walks • Dumbwaiters • Elevator Modernization and Maintenance Military Electronic Systems • Gas and Electric Trucks by Baker Division • Otis Elevator Company, 260—11th Avenue, New York, 10001 \*Trademark of Otis Elevator Company

On Readers' Service Card, Circle No. 391

STAIRWAY, TRENHOLM EAST MOTOR INN, Victor, N. Y. Paul F. Fox A.I.A., Architect. P&L products used: Vapex Wall Primer, Lyt-all Stippling Eggshell, Lyt-all Flowing Flat, Vitralite Enamel, Tonetic Wood Stain, "38" Pale Trim Varnish.

LOUNGE, COMMUNITY-GENERAL HOSPITAL OF GREATER SYRACUSE, Syracuse, N. Y. Eggers & Higgins and King & King, Architects. P&L products used: Vapex Wall Primer, Lyt-all Double Duty Primer, Lyt-all Stippling Eggshell, Lyt-all Flowing Flat, Vitralite Enamel, Tonetic Wood Stain, "38" Pale Trim Varnish.

CORRIDOR, STUDENT UNION, CANISIUS COLLEGE, Buffalo, N. Y. Thomas Justin Imbs & Associates, Architects. P&L products used: Lyt-all Flowing Flat Spectrum Colors, Lyt-all Stippling Eggshell, Tonetic Wood Stain, "38" Pale Trim Varnish.

PARLOR, BEECHWOOD RETIREMENT HOME, Amherst, N. Y. Duane Lyman and Associates, Architects. P&L products used: Lyt-all Double Duty Primer, Lyt-all Flowing Flat, Vitralite Enamel, Tonetic Wood Stain, "38" Pale Trim Varnish.

THOMAS J. CORCORAN SENIOR HIGH SCHOOL, Syracuse, N.Y. Pederson, Hueber, Hares & Glavin, Architects. P&L products used: Vapex Wall Primer, Lyt-all Double Duty Primer, Lyt-all Flowing Flat Spectrum Colors, Lyt-all Stippling Eggshell, Vitralite Enamel Eggshell, Vitra-Tile, Solidex.













## Pratt & Lambert Paint and Varnish... The Predominant Choice of Leading Architects

The extraordinary qualities of Pratt & Lambert products make them favorites with architects. Accurate, scientifically controlled and tested formulations yield paint and varnish which apply well, look attractive and last long on job after job.

Exclusive P&L Calibrated Colors<sup>®</sup> offer the architect ample choice. They are scientifically selected for their decorative correctness, both traditional and contemporary.

Pratt & Lambert Architectural Service Departments are eager and able to assist architects. They will offer recommendations for painting or finishing any interior or exterior surface, or develop a complete color plan for a building. Call or write your P&L representative or the Architectural Service Department nearest you. No obligation, of course.

P&L ARCHITECTURAL SERVICE DEPARTMENTS LONG ISLAND CITY, N. Y. 11101, 3301 38th Avenue BUFFALO, N. Y. 14207, 75 Tonawanda Street CHICAGO, ILL. 60632, 4900 South Kilbourn Avenue ORANGE, CAL. 92669, 1405 North Batavia Street FORT ERIE, ONTARIO, CANADA



Craftsmanship in the Package

Pratt & Lambert-Inc. Made and Sold Throughout All of North America



Tor Ancourtects. ENGINEERS, DESIGNERS, DRAFTSIERS Tor Ancourtects. ENGINEERS, DESIGNERS, DRAFTSIERS MILLIAM J. HORNUNG MILLIAM J. HORNUNG MILLIAM S. HORNUNG MILLIAM S. HORNUNG



reference diagrams and drawings This book presents the most up-to-date reference and drawing data in the field of architecture, construction, and design. Here, in a single, conveniently arranged volume, is the latest information on new construction methods, much of which has never appeared before in book form. An extremely practical book, it features the most essential reference data required by the professional in his daily work.

The contents are organized to deal, in order, with the four main aspects of building: sub-soil constructions; wall systems; floor and roof systems; and methods of construction, including details, surface, and finish treatments. The book begins with detail drawings and data for footings and foundations, and its sequence of presentation follows a pattern similar to that used in the actual construction of buildings. Valuable information is given on the various methods of wall, floor, and roof treatments employing new uses of wood, concrete, steel, and stone.

The arrangement of the subject matter is distinguished by the fact that where materials in a certain construction system have been shown in detail, the methods of estimating quantities of these materials have been included. Questions and answers pertaining to mechanical and electrical equipment of buildings have been added for the benefit of those preparing for the Registered Architect's examination.

The practical applications of this book within the building construction, cement, building materials, and equipment manufacturing industries are exceptionally broad. Architects, engineers, and builders will find it especially useful as an up-to-date source of ready reference, and for the contractor it can prove a most efficient aid to becoming better acquainted with new methods of construction. In addition, it is highly adaptable for reference use by students of architectural design and mechanical drawing in technical schools and colleges.

September 1965	256 pages	8¼4" x 10¼"	\$15.00
			<u> </u>

DEPT. M-313 REINHOLD BOOK DIVISION 430 Park Avenue, New York, New York 10022





## Visual drama with glass



There's a charming airiness about the tower of Norfolk's new Civic Center.

A solar screen of PPG SOLARBRONZE<sup>®</sup> glass hangs three feet from the building, creating serene interiors virtually free of glare. The view in any direction is superb, tranquil.

The exterior speaks eloquently for the limitless design freedom with glass.

SOLARBRONZE, a special environmental glass from PPG, is an economical choice as well. It reduces cooling costs in summer.

Once again the unique elegance and harmony of glass create a building people like to look at...and work in.









Glass wall construction—with all its advantages of openness, color, reflectivity and drama—gives the architect uncommon freedom of expression. For detailed information, please get in touch with your nearest PPG branch office or distributor, consult Sweet's catalog file, or write Pittsburgh Plate Glass Company, One Gateway Center, Pittsburgh, Pennsylvania 15222.

Norfolk Civic Center, Norfolk, Va. Architects: Vincent G. Kling and Associates Associated Architects: Oliver and Smith





PPG makes the glass that makes the difference



Progressive Architecture's Monthly Digest of Buildings, Projects, People and Products

September 1966

### SAARINEN FIRM CHANGES NAME

HAMDEN, CONN. On September 1, the architectural firm formed in 1950 by Eero Saarinen, which had evolved from the partnership Eliel and Eero Saarinen started in 1937, became Kevin Roche, John Dinkeloo & Associates. Since Saarinen's tragic death in 1961, at age 51, the firm has continued as a partnership of Roche, Dinkeloo, and Joseph N. Lacy. Lacy, 61, is retiring from active practice but will continue as a consultant.

Both Roche and Dinkeloo joined the Saarinen office in the early 50's. The first major project both worked on was the \$100-million General Motors Technical Center in Bloomfield Hills, Mich. --Dinkeloo as project manager and Roche as a designer. In 1955, Roche became Saarinen's principal design associate. Dinkeloo was by then principal in charge of technical development, working drawings, specifications, and construction supervision. The



Dinkeloo (left); Roche (right).

firm has a staff of 102 persons, and, since Saarinen's death in 1961, has added \$158 million in work to the \$177 million in construction the firm had undertaken up till then.

The change in name represents Saarinen's wish, expressed in his partnership agreement, that the firm's name be changed within five years after his death.

### **EXPRESSWAY THREATENS HISTORIC PHILADELPHIA**

PHILADELPHIA, PA. The unplanned sprawl of many cities has separated them from the rivers on whose banks they grew. And often this separation is formalized by the construction of a railroad or superhighway along the river, between it and the town. Philadelphia is the latest in the growing list of U.S. cities that the roadbuilders would so blight.

Plans by the U.S. Bureau of Public Roads call for a 10lane expressway to knife through Philadelphia, cutting along the western side of the Delaware River for more than 19 miles. Part of that route passes through the historic heart of Philadelphia: Independence Hall, Betsy Ross's house, the first U.S. bank, Carpenters Hall, and one of the nation's most famous old restaurants, Bookbinders, are all within a few blocks of the riverfront. So is Society Hill, the much touted urban renewal project, highlighted by three apartment towers designed by I.M. Pei. Ironically, another urban renewal area along the river, Penn's Landing, would be totally isolated from the rest of the city by the expressway.

Once the pendulum of bureaucracy has begun to swing, it is amazingly difficult to stop. Last summer, two groups - The Committee to Preserve Philadelphia's Historic Gateway and the Philadelphia Architects Committee - got together with the Pennsylvania Department of Highways to work out a feasible alternate proposal, calling for a cover for six key blocks of the expressway. It is a modest proposal in size; it would add \$11 million to the \$56 million the expressway would cost without the cover. But it would also restore 15 acres of open landscaped space, allow existing streets to cut through to the river, and probably save money by increasing the land values in the area and circumventing the expense of covering the expressway later on.

Pennsylvania accepted the proposal early this year and committed the 10 per cent state share of the funds. But despite efforts in Washington by Pennsylvania legislatures and officials, the Bureau of Public Roads refused to put up the 90 per cent share of Federal funds. In June, Pennsylvania Senators Clark and Scott introduced a Senate Bill, No. 3450, authorizing construction of the cover as part of Independence National Historical Park. The park, which includes the expressway site, is being developed by the Government at a cost of more than \$25 million. Also that month, a committee committed to securing the Governmental funds needed to construct the cover was formed. The Committee to Preserve the Nation's Birthplace includes architects Martin Meyerson, Philip Johnson, Louis I. Kahn, Morris Ketchum, Jr., Peter Blake, as well as Vincent J. Scully, Jr., Wolf von Eckardt, and

Grady Clay, and several leading executives.

Another aim of the committee is to promote better highway planning by Federal and state governments, to prevent problems like this from arising again. Senator Clark has urged formation of a top-level Federal committee that would have power over such designs.

Such concern and action is long overdue. President Johnson recognizes the need for it. In a message to Congress on February 8, 1965, he stated: "I hope that, at all levels of Government, our planners and builders will remember that highway beautification is more than a matter of planting trees or setting aside scenic areas. The roads themselves must reflect, in location and design, increased respect for natural and social integrity and unity of the landscape and communities through which they pass." It is strange that, in the light of these avowed aims of the Administration, funds are not forthcoming to solve Philadelphia's plight. And it is appalling that the need for such remedies remains.

### WHITNEY MUSEUM OPENS



NEW YORK, N. Y. On September 27, the Whitney Museum will formally open its doors to the public. Long awaited, the Whitney's new home, designed by Marcel Breuer, with Hamilton Smith coarchitect and Michael Irving consulting architect, has been underway here, on Madison



### Mo-Sai. Complements Capitol Complex



A new Department of Wildlife Conservation Building, part of the State Capitol complex in Oklahoma City, used Mo-Sai extensively for mullions, facing, and planters.

Mo-Sai rusticated joints emphasize the panel pattern.

In keeping with the character of the Capitol complex, the architects wanted a material with dignity and permanence. It had to complement the rest of the complex, yet have a character of its own befitting this building and natural to Oklahoma. They found the answer in a Mo-Sai with earth-toned aggregate ranging from beige through deep red-brown in a brown matrix.

This building is proof again that you can **do more with Mo-Sai**... the versatile, quality-controlled precast architectural concrete with exposed aggregate made only by one of the following manufacturers licensed by the Mo-Sai Institute, Inc.

Architect: Howard, Sanis and Davies / General Contractor: Barbour and Short / Photographs by: Ray Jacoby

Mo-Sai Institute, Inc., 🐑 110 Social Hall Ave., Salt Lake City, Utah 84111



BADGER CONCRETE CO. Oshkosh, Wisconsin BEER PRECAST CONCRETE, LTD. Scarborough, Ontario, Canada BUEHNER & CO., INC. Mesa, Arizona CAMBRIDGE CEMENT STONE CO. Allston, Massachusetts ECONOMY CAST STONE CO. Richmond, Virginia FORMIGLI SALES CO. Philadelphia, Pennsylvania GEORGE RACKLE & SONS CO. Cleveland, Ohio GOODSTONE MFG. CO., INC. Rochester, New York

On Readers' Service Card, Circle No. 382

GRASSI AMERICAN CORP. South San Francisco, California HAMILTON CONCRETE PRODUCTS CO. Chattanooga, Tennessee HARTER CONCRETE PRODUCTS, INC. Oklahoma City, Oklahoma INTERNATIONAL PIPE & CERAMICS CO. Pomona, California JACKSON STONE COMPANY, INC. Jackson, Mississippi OLYMPIAN STONE CO., INC. Seattle, Washington OOLITE INDUSTRIES, INC. Ojus Br., Miami, Florida PLASTICRETE CORPORATION Hamden, Connecticut *READY-TO-POUR CONCRETE CO.* Idaho Falls, Idaho SEKIGHARA STONE COMPANY, LTD. Tokyo, Japan SOUTHERN CAST STONE CO., INC. Knoxville, Tennessee SUPERCRETE, LTD. St. Boniface, Manitoba, Canada TEXAS INDUSTRIES, INC. Arlington, Texas WILSON CONCRETE CO. Red Oak, Iowa South Omaha, Nebraska Avenue at 75th Street, for almost two years.

The structure itself was completed early last month, and the staff has been occupying its top floor offices since early summer. In execution, the structure is almost exactly as the architects originally envisioned it. Its heavy floor overhangs have engendered a rash of jokes (sample: "The architects read the plans upside down"). But it seems more subdued in reality than it did in renderings, proving only that, in this case at least, gestation has lent maturity to vision.

It is a bold, strong building, which seems exactly right in scale and proportion for its site. And its remarkably flexible gallery spaces should prove just as right for the Whitney's collection of American paintings.

### HARVARD OKAYS FUND DRIVE FOR ENVIRONMENTAL STUDIES

CAMBRIDGE, MASS. In May, Harvard University gave the go-ahead for the Graduate School of Design to raise \$11,-600,000 (\$6 million for a physical plant, \$5 million for academic programs). Before this official sanction could be given, fund drives for Harvard College, the Divinity School, the Medical School, and the School of Education had to be completed. It is, of course, unfortunate that architectural education had to run fifth, but now that drive is underway, the School of Design can soon implement long-awaited programs and improvements. It has waited for eight years.

In a way, the wait was fruitful, for Harvard finds itself implementing an architectural curriculum at a time when the profession lacks clarity of direction.

Whatever the Harvard Graduate School of Design does will be watched carefully by the nation's 62 other architectural schools. There is a point to this watchfulness. Harvard had the first professional curriculum in landscape architecture, the first systematic course in city planning, and the first major postprofessional curriculum in urban design.

What the Graduate School of Design needs and wants now is increased working space, which they hope to gain in the form of new workshops and laboratories for experimental research and practical case studies, and a new building. Some of these laboratories would facilitate programs in computers and computer graphics, which Harvard will set up. Site for the new building will be some 77,000 sq ft of land between Burr and William James Hall, behind Memorial Hall, Two of the buildings now used by the Graduate School of Design -Hunt and Robinson Halls will be taken over by the faculty of Arts and Sciences.

Perhaps most important for Harvard and the profession will be the establishment of a program in Advanced Environmental Studies. As plans now stand, an endowment of \$2,500,000 would back four interdepartmental professorships in Advanced Environmental Studies. Men from each of four disciplines natural science, programming, design, and social science will fill these chairs.

According to Dean Sert of the Graduate School of Design, the environmental studies will include four basic segments: education on the nature of man and his environment, visual education, technology studies, and social sciences. Sert sees studies of the nature of man as an exploration of man as a natural and a social animal, and of his natural habitat. Visual education would help students learn how to look and to see. It would include an analysis of forms, textures, light, and color. A study of technology would implement goals established by studies in the first two categories. But it would go beyond mere building technology - a mere study of structural and mechanical systems, etc. - to a study of the technology of neighborhoods, cities, and metropolitan regions. The professorship in the fourth area - the operational social sciences - will be held by a scholar from economics, public administration, or law. This concentration on the practical considerations of environmental change has brought some criticism. Connection, the quarterly journal of the Graduate School of Design, expressed dismay that this chair, reserved for the social sciences,

"may have nothing at all to do with social problems."

As envisioned, the Program for Advanced Environmental Studies will emphasize refresher training courses for practicing professionals, who will attend for a semester or so. This type of training has been undertaken successfully by Harvard's Journalism and Business Schools.

Under this interdepartmental scheme, architecture can hopefully bring to an end its isolation from other departments at the University. The four new professorships will be full-time positions, and although they will perhaps be rotating, whoever holds them will devote his full attention to teaching. These interdisciplinary appointments will be made by the school, not by any specific department, and in this way will resemble Harvard's "university professors," who can teach any subject they want in any department.

Emphasis is also being placed on establishing links with industry and Government agencies, so that students can stay in touch with the latest technological advances. Thought is also being given to the establishment of urban field stations, to give students a more immediate and practical kind of experience.

In addition to other changes, the Graduate School of Design plans to lengthen existing graduate studies. City Planning has already adopted a three-year program. Urban Design is considering moving from one to two years, and the Masters program in architecture may be extended to two years also.

### CAMBRIDGE SEVEN REVEAL U.S. EXHIBIT PLANS FOR MONTREAL FAIR



MONTREAL, CANADA. The Buckminster Fuller's dome that will enclose the U.S. exhibit at Expo '67 is large enough (207' high and 250' across its equator) to just about cover Lever House. The design of its interior - structure, mechanical arrangement and exhibits - plans for which were approved last month by the United States Information Agency, are the work of Cambridge Seven Associates, Cambridge, Mass. Although the interior has received much less publicity, it is as sophisticated and as eyecatching as the dome itself. The entire inner structure consists of a series of seven levels, or platforms, connected by moving stairs and supported by columns that house heating- and air-conditioning ducts. In addition, partial support will be pro-

Photos: Maude Dorr



vided by two large vertical slabs that hold staircases, and (in one) an elevator. The interior structure will rise less than half the distance to the roof of the dome, where temperatures, even with air conditioning working at capacity, will hover near 180 F. Much of the actual exhibit will be suspended from the roof on wires, and the total effect will be one of color and motion, of constantly changing vistas and spaces. Part of this effect will be created by the fairgrounds' monorail. which Cambridge Seven talked Fair officials into running through the exhibit. Trains will pass through the building every three minutes or so, at a height of about 12'.

Briefly, a visitor touring the U.S. exhibit will see the following: As he enters, he faces a giant American Eagle, whose 60' wingspan covers the front wall of the rounded 300-seat theater, where a three-screen, 12-minute movie of children's games will be shown. Instead of going into the theater, he can ride an escalator to his right to the first level, and successively wander through exhibits of Indian beads and ornaments, quilts from a contest in Kutztown, Pa., decoys suspended on wires, cowboy hardware, and cartoon drawings by Tomi Ungerer and Saul Steinberg mounted on day-glow-colored panels. Overhead will be a theme pattern of American flag segments, painted on suspended sections of laminated styrofoam. Beyond the quilt and cartoons will be an area devoted to 300 Raggedy Ann, Andy, and other dolls of assorted shapes and materials, mostly hand-made, from private collections. From here, the visitor passes into a section of memorabilia drawn from political campaigns, mostly of the last century. And, beyond that, he will pass a forest-like grouping of 268 milliners' head forms on steel posts, each wearing a different hat from a typically American group, fireman hats, ranger hats, Amish hats, Indian headdresses, cowboy hats, etc. Beyond these are cases holding typically American - if off-beat - inventions: a whole raft of mousetraps, both benign and fiendish, apple corers, corn huskers, etc.



tor crossing the open space between the first and second levels. To reach the second level, which is some eight stories above ground, requires a four-minute escalator trip, which passes the hanging styrofoam flags, above the monorail, and deposits the visitor at the highest level, where, appropriately enough, the National Aeronautics and Space Administration exhibit is displayed. Hanging from the roof, just to the side of this level, will be models of the Gemini capsule, the Surveyor space-craft, and Mariner IV. Beyond these, down a short flight of steps, above level three, will dangle a model of the Apollo capsule, hung from three brightly colored, giant parachutes, which billow just beneath the dome's roof.

Inside a circular hanging screen on the second level. eight projectors will show slides of the space program, blast-offs, countdowns, and the workings of NASA at Cape Kennedy and in Houston. The third level will hold a huge model of the lunar surface, with a lunar excursion model perched on it. From this level, the visitor moves down a long, suspended escalator that slopes at a 30° angle over open space, to the fourth level and an exhibit of huge, specially commissioned paintings (the largest is 27' x 14') by contemporary American painters, mounted on giant canvas banners, the largest of which is 87' high.

From here, he moves down to ground level behind the theater, where an exhibit of U.S. movies will be arranged. Three rear-projection theaters will show film clips of great moments from American movies, and, spaced around this level, will be props from old films: old cars, planes once flown by stuntmen, a giant replica of The Beast from 20,000 fathoms, and perhaps King Kong's foot, if Cambridge Seven can locate it.

The exhibit is sophisticated in the best sense of the word. And it is catholic in its scope, showing everything from items of apple-pie homeyness to the vast technological expertise of the space program.

It is, in short, what an exhibit should be. And it should give everyone a colorful, funfilled feeling of what it is like to live in the U.S.

### CORRECTION

Due to a mechanical error, the past and present views of Corbusier's Villa Savoye (p. 73, AUGUST 1966 P/A) were mislabeled. The pristine view was, of course, "Before," and the run-down house of today was "After."

### BOLD BUENOS AIRES BANK BUILDING



BUENOS AIRES, ARGENTINA Since the last part of the 19th Century, the local headquarters of the Bank of London & South America has stood at the intersection of Bartolome Mitre and Reconquista in the heart of this city's financial district. It is still there, but now it is housed in a building, opened in mid-July, that may have architectural repercussions throughout South America for many years.

Designed by Argentine architects Sanchez Elia, Peralta Ramos, Agostini in association with painter-sculptor Clorindo Testa, the building is the result of a local architectural competition involving four Buenos Aires firms.

Competition rules called for a building that would reflect the bank's reputation: "No stylized or 'forced' elevational treatment should be employed; neither should there be an application of any currently fashionable clichés which may become outmoded in due course." The bank also wanted local materials used "as far as practicable" and a maximum of interior flexibility with a

September 1966



DIXIE SQUARE SHOPPING CENTER HARVEY, ILLINOIS BUILDING: MONTGOMERY WARD & CO., INC. CHICAGO, ILL. ARCHITECT: HORNBACH-STEENWYK & THRALL, INC. GRAND RAPIDS, MICHIGAN CONTRACTOR: INLAND CONSTRUCTION INC. MORTON GROVE, ILLINOIS DISTRIBUTOR: SCHUHAM HARDWARE CO. CHICAGO, ILLINOIS



Norton Uni-Trol controls prove particularly valuable to the satellite Automotive Center. Items purchased at this store are more likely to be bulky. Customers appreciate the convenience of an open door when they leave with their purchases.

Norton Series 6120 Uni-Trol door controls were used for all public entrance doors on both the exterior and interior doors. Shock absorber in the holding mechanism prevents damage to door and frame at full open position. Built-in holder can be engaged to hold the door open for customers. Note how the attractive styling blends with the door and frame.

### FOR CONTROL and SAFETY Montgomery Ward specifies NORTON<sup>®</sup> UNI-TROL DOOR CONTROLS

To control doors under all circumstances and to protect both customers and doors, Montgomery Ward has specified Norton Uni-Trol door controls. The tremendous traffic experienced by these stores at their public entrances demands that the doors be under perfect control at all times and all situations. In addition, safety to both customers and the door is an utmost concern.

All of these important considerations were met very successfully with the Norton Uni-Trol, a combination door closer and door holder. For normal to medium heavy traffic, the unit functions as a normal door closer. When traffic is heavy, the door holder is engaged to keep the doors open. The spring in the holding mechanism serves as a cushion as the door is opened. Strong winds or energetic customers cannot harm the door or frame when the unit is opened too quickly.

1121

SEND COUPON FOR PRODUCT DEMONSTRATION		NORTON® DOOR CLOSER DIVISION 372 Meyer Road, Bensenville, Illinois, 60106
Have your represent I'd like the information		an appointment to demonstrate. :
Norton Uni-Trol Do	oor Controls	Complete Norton Line
Name		Title
Company		
Address		
City, State & Zip		

minimum of interior columns.

The result is a building that has a soaring interior space, from first floor to the roof seven stories above it. The roof, which is of castin-place concrete, is supported by the outside wall columns and by the twin internal elevator shafts. Pouring the roof took patience: first, a steel network of temporary supports, reaching from the lowest basement level to the roof, was put up; then the wooden formwork was laid atop it; and, finally, the roof was poured in sections. Above the main roof level, two huge concrete beams, 15' high and 2' thick, were poured, spanning the space between the main elevator shafts. These beams help carry the load of the top five balcony-type floors, which overlook the main interior space and consist of precast panels hung from the roof by steel frames. The first two floors are cantilevered out from supporting columns.

The facade is a curving, spreading concrete sunscreen, woven between the exterior supporting columns. It has a sculptural effect, and, because of the inward curve near the base the building, looks as if it had grown there, reaching outward, as it swept toward the top, to reach the sun. Behind this facade is a curtain wall of aluminum and glass.

### THE CHARETTE: **MOCK HEROISM**

Sleep, a recently published book by science writer Gay Gaer Luce and psychologist Julius Segal, may have implications for architects and one of their time-honored customs: the charette. Luce and Segal have done little more than set down facts about human abilities and reactions long known to biologists, but unknown to most other people, even doctors. They point out that the body responds to a daily rhythm-or circadian rhythm, as it is called-which affects perception, ability to solve problems correctly, and alertness. The circadian rhythm is composed of several biological factors: Body temperature, pulse rate,

blood pressure, metabolism, blood-cell count, the number of cells dividing in tissue, the volume and chemistry of the urine, kidney function, and others all follow an approximate 24-hour cycle of peaks and lows. Most of these body functions are at their peak at the same time each day-for most persons, in the morning. around 10 A.M., reaching their lowest point at about 2 A.M. The body clings tenaciously to its circadian rhythm: If a man is not asleep when the rhythm dips through its low cycle, he feels terrible, his responses are slowed, his perception dimmed. Tests show that persons in occupations that demand long hours of wakefulness are at their worst during these nadir hours: News broadcasters will slur words; airline pilots are most subject to accidents, and doctors have most difficulty making correct decisions. "Nowhere, perhaps," write Luce and Segal, "is the sharing of night duty scheduled in a more stressful and absurd manner than in medical schools. Instead of shouldering night duty for a month and then resuming normal social life, the young interns and residents follow a routine that savagely disrupts their diurnal rhythm: their duties some-

"During a month of his internship when he was working on an accident ward, Elliot D. Weitzman, a neurologist at Albert Einstein College of Medicine, recalls that he had been on duty 24 hours, and was given a few hours to sleep in the morning before afternoon rounds with patients. 'The intern is inexperienced to begin with. When he is on duty he is busy, sometimes with life and death situations -often during hours when there may be nobody around to call for help. I know my decision-making abilities were diminished and by 3 A.M. I hoped nobody would come into the emergency room.'

times last 36 hours.

"When older doctors are told that this routine is as unfair to patients as it is hard on interns, they take the attitude that everyone in medicine must go through this endurance test."

The authors then go on to say, "Architecture schools also create three- and fourday drafting marathons, known as charettes, in a similar tradition of mock heroism." Perhaps the charette is the reason behind so much trancelike architecture.

Perhaps, too, even a colorful custom needs a fresh look. There seems little point in forcing oneself to work

through periods of painful inefficiency. What would happen if jobs were worked out on more reasonable schedules, if practitioners slept at night to work refreshed in the morning? Coffee sales might sag. But so might fewer buildings.

### CHANDIGARH THREATENED



Photo: Courtesy of Information Service of India

CHANDIGARH, INDIA. Political events have been the driving forces behind many great architectural projects. Unfortunately, politics can also be their undoing. Here, on the heat-shrouded plains of the Punjab, Le Corbusier's meticulously planned "organic" city, Chandigarh, is threatened by the political division of the state of which it is the capital.

This fall, the Punjab will be divided along roughly linguistic lines into two states: Punjabi Suba and Hariana, one Punjabi-speaking, the other Hindi-speaking. Al-though Hindi is now the official language of India, English is still widely spoken, and the Indian constitution recognizes 14 official languages. In all, some 215 dialects are spoken throughout India.

Since neither of the two new states wanted to give up Chandigarh, the city will become the capital of both and will itself be administered by the national government as a "union territory." The problems this raises for the city are legion. For one thing, it is still not certain

who will use the three main government buildings that Corbu called the "head" of his city. These are the Assembly, the Secretariat, and the High Court.

As in any situation where certainty becomes doubt, many alternatives are proposed. One proposal calls for a geographical division of the city, a scheme that would destroy Le Corbusier's plan as surely as division would kill any other organism. Some effort is being made to work a second head - a second group of government buildings — into Corbu's original plan without damaging it permanently or irreparably.

When the original plans for Chandigarh were drawn up, nothing stood on that vast plain except a handful of mud-hut villages. Today, there is a thriving city of 140,000. But, with the announcement of the division of states, building here has slowed appreciably. Some observers fear that ultimately both new states will withdraw their capitals from Chandigarh, and will locate them centrally.

### PCI AWARDS

CHICAGO, ILL. Commenting on the high quality of submissions to the 1966 Prestressed Concrete Institute Awards Program, jury chairman Morris Ketchum, Jr., announced 15 awards last month to structures showing excellence of design using precast and prestressed concrete. Shown here are the Lytton Savings & Loan Oakland Regional Office (1), and the Lytton Savings & Loan Canoga Park Regional Office (2), both designed by Kurt Meyer & Associates of Los Angeles. The surprising incidence of a single architectsingle client bringing in a





double award is a tribute both to the clean design of the architects and the progressive thinking of the client, Bart Lytton, president of Lytton Savings & Loan. Lytton, who heads the bank's design committee, has the final design say on all new bank installations, and Kurt Meyer, who has been chief Lytton architect for some time, has nothing but praise for his client. Lytton sees his banks as more than banks and sets aside over 10% of construction funds for art, much of which may be found on the exterior of the bank branches (as in the giant mobile of the Oakland Branch shown here). Each bank is sited in a plaza or public space. In these two instances, landscaping was done by Eckbo, Dean, Austin & Williams of South Pasadena, Calif.

Other award winners in the PCI Program were: Greenbriar Shopping Center, by Edwards & Portman of Atlanta; Syracuse University's School of Journalism (the S. I. Newhouse Communications Center), by I.M. Pei & Associates, with King

Orchards Bridge near Leavenworth, Wash., with Arvid Grant & Associates as engineers; Estancia High School in Newport Beach, Calif., by William E. Blurock & Associates; the First National Bank Building of San Diego, Calif., by Tucker, Sadler & Bennett; Children's Hospital Medical Center Parking Garage in Boston, by The Architects Collaborative; Bank of Park Forest, Ill., by Fridstein & Fitch; Central Mall and Transportation Centre, Simon Fraser University, Burnaby Mt., B.C., Canada, by Erickson/ Massey, Architects; Laboratory for Research Council of Alberta in Edmonton, Alberta, Canada, by Bell, McCulloch, Spotowski Associates; Century Building in Seattle, by Bystrom & Greco; LaGuardia Airport Runway Extensions, New York Authority Engineering Department; Los Penasquitos Creek Bridge, San Diego County, Calif., by the Calif. Division of Highways; the Laurentian Autoroute Bridges near Ste-Adele, Quebec, by the Quebec Autoroute Authorities.

World Trade Center, designed

by Minoru Yamasaki & Asso-

ciates in association with

### WORLD TRADE CENTER NYET?

NEW YORK, N.Y. As excavation work was begun last month for the foundation of the & King Associated; Cascade

Emery Roth & Sons, volleys of controversy over the building were still echoing in the canyons of New York. None struck a more amusing note than an advertisement in the June 30 issue of the Real Estate Weekly. It was paid for by the Committee for Better Understanding of the Port of New York Authority and was couched in the form of an apocryphal letter from Russian Premier Kosygin to the Board of the Port of New York Authority, which is building the Center. It read:

"The Soviet Ekonomicheskoy Vzaimopomoschi of the Soyuz Sovyetskikh Sotsialisticheskikh Respublik takes warm recognition of your in-

spired efforts as an agent of the State to strengthen the economic collaboration of the socialistic system by your planned construction of The World Trade Center. The vesting in the state of ownership of the largest office buildings in the world negates years of decadence of the capitalistic system of private ownership and should be the basis of continuing relationship between the Port of New York Authority and Gosplan (the State Planning Commission) for the exchange of economic and technical experience and rendering mutual aid."

(Signed) ALEXI NIKOLAYEVICH KOSYGIN

### **CLIP-ON FACADE**



ATLANTA, GA. Underway in Atlanta is this 25-story building for the Life Insurance Company of Georgia. Rising from a built-up, open landscaped podium, it will be a gigantic monument, towering above its neighbors. Its facade is marble-faced precast concrete. Stainless-steel anchor clips fit into pre-drilled holes in the marble facing, holding it to the concrete, which is cast around these anchors (see drawing). Architects are Bodin & Lamberson of At-



lanta in association with Eggers & Higgins of New York.

#### INACCURATE BIDS BOOM AS INFLATION TAKES OFF

Inflation bothers almost everyone, not just bankers; prices are now spiraling upward in a heady dash to catch up with wages and costs. But it is almost as if the race were being run on a treadmill, for wages and costs are running just as fast as prices.

All this has been showing up in the construction industry throughout the country, and architects asking for bids on building projects are finding, with unsettling frequency, that bids are coming in far over their estimates. Bids on the Pittsburgh Stadium, for instance, were 46% higher than the designers anticipated (see p. 61, AUGUST 1966 P/A). Bids for a 1<sup>1</sup>/<sub>2</sub>-mile section of subway in Oakland, part of San Francisco's Bay Area Rapid Transit District, were 28% over estimates.

And trustees at the University of Maine found that bids on three dormitories they hope to build were 18% over the state estimate.

Too frequently, when the projects involved are public ones, the bids are rejected, for officials are often bound by law to reject over-the-budget bids. They must then, of course, either do a cost-cutting redesign or persuade voters to authorize more money. Private owners can negotiate to get a better price; but, either way, there is delay, while costs continue to spiral upward.

The *Wall Street Journal* reports that the average hourly rate increase in the construc-

tion trades this year has been 6.2%, topping last year's 5% increase, and the 4% of the year before last.

In addition to labor costs, the prices of materials have been steadily rising. Steel, copper, plywood, lumber, and concrete have all shown price increases, and the *Journal* quotes one contractor in the Northeast who estimates an over-all materials cost increase of 5% so far this year.

But the picture is far from bleak. Firms that have gone to the trouble of keeping close tabs on construction costs are finding their bids are as accurate as ever. And the money is available for construction: It is just a matter of keeping the client calm with an accurate construction cost estimate.

Photo: Marvin Rand

INTERPLANETARY-STYLE LIBRARY



SECTION 18



SAN DIEGO, CALIF. The U.S. Air Force might call it swamp gas, but for students at the University of California's San Diego campus, it will be a library. Designed by William L. Pereira & Associates, the five-story spheroid library will hover like a spaceship over a 30' podium, or "forum." Beneath this raised forum (see section) will be the main library floor with optimum use areas. The two story, 200-sq-ft forum will be enclosed by a colonnade of concrete columns, but otherwise open to the elements in the good old Greek fashioned way. Pereira sees this space as "a vital meeting place for the entire campus, a place perhaps for exhibits, for certain functions and events, and — most importantly — for the exchange of ideas and opinions." The five upper stories will house 650,000 volumes and study and reading space for 1250 students. The unusual ovoid plan is thought to give greater stack accessibility. Construction on the \$3,800,000, concrete aggregate and graysolar-glass-wrapped building is scheduled to begin in the fall of 1967.

**BUILDING A BETTER KIOSK** 



NEW YORK, N.Y. Central Park is turning its back on the Turkish "kiusck" (a pavilion of ornate variety) and going modern the kiosk way. Winner of the first architectural competition to be held by this city's Parks Department since 1907 is 29-year-old William Maurer. In the words of Parks Commissioner Thomas Hoving, his "imaginative, pleasantly temporary, prefabricated, knock-down modular design" was thought the most sympathetic to the over-all Olmsted and Vaux park plan. This kiosk would serve, rather than offend, nature. Not one blade of grass would be displaced. The Horn & Hardart food company, which contributed the \$2000 prize money, will

build and operate the \$12,000 prototype somewhere in Central Park. Other such kiosks will be built throughout the city's park system as needs dictate and finances allow. This model has seven parts (see plan), which can be used singly or in any combination depending on how the crowd goes or comes. As such, it signals, as Hoving put it, "the end of the stereotyped, tired, rinky-dink type of building" that has plagued many a city agency. One hopes that other government departments will likewise benefit from the gentle breeze of architectural freedom. For more on Central Park, Hoving, and what's happening in parks now, see this month's P/A OBSERVER.

**ROANOKE ON THE RISE** 



ROANOKE, VA. This young (founded in 1834), mediumsized (pop.: 69,287), sprawling Southern valley town, once known as Big Lick, does not share the heritage of architecture and charm that other older dominion towns do, but this is not stopping her from building one of the first civic centers in the state. In an age of galloping civic-center-psychosis, Roanoke comes by hers after a long, hard fight. After three defeats, a bond referendum finally went through last June authorizing funds for the \$7 million center. And although its 24-acre site, bounded on three sides by major highways, does not sound like much of a setting for the arts from this side of the street, the center hopes the growing tourist trade will pack its 11,000-seat coliseum and 2460-seat auditorium-theater. With ice skating, tennis, basketball, circuses, rodeos, conventions, trade shows, as well as the ballet, opera, screen, theater, and concert, attendance should not be any problem. Beneath the connecting landscaped plaza will be a multipurpose exhibit and meeting hall. There will be parking space for 1900 cars. Exterior wall panels are to be of precast concrete, with exposed aggregate with native stone bases. Construction on this simply expressed center will begin next spring, with completion scheduled for early 1969. The project is being designed by associated architects: Smithey & Boynton, Thompson & Payne, Randolph Frantz & John Chappelear, with Somers, Rodes & Whitescarver as engineers.

### PLEASANT PORTLAND INSTITUTION



Thoros. An commercial stour



PORTLAND, ORE. Nearing completion on a tree-lined boulevard near downtown Portland is the new building for the Oregon Historical Society. It is really two buildings in one: The front - and main - part of the structure looks out on the institutional section of the city; while the rear - a one-story administrative wing, opening off a bricked courtyard, which, in turn, opens off pedestrian walk that cuts through the block next to the building ---looks out on the downtown area.

Architects Wolff, Zimmer,

September 1966



Gunsul, Frasca have made good use of a sloping site for this handsome concrete building. For example, the roof of the administrative wing will be an outside courtyard,

opening off the main building's first floor rotating gallery space. Second floor will be an open, unobstructed permanent gallery, and the third floor with its skylighted roof will be a library. In all, the building will take in about 55,000 sq ft, at an estimated cost of \$1,250,000.

THE BULK OF SCIENCE



Photo: Louis Checkman

FLUSHING MEADOW, N.Y. The New York World's Fair may now be little more than an eyesore by the side of the road, but its Hall of Science lingers on. Last month, plans were announced to turn the science pavilion there into a full-fledged science museum. The first construction phase will include a 120,000-sq-ft, \$7,500,000 complex of five one-level interconnecting blocks forming a sculptural base around the original 35,000-sq-ft Hall of Science. New York City will pay for the Nuclear Science Center (see photo), which will house a \$3 million Atomic Energy Commission exhibit, including a working reactor, which is believed to be the first available for exhibit and demonstration to the American public. Construction on this building will begin next May. The financing of the Education and Exhibit Building is still uncertain, although there is some talk about a Hall of Science of the City of New York, Inc., financing the project. Construction in this eventuality will start next August, with completion due by October 1968.

This bulk of science will be expressed by sloping cutstone walls rising 25' with a "floating" roof over the sculptured stone base. And a space-frame supporting system will provide interior flexibility and flow.

Architect of the 23-acre complex is Max O. Urbahn of New York, who has also provided a master plan for future expansion.

FRANK LLOYD WRIGHT AND THE 17 PLAQUES



STANFORD, CALIF. Shown here is the Frank Lloyd Wrightdesigned Hanna House, which, last month, along with

16 other esteemed Wrightian buildings throughout the country, donned an AIA commemorative plaque. Use

of these plaques was originally suggested by Aline Saarinen, in an article she wrote in 1959 for The New York Times, in which she indicated that the AIA might well remember, in some way, one of the nation's greatest creators. The following year, a Frank Llovd Wright Memorial Committee was formed, which included Karl Kamrath (as chairman), Edward Durell Stone, and Alden B. Dow; L. Morgan Yost joined soon after. Working with Mrs. Wright and Wright's son-in-law, Wesley Peters, at Taliesin, a list of Wright works was drawn up and 17 finally singled out. Photostatic copies of the original working drawings of each of these projects (with the exception of the two Taliesins) have subsequently been stored in the archives at the Octagon House and are available there to students and architects. Honored are: The Frank Lloyd Wright House in Oak Park, Ill. (1892); Winslow House in River Forest, Ill. (1893): Ward Willet's House in Highland Park, Ill. (1902); Unity Temple in Oak Park, Ill. (1906); Robie House, Chicago, Ill. (1901); Taliesin, Spring Green, Wisc. (1911); Barnsdall House, Los Angeles, Calif. (1917); Kaufmann House (Fallingwater) in Bear Run, Pa. (1936); Taliesin West in Scottsdale, Ariz. (1936); Hanna House, Stanford, Calif. (1937); S. C. Johnson Administration Building (1937) and Research Tower (1947) in Racine, Wisc.; V.C. Morris Shop, San Francisco, Calif. (1949); Unitarian Church in Madison, Wisc. (1949); Price Tower, Bartlesville, Okla. (1953); Beth Sholom Synagogue in Elkins Park, Pa. (1956); and the Guggenheim Museum in New York City (1957).

### **MEYERSON LEAVES BERKELEY**

BERKELEY, CALIF. On September 1, Martin Meyerson officially resigned his deanship at the College of Environmental Design, University of California in Berkeley, to take over duties as president of the University of Buffalo, Buffalo, N.Y. Replacing Meyerson at Berkeley will be John Burchard, who will serve as acting dean for six months, until a permanent dean is appointed.

### PRECAST ASSOCIATION FORMED

TAMPA, FLA. The recently formed Architectural Precast Association has, as members, firms and individuals who work with precast concrete. It hopes to prepare a standard reference specification for quality control in the manufacturing, testing, and erecting of precast concrete work. It also plans to prepare a guide specification for use in project specifications. Current president is Jack Plunkett. Address: Architectural Precast Association, P.O. Box 5685, Tampa, Fla. 33605.

### THE GREAT APE HOUSE



KANSAS CITY, MO. Six gibbons, five chimpanzees, three gorillas, two orangutans, and a partridge in a pear tree it may sound like a Darwinian Christmas, but in Kansas City it's an everyday thing. All live happily side by side in the new \$340,000 glassand-concrete Great Ape House in the Swope Park Zoo here — the birds in a foliated 40' glass tower in the center and the apes in their cages around the periphery. Linscott Kiene & Haylett of Kansas City are the architects.

### **COMPETITIONS**

The Birmingham-Jefferson Civic Center Authority has announced its AIA-approved competition for the design of a \$25-million Civic Center. The

center, which will be built on 23 acres of downtown Birmingham property, will consist of a 14,000-seat coliseum, a 3000-seat concert hall, a 1000-seat theater, a 100,000sq-ft exhibition hall, meeting rooms, restaurant, cafeteria, and parking facilities. Jurors will be Max Abramovitz, of New York's Harrison & Abramovitz; Gyo Obata of St. Louis' Hellmuth, Obata Kassabaum; John Carl 8 Warnecke, head of John Carl Warnecke & Associates of San Francisco, Honolulu, Washington and New York: Harold Burris-Meyer, director of the University Theater at Florida Atlantic University; and John Fernald, London theater director. William A. Briggs, of Richmond, Va., will be the Professional Advisor. The winner, to be selected from eight finalists, will receive a \$25,000 prize toward the commission (6% of the \$22-million construction cost). The second prize will bring \$15,000 and the third \$5000. Registration for the competition closes September 24 and all entries must be in by November 1. 1966. The program is available from William A. Briggs, AIA Professional Advisor, Box 16038, Richmond, Va. 23222.

### ANOTHER CLOUD PUSHER



Photo: Chicago Architectural Photographing Co.

CHICAGO, ILL. Shown here is the model for the 80-story Weinper & Balaban and Guenter W. Malitz-designed apartment building, to rise two years hence on Lake Shore Drive. The 141,000sq-ft building, which, reputedly, will be the tallest reinforced concrete building ever built, will house 1200 apartments. Its three wing pin-wheel shape will offer maximum exposure to the lakefront and maximum structural stability against wind loads, while permitting relatively short (75') corridors, terminating in central elevator lobbies on each floor. A garage for 1000 cars flanking the tower will have three tennis courts, pools, and landscaped areas on its roof. Construction will start this fall.

### **OBITUARIES**

FREDERICK FROST, president of the New York Chapter, AIA, from 1939–1941, and founder of the New York architectural firm of Frederick G. Frost, Jr. & Associates, died July 30 at the age of 89 in Stamford, Conn.

DOUGLAS W. ORR, 1947–49 president of the AIA, designer of the controversial Taft Memorial Tower in Washington, D.C., and partner in the firm of Douglas Orr, deCossy, Winder & Associates of New Haven, died on July 29 at the age of 74.

GERALD A. BARRY, president of Barry & Kay, Chicago architects, died at the age of 71, June 9, 1966.

### AWARDS

Winning structures in the annual competition for steelframed buildings, sponsored by the American Institute of Steel Construction, are: the Chicago Civic Center, designed by C. F. Murphy Associates, with Skidmore, Owings & Merrill, and Loebl, Schlossman, Bennett & Dart associated; the Equitable Building in Chicago, by Skidmore, Owings & Merrill; the Inland Steel Products Co., in Milwaukee, Wisc., by William P. Wenzler, in association with The Engineers Collaborative, Ltd.; the Birmingham Bloomfield Bank in Wixom, Mich., by Ziegelman & Ziegelman of Birmingham. Awards of Merit went to the Atlanta Stadium, by Heery & Heery, and Finch, Alexander, Barnes, Rothschild & Paschall, associated architects; the State Street Bank Building in Continued on page 67

September 1966



## PERMANENT WINDOW

of steel offer the strength to hold large glass, the structural integrity to keep water and air out, the quiet beauty to enhance or color your design without dominating it, and the unusual combination of highest quality at modest cost.

Steel windows are made by dependable companies you can count on to help with the fresh architecture of tomorrow.

STEEL WINDOW INSTITUTE Brookfield, Wisconsin

SPONSORING MEMBERS:

The William Bayley Company 1200 Warder Street Springfield, Ohio 45501

Bliss Steel Products Corp. 617 West Manlius Street East Syracuse, New York 13057

The Bogert & Carlough Company P.O. Box 2444 508 Straight Street Paterson, New Jersey 07501

The Ceco Corporation 5601 West 26th Street Chicago, Illinois 60650

Federal Window Division Continental Conveyor & Equipment Company P.O. Box 398 Winfield, Alabama 35594

Hope's Windows, Inc. P.O. Box 580 Jamestown, New York 14701

Republic Steel Corporation Manufacturing Division 1315 Albert Street Youngstown, Ohio 44505

## steel steel steel steel windows

You can gain all of the benefits of steel windows —plus the enduring beauty of stainless steel in windows from The William Bayley Company.

Aside from close personal engineering assistance on your project, you gain confidence from dealing with a well-established firm of professionals. Result—**practical** windows on your drawings and **on-time** delivery of windows on your job. Ask Bayley for responsible help on windows and curtainwalls. The William Bayley Company, Springfield, Ohio.



On Readers' Service Card, Circle No. 424

## CRYLCOAT

## **REPUBLIC STEEL WINDOWS**

Now . . . 18 more good reasons to specify steel windows from the complete Republic Steel line.\*\*

New Republic Crylcoat Windows offer you the choice of 18 modern colors . . . exactly the colors you specify. Crylcoat is a thermosetting acrylic finish, baked on for longer life. The smooth surface shuns dirt and grime, thus offering minimum maintenance.

Specially formulated Crylcoat finishes protect against sun, wind, weather. Never fade. And Republic's five-step phosphatizing process stops corrosion before it starts. Eighteen good, colorful reasons to specify Republic Steel Windows. Add these to Republic's other features . . . complete perimeter weather stripping, vent to frame to eliminate air leakage, and precise manufacture to rigid quality control standards. There are literally dozens of reasons to specify Republic Windows.

Let your design imagination color your clients' outlook.





\*\*These reproductions of the 18 Crylcoat colors are not absolutely true. The real beauty of Crylcoat can only be appreciated when actual paint samples are viewed. Ask the Man From Manufacturing to show you.

THE MAN FROM MANUFACTURING\*

## Since HOPE'S 1818 WEATHERSTRIPPED STEEL WINDOWS

 THE ARCHITECTS COLLABORATIVE OFFICE BUILDING
 • CAMBRIDGE, MASSACHUSETTS

 Architects: The Architects Collaborative, Inc.
 Mechanical Engineers: Reardon & Turner, Boston

 Structural Engineers: Souza & True, Cambridge
 Electrical Engineers: Norman Associates, Canton

 General Contractor: George A. Fuller Company, Inc.
 Mechanical Engineers: Norman Associates, Canton

Architects designing structures for their own use have complete freedom of choice. The makers of Hope's Windows were honored therefore to have Hope's Weatherstripped Steel Windows selected as one of the components in The Architects Collaborative office building.

Our catalogs are filed in Sweet's Architectural File and our sales offices and representatives are located in principal cities.



## HOPE'S WINDOWS, INC. Jamestown, N.Y.

HOPE'S WINDOWS ARE MADE IN AMERICA BY AMERICAN WORKMEN

## Can you stand by a specification that will save your client maintenance money for years?

If you can, we have windows that are right down your alley.

These are Cecoclad steel windows. They are finished in polyvinyl chloride, which is impervious to moisture. They won't rust.

Your client won't ever have to paint these wondrous windows, as he would ordinary windows. You save him up to \$10 per window every four years. You save him a lot of inconvenience, too.

Will he like that? Ask him. Ask us for colors, cost data, test data, specifications and samples. The Ceco Corporation, general offices: 5601 West 26th Street, Chicago, Illinois 60650. Sales offices and plants in principal cities.



On Readers' Service Card, Circle No. 423

P/A News Report 65

September 1966

September 1966

## CONTINENTAL-

manesque overtones. Woodbridge plans to use contemporary metal and glass and concrete. "I don't know what style you would call it," he says of his as yet unveiled plans. Traditional stonework is almost impossible to produce nowadays. Most of the stonemasons in the U.S. have permanent employment on the Washington Cathedral. "New York City," Wood-bridge says, "has only eight competent stonemasons."

Two considerations are foremost in Woodbridge's plans. He will keep the vast space beneath the dome free from girder or pillars. And he will use two elevators to replace the winding, 16-story staircase leading to the roof beneath the towers.

Perhaps some contemporary cathedral designer will find a way to keep the traditional grandeur and eloquence while providing heating and cooling, and in doing so eliminate the need for metal-and-glass entrance doors. (For another proposal for St. John's, see p. 181.)

prospective tenants will cheer its opening, for the complex is the Orange County Jail.

The largest of the three buildings will be a square, four-story Men's Jail, housing, on its third and fourth floors, up to 1200 inmates. The Women's Jail (left, in photo) will have administration, public visitation, and other functions on its first floor, and space for 156 female prisoners on its second. For exercise, the prisoners will use the "suitably fenced and screenedin" roofs of their respective buildings-a rather cruel solution, considering that the public will be allowed to amble through the plaza below. The final building, the Sheriff's Headquarters, will have two stories, and, reportedly, one of the most modern crime laboratories in the country.

The architects, aware of the incongruity of a jail in the midst of a civic center, have prettied up the complex with textured and patterned concrete walls. Perhaps we are going back to the Old Westthe jail on Main Street approach practiced by such strong arms as Dillon, Garrett, and Masterson. But even if Santa Ana is once more putting the jail in the midst of things, she is doing so with a difference. The iron bars have changed to artistic concrete work. And the Bad Guys don't wear black anymore.

ENERGY AT EXPO





MONTREAL, CANADA. With the opening drawing nigh posthaste, Expo '67 is preening herself for the show and showing her fair self off.

Seen here is Alexander Calder's contribution, an immense (46 tons, 67' x 94') "Man." The stabile—Calder's largest work-which was commissioned by the International

Nickel Company of Canada, will be built in France of stainless steel and bolted together on the fair grounds next March. Its rearing pinnacles and vaulting arches are not much different from his "Ticket Window" at Lincoln Center (p. 43, DECEMBER 1965 P/A), or "Big Sail" at MIT (p. 53, JUNE 1966 P/A).

September 1966



"DON'T DISCONNECT -- CONNECT"

ATLANTA, GA. Such was the rallying cry of Atlanta architects Toombs, Amisano & Wells when construction was begun recently on the Atlanta Memorial Cultural Center. The \$13 million, cast-inplace concrete center (model shown above) will house under one roof the High Museum of Art, the Atlanta Art School, the Atlanta Symphony Orchestra and facilities for all the performing arts. Plans call for a museum (with a 450-seat auditorium), a 1925-seat symphony hall, a 891-seat theater, and an art school to ring around a 52' x 232' multipurpose (open space, exhibit space, or meeting space for 1000 persons) galleria. Atlanta hopes to have ready by 1968 its memorial to the 126 members of the Atlanta Art Association killed in a plane crash four years ago. But only time will tell whether this is a plum on Peachtree Street.

### **HELP! I'M A PRISONER IN A CIVIC CENTER**



SANTA ANA, CALIF. Last May, construction was begun on a \$10 million, three-building 8acre complex in the southwest corner of the Santa Ana

Civic Center. When the three buildings, designed by the Los Angeles firm of Albert C. Martin & Associates, are finished in mid-1968, few of the



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

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

## FOR A SYMPHONY OF STYLING AND COLOR

### LINE MATERIAL MEDIUM ILLUMINATION OUTDOOR LIGHTING

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

### STYLING AND BEAUTY

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

### **EFFICIENCY, ECONOMY**

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

### **COMPLETE LIGHTING SYSTEMS**

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

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

> > TURN PAGE

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

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

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

### STYLED MERCURY Graceful, elegant styling in distinctive designs. Available in 9 dynamic colors. Provides economy, with 1) shorter poles, 2) standard pole top mounting eliminating support arms, and 3) internal ballast eliminating external ballasting plus related wiring and mounting expense. STYLEVUE (Scale: 1"=2') SPECIFICATION Units available for use with 250-watt and 400-watt STYLAIRE ST AIRE TWIN mercury and metallic additive lamps; constant-wat-tage, reactor, high-reactance or constant-current bal-(Scale: 1"=3') (Scale: 1"=3') lasts; IES Types II, II-4 way and III distributions; photocontrol accommodation.



### STYLESHIELD (Scale: 1"=2')

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

#### SPECIFICATION

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



## (Scale: 1"=2')

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

### SPECIFICATION

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

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



But presumably because the stabile had to conform to the Expo theme of "Man and His World," Calder worked man — lollypop style — into his otherwise forceful sculpture.

New in the pavilion line is the Venezuelan addition to Expo. Designed by Carlos Raul Villanueva, his country's leading architect, the pavilion is composed of three cubes 45' on a side. The cubes will be red, black, green, blue, and yellow, — their stone walls polished to mirror finish.

### SCHOOLS

The American Iron and Steel Institute has recently presented five \$8000 grants to architectural schools at Columbia University, Clemson University, IIT, the University of British Columbia, and the University of California at Berkeley. The grants are to encourage more creative studies leading to advances in steel construction . . . Starting September 20, at the Center for New York City Affairs of the New School for Social Research, eight courses of architectural interest will be offered. Peter Blake, editor of Architectural Forum, will teach a course on "Architecture and Design in New York City." Louis Schlivek, consultant with the Regional Plan Association, will discuss "The New York Metropolitan Region: Its People and Prospects." Francis Bloustein, vice-chairman of the New York City Planning Commission, will conduct a seminar, "Case Studies in City Planning." Elinor Guggenheimer, member of the City Planning Commission, will give a course on "A Recreation Program for New York City." Roger Starr, director of the Citizens Housing and Planning Council, will conduct a course on "Housing Rehabilitation: Decent Homes in Shabby Structures." Michael E. Eskstein, sociologist, will discuss "Dreamers, Engineers and Citizens: The Idea and Reality of the City." Charles Abrams, chairman of the department of urban planning at Columbia's school of architecture, and Percival Goodman, professor of architecture at Columbia, will

present a special lecture course on "The Future of the Metropolis." Further information may be obtained from the Office of Registrar, The New School, 66 W. 12th St., New York, N. Y.

MORE STEEL AND GLASS FOR SAN FRANCISCO



SAN FRANCISCO, CALIF. Designed in the Miesian tradition, The First Savings Building will be completed here by 1968. It will be the home office of the First Savings and Loan Association and northern headquarters of the Great Western Financial Corporation. As conceived by the office of John Carl Warnecke, the 26-story building will have a gray glass curtainwall, but this expanse of metal trim and glass will be broken on each façade by six strips of bay windows running up to the mechanical floors. It will be located at the corner of California and Sansome Streets. Groundbreaking should be underway this fall.

### EAVESDROPPINGS

"Today, we [architects] are an affluent profession in an affluent society. If we allow ourselves to be submerged in the day-to-day demands of our own prosperous workloads, ours will be a petty triumph soon forgotten. Failure to give a full measure of devotion to the demands of function, craftsmanship, art, and science which architecture must satisfy means that others will fill a gap we ourselves have created." Morris Ketchum, Jr., in an address to the Second Boston Architectural Conference, May 14, 1966.

"It is not easy to devise the means by which to inculcate the appreciation of beauty. To some it comes naturally. to others it is intellectually received. . . . If I were a teacher, I do not know what techniques I would use, beyond attempting to stimulate a mere interest in the question. Perhaps I would try showing the children slides of various buildings, and asking, 'Is this ugly? Is this beautiful?' and bringing down a cane upon the knuckles of the blockhead who grunted the wrong answer. I would do so with due recognition of the hazard of my undertaking, because my own knuckles are constantly rapped, as for instance when I go and see some of the work of our most prestigious artists and architects. . . . Still, I would take the risk, in behalf of the idea that a regard for beauty, an inquisitiveness about it, can be communicated." William F. Buckley, Jr., "The Politics of Beauty," Esquire magazine, July 1966.

"What use, my friends, is beauty? Why did the Athenians bother to take 30 years and the talent of every Athenian to build the Parthenon? Now, I do not propose that we appropriate tomorrow the 20 to 50 billion it would take in today's money to build the equivalent of the Parthenon....But should we not appropriate some of our billions to make our houses, our cities, beautiful, if not for posterity and immortality like the Greeks, then for ourselves? . . . I am convinced Americans can do what they want. And I have it on the authority of Pericles, the leader of the Athenians, who built the Parthenon, that Athens (and we) could have guns and butter - and great buildings." Commencement address by Philip Johnson at Mt. Holyoke College.

### PERSONALITIES

Appointments to the various and sundry AIA commissions, committees, and juries have been made by Charles M. Nes, Jr., new AIA president. George E. Kassabaum becomes chairman of the Council of Commissioners; Dan C. Cowling, Jr. chairman of the Commission on the Professional Society; Walter Scholer, chairman of the Commission on Education and Research; Victor C. Gilbertson, head of the Commission on Professional Practice; Willis N. Mills, chairman of the Commission on Architectural Design; David N. Yerkes, head of the Commission of Public Affairs; James Hunter, chairman of the Honor Awards jury; and Paul R. Hunter, chairman of the Jury of Fellows ... Minoru Yamasaki has been elected to the board of directors of Troy (N.Y.) National Bank ... Juan A. Casasco, Development Planner at Stanford Research Institute for the past two years, has been appointed Associate Professor of City and Regional Planning at Washington D. C.'s Catholic University . . . G. William Miller, president of Textron. Inc., was elected chairman of the Research and Design Institute, succeeding Dr. Albert Bush-Brown, president of Rhode Island School of Design . . . John P. Eberhard has been named director of the National Bureau of Standards Institute for Applied Technology . . . Charles Luckman was recently elected to the National Board of Governors of the Library of Presidential Papers in New York City ... The San Francisco Redevelopment Agency has appointed five members to the Advisory Panel for the development of the design for the Gateway World Trade Center: They are Boston architect and dean emeritus of MIT's School of Architecture and Planning, Pietro Belluschi; Berkeley architect and chairman of the University of California at Berkeley's Department of Architecture, Gerald M. McCue; San Francisco landscape architect, Thomas D. Church; Washington city planner, William L. Slayton; and professor of design at the Berkeley campus of the University of California, Jesse Reichek . . . Dr. Melville C. Branch. president of the Los Angeles City Planning Commission, will join the University of Southern California faculty as professor of planning . . . Ben H. Evans, director of research programs for the AIA, has been elected a member of the board of directors of the Building Re-

On Readers' Service Card, Circle No. 374

search Institute . . . Elected to positions with the National Council of Acoustical Consultants this past June were: Harold Mull, president; Michael J. Kodaras, vice-president; and Robert Lindahl, secretary-treasurer ... Dr. Waclaw Zalewski, a visiting professor at MIT for the past two years, was recently appointed to a professorship there . . . Edward Durell Stone has been named master architect for the six government buildings at Islamabad, Pakistan's new capital . . . California Governor Edmund G. Brown announced in early July a seven-man Governor's Jury on Good Design and Beauty, to be headed by Nathaniel Owings. Members include Mrs. Helen Reynolds, president of the California Roadside Council; Allan Temko, member of the Center for Planning and Development Research of the University of California at Berkeley; Sam T. Hurst, dean of the School of Architecture and Fine Arts of the University of Southern California in Los Angeles; Cesar Pelli, director of design for Daniel, Mann, Johnson & Mendenhall, winners of the Top Award of the Thirteenth Annual P/A Design Awards; T. Y. Lin, professor of Civil Engineering at the University of California at Berkeley; and Harry Ashmore of the Center for the Study of Democratic Institutions at Santa Barbara. The panel will select and honor outstanding contributions to architecture, planning, and conservation in California.

### STRANGER THAN FACT

LONDON, ENGLAND. On the London stage last spring was a play about a man, who, as a youth, has ideals, and who, as he grows older, compromises them. He is an architect. He comes to the big city from the north, a young draftsman, who stands on his head when he's excited and happy. With him he brings his dream to tear down the mills in his native north and put up six model, co-operatively owned socialist towns. Bitterness begins to set in when the Labor government refuses to help him. Determined to finance the scheme himself, he rereturns to his office and begins to take on commissions he normally would have turned down. (He had previously refused to build anything he did not approve of.)

Evidently, his commissions don't earn him much because, four decades later, he is forced to accept Tory aid to build one mixed-economy city. And although he is awarded a knighthood, he has to hear the Tory Minister of Works tell him: "The trouble with the Left, dear Cobham, is that it's dreary."

The reviewer for the Observer Weekend Review did not find Arnold Wesker's play, Their Very Own and Golden City, dreary. Nor did a group in Italy where a year ago the unpublished text won the Marzotto prize.

### MC GUINNESS TO TAKE ON CITY JOB

BROOKLYN, N. Y. William J. McGuinness, Chairman of the Department of Structural Design at Pratt Institute, set aside his academic gown for a bureaucrat's cigar beginning July 1. Pratt has given McGuinness (whom P/A readers will recognize as our Contributing Editor in charge of Mechanical Engineering Critique) a leave of absence to become Chief Engineer in New York City's Department of Investigation. During off-duty hours, Chief Engineer McGuinness will continute to edit his P/A column.

### FILM ON GAUDI

NEW YORK. N. Y. The Center for Mass Communication at Columbia University has announced that a new 16mm, 27-minute, color film, Antonio Gaudi, is available for purchase. Filmed on location in and around Barcelona by Ira Latour, the picture won a Blue Ribbon Award in the 1965 American Film Festival. For information about this or other films write: Center for Mass Communication, 1125 Amsterdam Ave., New York, N. Y. 10025. L. A. / P. O.

LOS ANGELES, CALIF. Neither snow, nor rain, nor heat, nor gloom of night stays the U.S. Post Office Department from the swift addition of 1000 new Post Office buildings each year. Recently out for bids is the Worldway Postal Center building in this city, designed by Los Angeles architects Daniel, Mann, Johnson & Mendenhall-the first postal center to be located at a major airport. The \$8 million 390,000-sq-ft reinforcedconcrete and brick building will stand on 7.3 acres of land in the Cargo City Development at the airport. The post office will also be the first civic building to heed the Los Angeles Art Commission's suggestions for aesthetic improvement. The commission suggested coloring the roof deck material and adding landscaping to the roof sprucing up the building for passengers arriving by air. Postal officials and DMJM were quick to endorse the plan.



MANHATTAN, KA. Most architects have colleagues or coworkers. Bucky Fuller has disciples. One of them, Bennett Shapiro (left, in photo), currently teaching at California State Polytechnic College, led his Kansas State University students in the construction of this 30' geodesic dome. The students built the dome themselves. They used pipes found locally, finished it in the school's industrial shop, and then erected the dome in one afternoon in the city park across from the nursery school laboratory.

The "lacy" and "invisible" structure of the dome uses a new kind of joint developed

by the Butler Steel Company, which partly finances Shapiro's courses (so far given at Kansas State, Oklahoma State, and Cal Poly). The dome will have heat lamps, windshields, possibly a roof canopy, and a heated asphalt floor. The design problem was to provide an "interior" that includes the "exterior" world, because, as Shapiro feels, most people prefer the outdoors, and prefer it even more if the weather can be controlled. Dean Henry Wright of the KU School of Architecture hopes this dome will be used as a children's playground. But potentialities are limitless in this put-uptake-down-in-a-day dome.

A HILLYARD SPECIFICATION FOR SEALING AND FINISHING SLATE FLOORS

Savior of the World Seminary Chapel, Kansas City, Kansas. Architects: Shaughnessy, Bower and Grimaldi, Kansas City, Missouri. Cem-Seal was applied for protection during construction and installation of pews. (In progress above). After pews were installed, two thin coats of Super Hil-Brite carnauba wax provides the wearing surface.

## **CEM-SEAL**<sup>®</sup> ENHANCES AND PROTECTS SLATE FLOORING... CURES AND SEALS GROUTING

Cem-Seal intensifies the beautiful, deep, natural colors of slate floors and guards against scratching, marring and dulling. Cem-Sealed slate may then be maintained against heavy traffic conditions with Hillyard Super Hil-Brite carnauba wax. Since Cem-Seal is formulated to produce maximum curing of concrete and protect masonry surfaces, it has an excellent function with slate and the grouting— Protecting both against damaging moisture and dirt.

**PRODUCT DESCRIPTION:** A modified clorinated rubber sealer. Recommended to properly cure concrete. It is commonly used to fill and seal porous masonry-type floors. Protects surface, improves appearance and provides base for final wax or finish coats.

**SPECIFICATION AND HOW TO APPLY:** Onto a perfectly clean, stain-free floor, apply Cem-Seal in an even coat with lamb's wool applicator. Avoid puddling. After drying thoroughly, apply two thin coats of Super Hil-Brite carnauba wax with a new lamb's wool applicator, again being careful not to puddle. On large, open exterior areas, Cem-Seal may be sprayed.

**DRYING TIME:** Cem-Seal-two hours in normal weather conditions; Super Hil-Brite wax - 30 minutes.

**COVERAGE:** 500-700 square feet per gallon depending upon the porosity of the floor.

**TECHNICAL DATA:** N.V.M.-20%. Viscosity-Gardner A-2-A-5. Color-Gardner max. 6. A clear liquid with no sediment or suspended mat-





ter. The product shall comply with ASTM C156-55T, water retention efficiency of liquid membrane forming compounds for concrete curing.

**GUARANTEE:** When applied in accordance with manufacturer's directions, it is guaranteed to meet all claims made.

**MAINTAIN WITH THESE HILLYARD PRODUCTS:** Sweep daily with a Super Hil-Tone treated dust mop. Buff periodically. When floor is soiled, clean with Super Shine-All or with Clean-O-Lite (if a cleaner-sanitizer is desired). Traffic lanes may be patched in with Super Hil-Brite carnauba wax and buffed to blend with entire floor.

**APPROVALS:** All Hillyard products mentioned are listed by the Underwriters' Laboratories as slip resistant.

**EXCEPTIONS:** Do not use Cem-Seal on lightcolored masonry type flooring. Contact Hillyard for specification.

**REFERENCES:** Sweet's Architectural File, A.I.A. Building Products Register, Hillyard A.I.A. File No. 25G.

A certified Hillyard Architectural Consultant will gladly discuss with your specification writers the proper, approved procedures and materials for the original treatment of any type floor you specify. He'll also provide free follow-up "job captain" service to protect your specifications. Write, wire or call collect.

The most widely recommended and approved treatments for every surface



a

 $(\mathbf{G})$ 

## WASHINGTON/FINANCIAL NEWS

### BY E. E. HALMOS, JR.

The current furor over Capitol Architect J. George Stewart and plans for extension/ rehabilitation of the crumbling West Front of the U.S. Capitol have obscured the fact that estimable nonarchitect Stewart is a long way from being the Government's biggest builder.

With little fanfare, the General Services Administration — builder and housekeeper for all government departments except the legislative—is right now carrying forward a construction program, in the Washington area, that easily tops \$150 million.

By comparison, Stewart's current total of \$23 million worth of construction now under way or ready to start (a \$10 million remodeling of the two older House office buildings, and a \$13 million underground garage for House members) is piddling indeed, by Washington standards. Even if the not yet approved proposals for a \$73 million third Library of Congress building (the James Madison memorial), and the \$34 million West Front work were approved, Stewart still wouldn't come up to GSA's normal yearly operations.

And GSA's program includes some huge affairs in its own right: The sprawling, \$33 million Forrestal Building (the so-called "little Pentagon") in Washington's New Southwest; the \$23,300,000 Housing and Urban Development Department building near the city's mainline railroad tracks; the \$20,500,000 red brick structures on Lafayette Square, to house new Executive offices and courts. In addition, the agency is spending sums like \$5 million to remodel the old Patent Office in downtown Washington (for the Smithsonian), building new structures and refurbishing old ones at Howard University and St. Elizabeth's hospital, installing air conditioning, painting and repairing other Government structures.

And outside the city, GSA supervises work on the nearly completed vast complex of the Bureau of Standards at Gaithersburg, Md.; the National Institute of Health's constant construction at its Bethesda, Md., headquarters, and much else.

This is not to downgrade Stewart's efforts within his own 133-acre Capitol Hill domain, but rather to put it in some perspective.

GSA has had its share of troubles and criticisms (notably for the "IBM Punchcard" style of several of its new buildings) but in general has never stirred up quite the excitement engendered by Stewart.

Main reason: GSA has to meet the desires of such organizations as the Fine Arts Commission and others; Stewart does not. Second reason: GSA isn't working right in the same building with the 535 very vocal "associated architects and engineers" who make up the Congress.

Contractors May Feel War Shortage Pinch — Architects should be aware of upcoming shortages in items vital to the construction industry, a development closely tied to meeting military demands in Viet Nam.

As of early August, Government orders had tied up the entire production capacity of the seven major U.S. manufacturers of cranes and shovels; the nation's biggest maker of tractors and bulldozers was accepting no orders until at least next February; steel allocations for the military had jumped by 30 per cent (to nearly 1,500,000 tons) for the last quarter of the coming year. In the first six months of 1966, more than \$200 million worth of construction machinery had been commandeered for shipment to Viet Nam and other Asian areas alone.

Momentarily, this hasn't affected contractors too much: Most have been replacing equipment at a steady rate over the past several years.

But few contractors can afford to carry expensive, special-purpose machines in inventory; normal practice is to order such equipment after a successful bid.

Thus, if machinery is not available, lists of prospective bidders must shrink; if steel and other metals (copper is already in extremely short supply) become harder to obtain, then prices must go up. Add to upcoming shortages

Add to upcoming shortages the rambunctiousness of construction labor so far this year: There were more than 50 strikes in construction in the first six months of the year, ranging in duration up to 65 days, which drove wages up another 7 per cent this year alone.

• Financial — All other matters considered, there was little doubt, as of early August, that finance was the single most important consideration for anyone in the construction industry.

Speaking broadly, the official statistics hadn't caught up with the situation yet: Census Bureau totals for June showed a continuing uptrend through the first six months of the year that seemed to confirm predictions of another all-time record (in terms of dollar volume) for the industry.

In the first six months of the current year, a total of \$34,500,000,000 worth of new construction was put in place — up 2 per cent over the same period in 1965.

But there were extremely disturbing signs, notably in housing, which continued its two-year long decline. (It is interesting that, although the total *number* of individual dwelling units goes down steadily, value holds its own or goes up: In the first six months of the year, *value* was set at \$12,500,000,000 — up 1 per cent over a year ago.)

Homebuilders were gloomily predicting that total housing starts for the year would top out at 1,100,000 — a drop of almost a third under last year.

The homebuilders have found a lot of things to blame for their troubles (including slowdown in the pace of family formation), but their real bugaboo is the sharp curtailment of credit. Recent surveys indicate that the national average interest on conventional home mortgages has hit more than 6 per cent. The fact is that available investment money is going into short-term, higher-interest areas (notably bank "Certificates of Deposit"), rather than long-term mortgages.

So far, the credit shortage is only beginning to appear in loans for business purposes, but it is creeping in where businessmen want the money for construction.

For the moment, the saving factor for construction people has been the continuing high rate of spending at all levels of Government, and promises that it will continue. In the first six months of 1966, \$10,100,000,000 was spent by Governmental units for construction; huge planned Federal programs such as the recent Senateapproved pollution-control bills envisage a \$6 billion, six-year construction grant program alone. Voters seem ready to continue this type of spending: In May, they approved nearly \$349 million of new bonds (77 per cent of the total presented to them by state and local governments) for public works construction.

But, with continuing military commitments in the Far East, the Federal Government may begin to trim its construction spending sails.

Coupled with tightening finances is the already alarming evidence of sharp rises in costs of construction.

One of the best indicators is the Bureau of Public Roads' quarterly construction cost index, which took a giant leap upward in the second quarter of the year — a total of 4.3 per cent — to reach a new all-time high of 113.7 (with 1957–59 prices taken as 100).

Significantly, the rise follows a 2.3 per cent jump (also to a new record) in the first quarter of the year, and reflects rising prices in every category that makes up the index: excavation, concrete and asphalt surfacing, reinforcing and structural steel (up 10 per cent), structural concrete (up 7.4 per cent).

BPR's index does not break down labor costs, but contractors say that these constitute a very large part of the overall price rise. So far, in 1966, wage raises, as noted, have jumped about 7 per cent; and Government-backed proposals, such as the "guaranteed annual wage" recently suggested for New Jersey operating engineers, can only raise that average.

September 1966
## Here's how Macomber can give you the building you want at lowest possible cost

When you specify a Macomber open-web structural system, you have a steel-frame building that's exactly tailored to your needs, your taste and the dimensions of your property-one that will give you the most building, and the most usable space, for your dollar. Your architect has complete freedom of design and structural range; your builder has



a modern, easy-to-erect package, and you enjoy quicker occupancy. All of these benefits are yours in a custom-built structure that can cost you less than a pre-fab of comparable size. Macomber doesn't restrict you to any size, shape or style of architecture-as you can see by the photos on this page.





SHOPPING CENTERS, bowling alleys, commercial buildings of all types made to meet architects specifications.



APARTMENTS, office buildings—high rise units for any purpose-go up quicker when builders use Macomber framing systems.



INDUSTRIAL STRUCTURES, military buildings, etc., are built to meet requirements . . . easily extended as conditions demand.



SHOW ROOMS for automobiles, boats, appliances, etc., can be erected at less than the cost of a pre-fab.



WAREHOUSES, aircraft hangars are two more building types where Macomber systems have provided substantial savings.

#### Need help, information — an estimate . . .

THE MACOMBER SALES REPRESENTATIVES LISTED BELOW ARE AT YOUR SERVICE. CALL OR WRITE TO THE ONE IN YOUR AREA.

Your source for quality controlled steel building products.

#### ALABAMA

- BIRMINGHAM 35206 Phone (205) 833-3197 BILL ECHOLS CO. P. O. Box 4387
- Phone Fairfax 2-1208
- ALASKA ANCHORAGE 99501 Ph TAFT STRUCTURALS, INC. P. O. Box 4-00 428 West 25th Street

### ARIZONA

- Phone (602) 274-7713 ASPEY STEEL PRODUCTS P. O. Box 9068 726 East Flyn Lane

- CALIFORNIA BURLINGAME 94010 (415) 697-0316
- BURLINGAME 94010
   (415) 697-0316

   MORTON STRUCTURAL SYSTEMS, INC.

   1499 Bayshore Highway

   MONTEBELLO 90640
   Phone (213) 685-4148

   FAR WEST STEEL CORPORATION

   825 West Washington Blvd.

   SAN DIEGO 92110
   Phone (714) 295-3153

   DRAHEIM STEEL, INC.

   2049 Kurtz Street
- COLORADO

LEEVER 80217 Phone (303) 433-7445 LEEVER BUILDING SPECIALTIES P. O. Box 5245

#### CONNECTICUT

BLOOMFIELD 06002 Phone (203) 242-0887 GUY JODICE BUILDING PRODUCTS 99 Old Windsor Road

#### DELAWARE

- WILMINGTON 19899 Phone (215) 388-7304 ROBERT F. INGHAM ASSOCIATES P. O. Box 1689
- FLORIDA
   Phone (305) 847-2831

   KISSIMMEE
   Phone (305) 847-2831

   THE GRAVES COMPANY OF KISSIMMEE, INC.
   P. O. Box 610, 211 Central Avenue

   MIAMI SPRINGS
   Phone (305) 888-1834

   M. J. BANTTEN & ASSOCIATES, INC.
   P. O. Box 65, 385 Westward Drive

#### GEORGIA

- ATLANTA 30324 Phone (404) 636-7546 PLOWDEN & ROBERTS, INC. P. O. Box, 13692, Sta. K, 2535 Chantilly Drive, N. E.
- IDAHO
- BOISE, IDAHO ASSOCIATED SYSTEMS, INC. 513 South 8th Street (208) 343-1869

- ILLINOIS ROCK ISLAND 61202 Phone (309) 788-9543 MACOMBER INCORPORATED ROCK ISLAND STEEL DIVISION
- ROCK ISLAND STEEL DIVISION 1603 Mill Street ADDISON 60101 Phone (312) 543-4710 JONES & BROWN COMPANY, INC. 568 West Winthrop Avenue

- INDIANA FORT WAYNE 46801 Phone (219) 748-1184 D. H. ERWIN SALES CORP. P. O. Box 95, 5020 Executive Blvd. INDIANAPOLIS 46205 Phone (317) 924-4338 BURTON STRUCTURAL SYSTEMS, INC. P. O. Box 55387, Uptown Station 3902 North College Avenue SOUTH BEND 46628 Phone (219) 232-8245 NELSON ENGINEERING SALES, INC. 1612 Lincolnway West
- 1612 Lincolnway West

#### IOWA

DES MOINES 50309 JAMES M. DINNEN (515) 244-9659 317 Hubbell Building

#### KENTUCKY

- KENTUCKY LOUISVILLE 40203 Phone (502) 583-3832 JOHN W. BISHOP, INC. 958 South Third Street LEXINGTON Phone (606) 278-5311 MARCUM & ASSOCIATES, INC. P. O. Box 1631

#### LOUISIANA

SULPHUR ENDICOTT-STAGG, INC. 201 Roddam Street Phone (318) JA 7-7979

#### MARYLAND

- MARYLAND BALTIMORE 21218 Phone (301) 467-2010 AMERICAN METALCORE SYSTEMS, INC. 1700 Friendship Street SILVER SPRING Phone (202) JU 5-0855 PERRY STEEL SALES P. O. Box 973, Blair Station, 805 King Street

MASSACHUSETTS

## IPSWICH 01938 FRED L. CARTER Newmarch Street

#### MICHIGAN

Phone (617) 245-6214

- MICHIGAN ADA 49301 Phone (616) 676-1767 H. EDWARD BRUNHOFF, JR. P. O. Box 93 GRAND RAPIDS Phone (616) 676-1767 H. EDWARD BRUNHOFF, JR. 8295 Bailey Drive, S. E. DETROIT 48227 Phone (313) VE 7-6017 MACOMBER DETROIT SALES 13035 Hillview Avenue SAGINAW 48603 Phone (517) 792-8711 LFF LRON WORKS, INC
- LEE IRON WORKS, INC. 4055 State Street FLINT 48502
- +000
   State
   Street

   FLINT
   48502
   Phone (313) 235-8548

   LEE
   IRON
   WORKS, INC.

   608
   MacArthur Building, 114
   West Union Street

   WEST
   BRANCH 48661
   Phone (517) 75

   WEST
   BRANCH STEEL
   COMPANY

   P. O.
   Box 255, 2460
   South M-76
- MINNESOTA
- MINNESOTA MINNETONKA 55343 NORDIC STEEL, INC. 12401 Minnetonka Blvd. Phone (612) 935-8247
- MISSISSIPPI
- JACKSON 39216 Phone (601) 362-0378 JOHN B, HOWARD COMPANY, INC. P. O. Box 4922, 248 West Lorenz Blvd.
- MISSOURI

- MISSOURI ST. LOUIS 63117 Phone (314) PA 5-5880 PHIL CROWLEY & ASSOCIATES 6383 Clayton Road CAPE GIRARDEAU 63701 Phone (314) ED 4-3088 DRURY TILE & PLASTERING CO. P. O. Box 720 Gordonville & Mt. Auburn Rds. KANSAS CITY 64105 Phone (816) GR 1-4822 H. R. LESTER CO. Board of Trade Building 127 West 10th Street
- MONTANA
- BILLINGS Phone (406) 252-6080 ANDERSON CONSTRUCTION PRODUCTS P. O. Box 299, 2319 Patricia Lane GREAT FALLS 59401 Phone (406) 761-3699 CHARLES F. POOLE P. O. Box 1351
- P. O. Box 1351
- NEBRASKA
- OMAHA 68114 Phone (402) 393-3711 FELLER ARCHITECTURAL SALES CORP. Box 1441 Peony Park Station 335 South 78th Street
- NEVADA
- Phone (702) 329-8631 RENO MARTIN IRON WORKS P. O. Box 2917, 530 East Fourth Street

- P. O. Box 2917, 530 East Fourth Street **NEW YORK** BUFFALO 14216 Phone (716) 877-4300 A. O. STILWELL CO., INC. 85 Great Arrow Avenue NEW YORK 10007 Phone (212) CO 7-2493 ZUCKERBROD STEEL PRODUCTS CO., INC. 50 Church Street SCHENECTADY 12309 Phone (518) FR 4-2350 J. A. REITFORT, P. E. 2310 Stuyvesant Drive SYRACUSE 13210 Phone (315) 476-5367 ENGINEERING PRODUCTS COMPANY Room 635, Midtown Plaza 700 East Water Street NORTH DAKOTA
- NORTH DAKOTA FARGO 58103 Phone (701) 235-6605 CONSTRUCTION SUPPLY, INC. P. O. Box 243, 2301-7th Avenue North

оню

- OHIO AKRON 44310 Phone (216) 762-4611 MOORE & GLASS, INC. P. O. Box 3628, 640 North Main Street CLEVELAND 44132 Phone (216) 732-7880 MOORE & GLASS, INC. 25901 Tungsten Road COLUMBUS 43214 Phone (614) 267-3191 HOWARD S. STERNER COMPANY 4294 Indianola Avenue DAYTON 45414 Phone (513) 278-7947 P. M. SWEENEY & ASSOCIATES P. O. Box 14116, Northridge Sta. 2077 Embury Park Road MANSFIELD Phone (419) LA 2-5911 THE MANSFIELD STRUCTURAL & ERECTING COMPANY
- THE MANSFIELD STRUCTURAL & ERECTING COMPANY 429 Park Avenue, East TOLEDO 43613 Phone (419) 474-6431 COOK ASSOCIATES, INC. 2854 Sylvania Avenue
- MACOMBER INCORPORATED

CANTON, OHIO 44701 SUBSIDIARY OF SHARON STEEL CORPORATION

OREGON

PORTLAND 97202 Phone (503) BE 4-9731 PORTLAND WIRE & IRON WORKS 4644 S. E. 17th Avenue 
 PENNSYLVANIA
 Phone (412) SP 4-7075

 BEAVER 15009
 Phone (412) SP 4-7075

 VANCO ENGINEERING COMPANY
 P. O. Box 249

 PHILADELPHIA
 Phone (215) CA 4-0200

 VOLCHOK & COMPANY
 B008 Old York Road (Elkins, Park 19117)

 PITTSBURGH 15222
 Phone (412) EX 1-1695

 VANCO ENGINEERING COMPANY
 707 Renshaw Building

 HARRISBURG 17102
 Phone (717) 238-9041

 VANCO ENGINEERING COMPANY
 1719 North Front Street
 PENNSYLVANIA

RHODE ISLAND

SOUTH CAROLINA

TENNESSEE

UTAH

VIRGINIA

ROANOKE

WASHINGTON

WEST VIRGINIA

WISCONSIN

BAHAMAS NASSAU

UERTO RICO

P. O. Box 1841

MACO PANAM LIMITED P. O. Box 252

CANADA TORONTO 9, ONTARIO Phone ANTHES STEEL PRODUCTS LIMITED 3430 Dundas Street West ST. CATHERINES, ONTARIO Phone I ANTHES-IMPERIAL CO. LIMITED P. O. Box 67

HATO REY 00919 Phone 3 ARCHITECTURAL PRODUCTS COMPANY OF WEST INDIES, INC.

1719 North Front Street

G. R. SIMMS CO., INC. P. O. Box 6442, 727 North Main Street

SOUTH CAROLINA COLUMBIA 29202 Phone (803) 252-3305 PLOWDEN & ROBERTS, INC. P. O. Box 633 3000 Devine Street TAYLORS Phone (803) CH 4-3505 PLOWDEN & ROBERTS, INC. P. O. Box 218, #9 Cahu Drive (Rt. 4)

MEMPHIS Phone (901) GL 8-7373 TOBEY STEEL SALES 1399 Airways Blvd. NASHVILLE 37214 Phone (615) 883-4136 STEPHENS STEEL STRUCTURES 2517 Lebanon Road

TEXAS TEXAS EL PASO 79984 Phone (915) 565-3491 CONSTRUCTION MATERIAL & ENGINEERING CO., INC. P. O. Box 9428, 2919 Pershing Drive HOUSTON 77024 Phone (713) UN 9-4321 THE JIM DOYLE COMPANY, INC. P. O. Box 19187 6404 Hurst Street UIBBOCK 78408 Phone (805) PO 2-3000

SALT LAKE CITY 84110 Phone (801) 484-7882 BUILDING SPECIALTIES CORP. P. O. Box 1858, 1340 South First West

RICHMOND Phone (703) EL 8-7940 THE DAGES COMPANY 2504 Westwood Avenue Phone (703) 244 9840

J. LEWIS INGLES P. O. Box 707, 2505 Longview Avenue, S. W.

WASHINGTON SEATTLE 98109 Phone (206) MA 3-6096 TAFT STRUCTURALS, INC. 409 Yale Avenue North SPOKANE 99207 Phone (509) FA 8-4753 TAFT STRUCTURALS, INC. 24 East Montgomery

CHARLESTON 25328 Phone (304) 342-8111 FIREPROOF PRODUCTS COMPANY P. O. Box 753 (25323) Quarrier & Bradford Streets

MILWAUKEE 53225 Phone (414) 464-3900 STRUCTURAL PRODUCTS CORPORATION 9400 West Flagg Avenue GREEN BAY 54305 Phone (414) 432-8685 STRUCTURAL PRODUCTS CORPORATION P. O. Box 789, 1017 North Jackson Street

LUBBOCK 79408 Phone (806) A P B M P. O. Box 329, 2217 Auburn Street DALLAS 75205 Phone (214 STALEY STEEL SALES Box 35863

Phone (401) 421-1040

Phone (806) PO 2-3000

Phone (214) FL 7-2611

Phone (703) 344-8840

Phone 8796

Phone RO 64164

Phone MU 28621

Phone 768-150





Steam heat baseboard system provides room-by-room damper control of temperature. The all-steel-pipe-and-fin unit, claims manufacturer, is compatible with conventional castiron radiation system, but weighs less, costs less, and produces more heat than a cast-iron baseboard system. The system has a rating of 980 Btu per lin ft. It is available in precut, preassembled lengths from 3' to 8'. Slant/ Fin, 100 Forest Dr. at East Hills, Greenvale, N. Y. 11548. Circle 100, Readers' Service Card



Steel fin spirals through electric baseboard heater, which directs air flow away from the wall and into a room. A wire raceway permits wiring of the heater at either end. Available in lengths between 10' and 2', and in wattages of 190 and 250 per ft. Amp-Therm, Inc., 146-61 South Road, Jamaica, N.Y. 11435. *Circle 101, Readers' Service Card* 

#### CONSTRUCTION

"Sol-Seal" asphalt shingles are sealed down by the heat of the sun to make a weathertight roofing. Shingles are backed with a thermoplastic adhesive which is self-bonding. Available in colors. The Philip Carey Mfg. Co., 320 S. Wayne Ave., Cincinnati, Ohio 45215. "Circle 102, Readers' Service Card

**Special nail** for fastening redwood bevel siding is the result of a three-year research pro-

September 1966

On Readers' Service Card, Circle No. 457

ject at Virginia Polytechnic Institute, co-sponsored by the manufacturer and a lumber trade association. The nail is enameled stainless steel, annularly threaded. Virginia Polytechnic reports that the nail holds well, will not back out, will not split siding, and does not rust or discolor the wood. Independent Nail Corp., Bridgewater, Mass. *Circle 103, Readers' Service Card* 



**One-ply roofing system** can be applied on any deck slope from horizontal to vertical without a base sheet. The "Chem-Ply System" sheet is a heavy-duty elastomer (chlorinated polyethylene) laminated to flexible urethane foam, and is said to be dimensionally stable from -50 F to 150 F. Application is by adhesive. Color: white. Allied Chemical Corp., Barrett Div., 40 Rector St., New York, N.Y. 10006. *Circle 104, Readers' Service Card* 



**Bronze cladding** for an aluminum curtain-wall system will offer the rich appearance of bronze combined with the economy and structural performance of aluminum. The prototype system, developed by the Copper Development Assn. for buildings under four stories, has been created to stimulate the use of lightgage bronze. The extruded aluminum components may be shop-assembled, and prefinished bronze covers will be fitted over vertical and horizontal wall members before or after the wall is glazed. Vinyl extrusions stripped into slots in the aluminum frame will prevent any direct metalto-metal contact. A cost analysis indicates that the prototype system could be installed for about 8% more than comparable all-aluminum systems with a bronze-anodized finish. Morris Ketchum, Jr. & Associates and Graham Engineering Co. were consultants on the project. Copper Development Assn. Inc., 405 Lexington Ave., N. Y., N. Y. 10017. Circle 105, Readers' Service Card



"Fire Test Panel," plasticfinished hardboard, is suitable for areas where codes require noncombustible or flameretardant surfaces. Flamespread ratings are 0 to 25, or 26 to 75 (ASTM tunnel test) and smoke ratings are as low as 45. Sheets are 4' x 8' x  $\frac{1}{4}$ ", available in three colors and two woodgrains. Marlite Paneling, P.O. Box 250, Dover, Ohio 44622.

Circle 106, Readers' Service Card

#### ELECTRICAL EQUIPMENT

A photoelectric cell is the heart of a skylight/lighting system suitable for factory and warehouse. When Acrylite "Skydomes" flood sufficient natural daylight into the building, the system keeps unnecessary electric lights turned off; and when darkness makes artificial lighting necessary, lights are electronically turned on. The "Lite-Genie" system helps save electricity costs. American Cyanamid Co., Building Products Div., 595 North Ave., Wakefield, Mass. 01881. Circle 107, Readers' Service Card



Multicolor paint can be applied in one coat over concrete floors. Stippled effect is achieved through development of a new formula paint resin base, "Marbon 1100," which allows individual paint particles to retain their separate colors. Significant features of the paint are durability and low cost. United Lacquer Corp., Linden, N.J., will market the floor paint under the trade name "Multakolor." Four color combinations. Borg-Warner Corp., Marbon Chemical Div., Washington, W. Va. 26181. Circle 108, Readers' Service Card

Vinyl tennis court coating for asphalt or concrete surfaces protects against weathering damage and promotes player comfort by reducing heat absorption. Green, brick red, or gray "Vynatex 23" can be applied on existing or new courts. Maintenance Inc., Wooster, Ohio 44691. *Circle 109, Readers' Service Card* 



Mediterranean patterns are the basis for this vinyl tile design. Random shadings add to a fired ceramic appearance and the mortar-like grout is an integral part of the tile. "Moda Moresca" is available in tiles of five colors: red, beige, brown, gold and white. 12" x 12" squares. Kentile Floors Inc., 979 Third Ave., New York, N.Y. 10022. Circle 110, Readers' Service Card

"Thin Set" terrazzo (epoxy resins, curings agents, fine filler, and marble chips) is

said to be easily maintained with cleaning agents on either side of the pH scale. Thicknesses from  $\frac{1}{8}''$  to  $\frac{1}{4}''$  are troweled on, and may be ground the day after troweling. It is "nonslippery," with a Static Coefficient of Friction of 0.64 to 0.68. Divider strips are not necessary except as a footing for base coves. Color for the mix is dispersed in the resin at the factory. Carrara, Inc., P.O. Box 12, Largo, Fla. 33541. Circle 111, Readers' Service Card

Tile for outdoor floors is designed to stand up under all kinds of weather conditions — rain, freezing and thawing, etc. The 12" embossed vinyl squares are laid with a neoprene primer and a heavyduty neoprene contact adhesive on concrete patios, sundecks, etc. "Weatheron" is available in four colors. Armstrong Cork Co., Lancaster, Pa.

Circle 112, Readers' Service Card

#### INSULATION

**Rigid roof insulation,** a sandwich of urethane, bonded between two felt skins during the foaming operation, has thermal "C" values from .24 to .07 for thicknesses of  $\frac{5}{8}$ " to 2". Panel size is 3' x 4', with a density of 2 lb per cu ft. Flexural yield strength is 220 psi, and age resistance is said to be excellent. Apache Foam Products, 1005 Mc-Kinley Ave., Belvidere, III. *Circle 113, Readers' Service Card* 

FURNISHINGS

Pale Oak storage wall, imported from Denmark by Royal System, is a wall-rail version of Paul Cadovius' peg-and-dowel system of attachment. Components include: cabinets with sliding doors, drop-fronts or glass fronts; three- and four-drawer chests; drop-front desks; and shelves of various sizes. Pieces are available in teak, walnut, and rosewood, as well as pale oak. Royal System, Inc., 1130 Third Avenue, New York, N. Y. *Circle 114, Readers' Service Card* 



Pace Furniture Line, intended for hospital and dormitory use, includes comely cabinets of dieformed steel components. Solid enamel or vinyl (in wood-grain finishes or burnished leather) cover cabinet exteriors. Self-closing drawers with built-in runners have a laboratory-type finish which, the manufacturer claims, will not chip or stain. Drawer fronts and cases come in three styles of which "Elite" (shown) has the simplest aluminum drawer pulls. Simmons, Contract Division, Merchandise Mart, Chicago, III. 60654.

Circle 115, Readers' Service Card

**Polycrest Olefin yarn** from The United States Rubber Company has been introduced into carpet production by three firms. Piece and cross-dyeable filament allows the producer to pattern his carpet and color lines on customer requests. Mohawk Carpet Mills' "Festive," a geometric, angled texture, has 10 colorations. Magee Carpet Company's "Color Flair," a multilevel loop pile with texture emphasized by slight random shearing, has a rippling appearance (15 colors). Callaway Mills' "Skyline" is worked in rhomboids and rectangles of eight different pile heights (15 colors). Textile Division, United States Rubber Company, Chicago, Ill. *Circle 116, Readers' Service Card* 



Color plays a game in a table lamp of white handblown Venetian glass. Inside the upper portion of the sculptured form rests a half sphere of tinted bubbled glass; turn on the lamp, and the colored light tints the outer shell. Inner sphere comes in eight colors or white. Sculptured form stands 20" high. Koch and Lowy, Inc., 201 East 34th St., New York; N. Y. Circle 117, Readers' Service Card



Economical wall hangings of extravagant pattern, color, or texture can be obtained from the brilliant array of South American handcrafted rugs to enliven lounges, restaurants, dormitories, and dreary spaces. Available from the U.S. Government Program "Products of the Alianza" (a function of the Alliance for Progress), the rugs - hand-woven wool or soft vicuna fur from Colombia, Ecuador, Peru, and Bolivia - are remarkably distinctive products for remarkably minimal costs. Also available are many other handcrafted objects that can be used as one-of-a-kind accessories where lively finish is essential to a scheme. (They may even replace plastic plants.) Architects are advised to consider minimum orders of \$200 FOB country of origin so as to amortize airfreight and customs costs: Products personnel will attempt to find an existing importer for smaller orders. Custom-design production is also possible. Literature available. Products of the Alianza, 7610 Empire State Building, New York, N. Y. Circle 118, Readers' Service Card



Inca sunscreens might have been like Jack Lenor Larsen's Andean Gauzes, if they could. Three casement cloths to make the world outside a window seem a hazy dream of history are included in Larsen's new Andean Collection. "Quimbaya Crepe," named for a pre-Columbian culture that was renowned for its craftsmanship, is a random mesh of natural colored, crepe-spun wool.

## big news from Swivelier

The last word in **Architectural** lighting... ...from the first word in accent lighting.



When the world's leading manufacturer of adjustable lighting turns to another lighting field, that's news! When the field is **architectural** lighting – recessed and regressed downlites, Alzak downlites, wall washers, wall brackets and dozens of other surface units – that's **big** news!

Big news because the Company is **Swivelier** – for over 25 years the first name in accent lighting. Big news because all **Swivelier's** experience in exemplary engineering and meticulous manufacturing has been brought to bear on these units; all our know-how, all the factors which have built our reputation for superb quality.

Within this first group of architectural units (there are many more to come), you will find the answers to many of your lighting problems. If you desire modifications, if you are confronted with unique lighting requirements, if you are seeking new lighting ideas, you will probably find that our excellent engineering staff has the answers, or can develop them for you.

Discover Swivelier **architectural** lighting. Write Dept. PA for our new catalog or ask us to arrange for a Swivelierman to call on you.



On Readers' Service Card, Circle No. 411

Crepe-spun yarns are twisted to give resilience, and, when woven, achieve a fluffy cobweb effect. "Inca Gold" (shown behind chair) is a filmy leno weave of heavy spun gold wool, combined with metallic gold warp to produce an effect like early Peruvian gauzes. "Miraflores" (close up) is a heavy, luxurious casement cloth of wool shot with spun silk. Jack Lenor Larsen, Inc., 677 Fifth Avenue, New York, N. Y. Circle 119, Readers' Service Card



Entertainment Center, for home or office, consists of two teakwood and ebony cabinets. One, the "Entertainment Cabinet," compactly stores a tape recorder and turntable (installed at working height), records (at top), television set (bottom), and additional electronic equipment. The second, a "Bar Cabinet," has concealed lights, mirrored back, glass shelves, an electric warming tray, built-in refrigerator, and laminated wine racks. Each cabinet measures 39" wide, 171/8" deep, and 821/2" high. Harvey Probber, Inc., 155 E. 56th Street, New York, N. Y. 10022

Circle 120, Readers' Service Card

Fuzzy Wuzzy was a wall and, manufacturer claims, a miracle wall at that: economical and durable, it soundproofs, waterproofs, flameproofs, insulates, dirtproofs, glareproofs . . . and, depending on the length of the fiber, feels like anything from flocking to fur. This Velvetex surfacing can be applied to any solid construction material; after the Fiberbond adhesive is applied, the nylon fibers are electrostatically "shot" straight in and are bonded permanently. Velvetex Industrial Corp., 18515 James Couzens, Detroit, Mich. Circle 121, Readers' Service Card



Coated drafting paper erases clean, with no "phantom image." Resins give the paper a good translucent quality for sharp prints and offer a highstability paper that is said not to yellow or become brittle. Azon Corp., Azon Rd., Johnson City, N.Y. Circle 122, Readers' Service Card



Hospital tub for bathing emergency patients is equipped with a thermostatic mixer valve, wall-mounted dial thermometer, and rubber hose with spray. It is enameled cast iron, 75" long, 30" wide, 5" deep. Height from floor to rim is 31". Kohler Co., Kohler, Wis.

Circle 123, Readers' Service Card

Brass gooseneck tubing on faucet-handle unit allows custom countertop installations. "Crystal Glo" faucets can be spaced between 8" to 15" apart, and can be mounted on marble tops up to 21/4" thick. Clear plastic handles are faceted inside and out. Also available in tub-shower combinations. Harcraft Brass, 19200 S. Western Ave., Torrance, Calif.

Circle 124, Readers' Service Card



"Etching" process for aluminum uses electrochemical action to transfer designs onto the metal in shades of gold, bronze, black and gray, plus natural aluminum. Any design which can be silkscreened, roller-coated, or mask-sprayed (including photographs) can be hard-coatanodized in the above shades by the recently developed process that produces a hard, durable surface. Suggested applications are for curtain walls, murals, plaques, etc. Reynolds Metals Co., 19 E. 47 St., New York, N. Y. 10017.

Circle 125. Readers' Service Card



Playground duck joins manufacturer's concrete animal family, which includes whales, seals, horses, and frogs. The duck is cast in a glass-fiber mold with an armature of 3/8" steel reinforcing rods. The concrete duck is polished to a smooth finish. Copper tubing and brass fittings for fountain installation are cast in the duck, with a spray nozzle recessed at the mouth. Three colors. Playcrete Co., 185 N. 15 St., Bloomfield, N.J. 07003.

Circle 126, Readers' Service Card



Modeling material, high density urethane foam (6 lb per cu ft), can be carved with a pocket knife or other common tools. It is said to be rigid and durable with the workability of balsa. If a mistake is made, another piece of urethane foam can be glued on for reshaping. Available in seven sizes from 3" x 3" x 6" to 8" x 24" x 24", and in two grades: Institutional and Professional. Model shown is by Lester Associates of Thornwood, N. Y. Strux Corp., Artfoam Div., 100 E. Montauk Highway, Lindenhurst, N. Y. 11757.

Circle 127, Readers' Service Card

#### SURFACING

A granite wall finish can be troweled on over masonry, cement asbestos board, cement plaster, and other structural surfaces, but it is especially suitable for cast-inplace concrete construction. according to manufacturer. The material, reconstituted from quarried granite mixed with a resin binder, is applied in one coat, 1/8" thick. It may be used for both exteriors and interiors but is not recommended for floors. Available in eight standard colors that are said to simulate the muted shades of natural granite. Larsen Granite Finish Co., Bethesda, Md. 20014.

Circle 128, Readers' Service Card



Baseball-diamond greenery is man-made "AstroTurf" — a synthetic grass carpet of clipped nylon strands embedded in polyester and bonded to a vinyl foam pad. Suitable for both indoors and out, it can be laid over earth, concrete, or asphalt. The first commercial installation is, appropriately enough, at the Houston Astrodome. An allpurpose "turf" is available, as well as custom-tailored systems for golf, football, tennis, track, and baseball. The material can also be used on playgrounds and around pools because it is rot- and mildewresistant. Test installations for the above athletics are said to have proved sportsworthy. For maintenance: vacuuming or hosing. Astro-Turf Recreational Surfaces, Chemstrand, 350 Fifth Ave., New York, N.Y. 10001. Circle 129, Readers' Service Card

## SAW-TOOTH FLAT SLAB with 12' x 24' column spacing for oru dormitory

The saw-tooth 8" slabs show clearly; transverse tendons are normal to saw-tooth edge strip.

The floor framing for this Oral Roberts University Dormitory is an 8" thick prestressed flat slab, post-tensioned using the Prescon System. The saw-tooth floor plan has columns recessed 2' 10" in from the re-entrant corner with the teeth of the saw projecting 5' 3" from the re-entrant corner. Columns are spaced 24' transversely and 12' longitudinally with tendons running diagonally.

The Prescon tendons are spaced on a one to two slope with the transverse column line, with the column strip tendons extending to the tips of the saw teeth. This rotation of the Prescon tendons permitted principal cantilever reinforcement to become part of a column strip for maximum stiffness in the floor. The structural analysis was based upon load balancing applied to a flat plate. In effect, it is a pure membrane analysis. Tendons varied from 3 to 10 wires. In each 12' increment of floor, 8 tendons running the full width were used and 2 short tendons over the columns. All slabs were cast-in-place with an entire slab completed in a single concreting operation. The average prestress was 300 psi transversely and 150 psi longitudinal. The structure has performed in a most satisfactory manner.

The three wings radiate from a hexagonal 30' core which houses the elevator, lounge and stairs. Each wing is 40' wide by 120' long. Floor-to-floor height is 9' 4" except for the ground floor where height is approximately 11'.

This is first of three planned dormitories. Each will be seven levels including the ground floor. Grade level includes lounges, game rooms, etc.; each of the other floors include an apartment for the house mother, laundry and linen facilities, baths and living quarters for 100 students. Floors' are carpeted except for terrazzo in toilet areas. The underside of the slab serves as the ceiling and is a sprayed texture coating.

The architect for the project was Frank William Wallace, AIA; engineers were Netherton, Dolmeyer, Solnok; and the contractor was Manhattan Construction Company. © 1966 THE PRESCON CORPORATION G66 Among the advantages gained by using the Prescon System of post-tensioning prestressed concrete are: flexibility of column spacing, thin slabs with no deflection, and waterproofing of slabs when desired. For the complete story on the advantages to owners, architects, engineers and contractors using the Prescon System, write for brochures and the Prescon NEWS.



The tendons are placed diagonally on a one to two slope to the transverse column direction with the column strip tendons extending to the tips of the saw teeth. Structural analysis was based upon load balancing applied to a flat plate.



MEMBER OF PRESTRESSED CONCRETE INSTITUTE

On Readers' Service Card, Circle No. 398

## Living proof it's waterproof!



## FOAMGLAS<sup>®</sup> Roof Insulation will still be waterproof when this sequoia is 200 feet tall.

Talk about long lasting ! The Sequoia in this FOAMGLAS planter belongs to the oldest living species around. Some of the giants in California are over 2,000 years old.

We're not claiming FOAMGLAS, the cellular glass roof insulation, will last that long (although the material's inorganic composition makes it possible). But we do know that the FOAMGLAS this planter is made of will still be waterproof—still have all its original insulating efficiency—years after the Sequoia has outgrown it.

FOAMGLAS is the only completely waterproof and vaporproof insulation. We won't give you a 2,000-year guarantee. But FOAMGLAS is guaranteed for 20 years. Once it's down on your client's roof, he's protected.

Get full details on new bevel-edged FOAMGLAS<sup>®</sup>-BOARD —ideal way to get the full value **PITTSBURGH** 

of FOAMGLAS in a 2' x 4' x 1½" thick unit. Write Pittsburgh Corning Corporation, Department **PP-96**, One Gateway Center, Pittsburgh, Pa. 15222.



In Western Europe, FOAMGLAS® cellular glass insulation is manufactured and sold by Pittsburgh Corning de Belgique, S. A., Brussels.

BULLETIN: FOAMGLAS IS NOW AVAILABLE FOR IMMEDIATE DELIVERY. JUST GIVE US A CALL.



"1966 Architectural Reference File" for "Acousti-Celotex" products updates manufacturer's data on acoustical tile and lay-in panels for UL time-rated assemblies, incombustible systems and "Celo-Flow" ventilation and air distribution systems. Charts give physical properties and fire ratings according to suspension system and floor-ceiling assembly. Guide specifications, photos, installation details, and technical data tables. 28 pages. The Celotex Corp., 120 N. Florida Ave., Tampa, Fla. 33602.

ACOUSTICS

Circle 200, Readers' Service Card

CONSTRUCTION



Aluminum curtain wall framing members and windows are catalogued in a brochure illustrated with typical sections; mullion profiles, and drawings showing the various kinds, sizes, and combinations of glazed units. Factory fabricated floor-to-floor sash and panel units are available. Manufacturer's "Therm-Stanley-Artex" porcelain on steel insulated sandwich panel is recommended. Suitable for low- and high-rise buildings. Photos and specifications. 20 pages. Dept. PID, The Stanley Works, New Britain, Conn. 06050.

Circle 201, Readers' Service Card

The Aluminum Association's list of publications includes two booklets about construction: "Specifications for Structures of Aluminum Alloys" (96 pages) prepared by the American Society of Civil Engineers, and "Drafting Standards - Aluminum Extruded and Tubular Products"

(55 pages). The latter outlines basic drafting practices for shapes and extrusions, and contains 30 pages of formulas and data used in computing cross-sectional areas. The Aluminum Assn., 420 Lexington Ave., New York, N. Y. 10017. Circle 202, Readers' Service Card



Trussless buildings in three profiles - semi-circular, arced, and straight wall with arched roof - are supported by modular, double-corrugated steel arch panels bolted together to form a self-supporting structure. Descriptive text, photos, size charts. 4 pages. Wonder Trussless Building, Inc., 2901 S. Cicero Ave., Chicago, Ill. 60650. Circle 203, Readers' Service Card



Porcelain glazed steel or aluminum in light gages is used as a surfacing material for panels and chalkboards. Vitreous coating is heat bonded to metal, making a surface which is said to be heat, stain, fade proof, and scratch resistant. Three pamphlets cover: 1) insulated interior and exterior wall panels and moldings in manufacturer's 19 standard colors, 47 Porcelain Enamel Institute colors, and 12 "Terra-Cal" colors — matte finish earth shades such as olive, ochre, etc.; 2) corrugated and ribbed siding and panels for industrial and commercial buildings; and 3) chalkboards in eight colors. Information included: specifications, installation instructions and details, size charts, and properties tables. Alliance Wall Corp., P.O. Box 247, Alliance, Ohio 44601. Circle 204, Readers' Service Card

"Bondmaster G458" adhesive bonds rigid styrene foams to themselves or to other materials without attacking foam surfaces. Leaflet describes application for interior panels and cold-room construction. Description of characteristics and photos. Pittsburgh Plate Glass Co., Adhesive Products Div., 225 Belleville Ave., Bloomfield, N. J. 07003. Circle 205, Readers' Service Card



Giant bricks with a 16" x 4" face are available 4", 8", or 12" thick. These high-fired, hollow-core bricks, finished on both faces, are available in shades of tan, brown, red, gray and charcoal, suitable for loadbearing or curtain walls. Vertical course and horizontal dimensions are charted; complete dimensioned drawings of standard and special shapes, construction details, photos of buildings. 16 pages. Harbison-Walker Refractories Co., 2 Gateway Center, Pittsburgh, Pa. 15222.

Circle 206, Readers' Service Card

Preformed gaskets for control joints relieve stresses in masonry walls. Manufacturer offers five profiles formed from neoprene, polyvinyl chloride, and rubber. Pamphlet illustrates gaskets and applications, and describes composition and properties of the seals. 6 pages. Accompanying 4-page "Spec-Data Sheet" conforms to the Construction Specifications Institute recommendations. Williams Products, Inc., 486 W. Eight Mile Rd., Hazel Park, Mich. 48030. Circle 207, Readers' Service Card



Seven types of sealants, including liquid polymers, butyl and bituminous, are recommended for their most appropriate service such as glazing, tile, and metal or wood sash seals, and setting art glass in limestone. Chart lists joint size limitations. characteristics, life expectancy and color. Suggested specs, sample details, test results; performance characteristics of "Mono-Lasto-Meric," claimed by the manufacturer to be the "most powerfully adhesive construction joint sealant known." 8 pages. The Tremco Mfg. Co., Cleveland, Ohio 44104.

Circle 208, Readers' Service Card



"Design Innovations In Wood" is a handsome booklet that presents seven architect-designed projects commissioned by Weyerhaeuser for its advertising campaign during the past year. Designers were asked to explore new uses, forms, and struc-

## Want the most from electric heat? Consider Styrofoam.

That's because an installation system using Styrofoam<sup>®</sup> brand insulation board doesn't make demands on floor space the way other insulations do. The combination of properties offered by Styrofoam makes it unusually effective. So much so that you get more permanent insulation value per square inch, and get a maximum of usable floor space, too.

How else is Styrofoam good for electric

heat? Once in, Styrofoam is in for good because it doesn't rot, mold, or deteriorate. It needs no vapor barrier. It's flame retardant. And is lightweight and easy to install.

Where does Styrofoam insulation go? Just about anywhere. Over walls of unit masonry or poured concrete, as form liners for conventional concrete, in foundations and slabs. And it makes an excellent base for gypsum wallboard, wood paneling or plaster. Have we almost made a sale? Then to clinch it, write us or consult Sweet's Architectural File 10a/Do. The Dow Chemical Company, Plastics Sales Department, Midland, Michigan 48640.

Styrofoam is Dow's registered trademark for expanded polystyrene produced by an exclusive manufacturing process. Accept no substitutes... look for this trademark on all Styrofoam brand insulation board.

## (It's the least you can do.)

tural properties of wood; the results include an architect's office, a community art center, and a school. The "Grand Bazaar," designed by Charles Callister, is a large, round market building with an open plan ringed on two levels by food stalls; standard laminated decking, beams, girders, arches and columns were the building components. Another project, a seaside motel complex (by Ulrich Franzen; shown) uses laminated decking as the exterior circular walls of 40, four-story towers. Weyerhaeuser Co., Box B, Tacoma, Wash.

Circle 209, Readers' Service Card

DOORS/WINDOWS



Round-corner extruded aluminum ventilator windows are detailed in a series of data sheets showing installation in masonry, precast concrete, and window walls. Scale details, photos, size charts, brief specifications. 5 sheets. E. K. Geyser Co., 915 McArdle Roadway, Pittsburgh, Pa. 15203.

Circle 210, Readers' Service Card

Hager hinges open in and out (doors) or up and down (transoms). Selection charts list wood and metal doors of various sizes and weights keyed to an appropriate hinge. Installation details, descriptions and photos of hinges for steel, wood, and channel jambs. 8 pages. Hager Hinge Co., 139 Victor St., St. Louis, Mo. 63104. *Circle 211, Readers' Service Card* 

**Casement, picture,** bow, double-hung, sliding, hopper, and awning wood windows are catalogued and detailed in a booklet with size drawings, glazing chart, photos and specifications. Pine is treated with a water-repellent preservative and exterior surfaces are factory primed or vinyl covered by "Perma-Shield." 40 pages. Andersen Corp., Bayport, Minn. 55003. *Circle 212, Readers' Service Card* 



Suitable for framing in 50 of the most commonly specified wall systems, reports manufacturer, a series of metal door frames, feature a snap-on casing, an aligning header, and an adjustable strike. The booklet, generously illustrated with sized profile drawings and installation details, also includes guide specs. 14 pages. Roberts Consolidated Industries, Inc., Building Products Div., City of Industry, Calif. 91747.

Circle 213, Readers' Service Card



Lights shine down from both flat and sloped ceilings. Grooved "Micro-Baffle" reduces brightness of these aluminum fixtures. Suitable for theaters, lobbies, and other areas in commercial and public buildings. Recessed, semirecessed, surface, and suspended lights are finished in matte black. Wall-mounted and track-mounted projector designs are also included. Bulletin No. 127 is illustrated with drawings and tables giving dimensions, wattages, ceiling types, etc. 16 pages. Hub Electric Co., Inc., 2255 W. Grand Ave., Chicago, Ill. 60612.

Circle 214, Readers' Service Card

Aluminum roof ventilators, wall ventilators, and blowers are the subject of a catalog that gives capacity and dimension charts, shop drawings, and installation details. Shown are 24 ventilators and accessories, including sound attenuators. 54 pages. Loren Cook Co., 640 N. Rocky River Dr., Berea, Ohio 44017. *Circle 215, Readers' Service Card* 

FINISHES PROTECTORS

C/S Finishes, a 4-page brochure, assists in the specification of color coatings for the firm's line of architectural products (louvers, sun controls, screens, and refacing systems). Brochure includes descriptive detail, chip specimens for color match, and suggested specifications for the finishes. Among them is Kynar 500, a new flurocarbon polymeric coating of 12 standard colors; it is supplied with 12-year written guarantee. Construction Specialties, Inc., 55 Winans Avenue, Cranford, N. J. 07016. Circle 216, Readers' Service Card



Whelan's Institutional Furniture line is introduced in a 4-page brochure. Specifications page discusses doors, finish, plastic laminate tops, hardware, and materials (exterior casework is natural birch; interior, Douglas Fir plywood). Brochure includes drawings of various pieces (simple carpentered wardrobes, cabinets, bookcases, and desks), graphs of sizes, and sketches of possible combinations. Whelan's, Inc., 715 E. 4th, Topeka, Kans. 66601. Circle 217, Readers' Service Card

Among the decorative fixtures — pendant and wall or ceiling mounted — that are illustrated in a 123-page, primarily "residential" catalog by Moe Light, are some serviceable standard recessed incandescent squares, outdoor garden lights, dimmers (including fluorescent dimmers), simple geometric globes, and illuminated ceilings. Thomas Industries, Inc., Residential Lighting Division, 207 East Broadway, Louisville, Ky. 40202.

Circle 218, Readers' Service Card



Trio of Travertines. Parkwood Laminates has added three "travertines," gold, beige, and slate, to its line. The material is said to be wear-, stain-, and heat-resistant. Gold and beige travertine are available in polished or matte finishes, while the slate's natural finish is said to be an innovation in the field. Parkwood Laminates, Inc., 134 Water St., Wakefield, Mass. 01880.

Circle 219, Readers' Service Card



A feast of office furniture by Hoosier Desk Company includes executive conference desks, "management" desks, single and double pedestal clerical desks, and a variety of secretarial returns. These standard wood pieces, which are fairly inexpensive-looking, come in walnut veneer with a variety of leg styles, including square and tapered wooden legs, square aluminum legs, and aluminum Hframes. Aluminum legs can be either brushed, mirrorpolished, or brass-finished, and have adjustable glides. Some of the desks have over-



## Hetron<sup>®</sup> creates a dramatic ceiling at No. One Wall Street

New banking area of the Irving Trust Company, One Wall Street. Architects: Smith, Smith, Hayne, Londberg & Waehler. Hetron-based reflectors designed by Edison Price, Inc., and manufactured by Lunn Laminates, Inc. Scores of spherical-shaped plastic panels reflect the light from the dramatically hung ceiling of the Irving Trust Company's new banking area.

The five foot by five foot panels are molded of glass-reinforced Hetron polyester resin—a construction material that combines strength, light weight, and fire retardance.

They weigh only 30 pounds each and meet the fire-safety building code requirements for high ceilings.

Why not consider Hetron-based plastic reflector, skylight, or

siding panels for your next project? They are available as translucent or opaque and are qualified to carry the Factory Mutual Seal and the U/L label.

We don't make the panels—just the Hetron that makes them lightweight and fire retardant.

For a list of fabricators, please write us. Durez<sup>®</sup> Plastics Division, Hooker Chemical Corporation, **7709** Walck Road, North Tonawanda, N.Y. 14121.

Overseas: Hooker Chemical International, Ltd., 6 Place Madou, Brussels, Belgium, Telephone: 186336



DUREZ PLASTICS DIVISION 342



hanging tops. Keller-Crescent Co., P.O. Box 25, Evansville, Ind. *Circle 220, Readers' Service Card* 

System 70 dormitory and library furniture, available in a wide choice of sizes, has welded steel frames and tops of Fiberesin. Baked enamel finishes in bright and subdued shades are obtainable for wardrobes, desks, and chests. Eight-page brochure contains drawings, specifications, and color illustrations of bedroom and library settings. The Troy Sunshade Company, Division of the Hobart Manufacturing Company, Troy, Ohio. Circle 221, Readers' Service Card

The pedestal auditorium seat, designed by England's Peter Dickinson for Race Ltd., rests on just one leg. Its frame is of welded steel, its tip-up seat and back of hardwood plywood. And the seat is covered with molded polyurethane foam. Illustrations in 4-page brochure show how the chair can be installed in straight or curved rows. Drawings describe the "disappearing" tablet arm, for left or right arm use. Specifications and planning details. JG Furniture Co., Inc., 160 E. 56th St., New York, N. Y. *Circle 222, Readers' Service Card* 

Serviceable, interesting glassfiber tables with attached molded glass-fiber benches are featured in a loose-leaf catalog. Plastic elements have rounded edges and rustproof fasteners; legs are of steel tube. Specifications included. Decar Plastic Corporation, Dentin Mfg. Co., 2600 Washington Blvd., Bellwood, Ill. 60104.

Circle 223, Readers' Service Card



Dry wall insulation system has two components: a furring strip and a styrene foam insulation sheet (see illustration). Furring strips, 2" wide x 8' long, consist of 3/8" exterior grade plywood laminated to insulation board; the over-all thickness is 1", 11/2", or 2". Strips are fixed at 4' o.c. to masonry or concrete walls by adhesive and nails, and insulating sheets butt-fitted between the strips. Standard 4' x 8' gypsum wallboards can then be installed horizontally and fixed to the insulation and furring strips with adhesive and screws. Leaflet gives installation instructions and details, U factor chart, photos. 4 pages. Holland Plastics Co., Gilman, Iowa. Circle 224, Readers' Service Card



Magnetic board is a useful device for flexible visual charting. Grid patterns of 1", 1/2", or 1/4" are lithographed on a steel face; 80 magnetic accessories include symbols, card holders, and buttons which can be marked with a grease pencil. Suitable for scheduling hospital and hotel rooms, for inventory control, etc. It may also be used in planning plant layouts (illustration). Booklet describes uses for system. 28 pages. Methods Research Corp., 105 Willow Ave., Staten Island, N. Y. 10305. Circle 225, Readers' Service Card



VENTILATOR COMPANY, INC.

1200 S. WILLIS AVENUE · WHEELING, ILLINOIS 60090

iters Taboratories Jar

nSf



90 Manufacturers' Data

### Joints expand...

## and contract 10,950 times in 30 years...so will G-E Silicone Construction Sealant

Construction joints go through the expansion-contraction cycle at least once a day, and far more often in modern curtain wall buildings. This is the major cause of sealant failure. In the past, even the best elastomeric sealants have been subject to early failure under severe compressionextension conditions. Because these sealants take a "set" during compression, they put a severe strain on the bond during extension. G-E silicone sealant, with almost 100% recovery after severe compression, withstands repeated cycling while maintaining an effective seal.

General Electric Silicone Construction Sealant will take this punishment for years because silicone rubber doesn't lose its elastomeric properties through exposure to sunlight or ozone, the deadly enemies of organic rubber sealants.

It is unaffected by ozone in any concentration over thousands of hours in accelerated aging tests. It withstands weathering, intense heat and sub-zero cold superbly. In fact, our tests support conservative estimates that it will last at least 30 years, much longer than *any* other type of sealant on the market.

G-E Silicone Sealant comes in a variety of non-fading, non-staining, non-bleeding colors including almost invisible translucent. It needs no pre-mixing or catalyst — bonds securely to all common building material — can be applied easily, efficiently and quickly at any temperature.

For more information, write General Electric Company, Silicone Products Department, Section Q9118R-1, Waterford, New York 12188.



On Readers' Service Card, Circle No. 448



It's Mirropane<sup>®</sup>, the "see-thru" mirror. In the brighter room, it acts as a mirror. In the darker adjacent room, it acts as a window. Here, in a special panel room of an advertising agency, consumer reactions to various advertising approaches can be studied by observers without being a distraction. Teachers and therapists use *Mirropane* for observing children's reactions. Storekeepers use it for detecting shoplifters, and to watch stock. You can probably think of a dozen uses of *Mirropane* for the buildings you're planning right now. For more facts, phone your L·O·F distributor or dealer listed under "Glass" in the Yellow Pages, or write:



LIBERTY MIRROR

A DIVISION OF LIBBEY-OWENS-FORD GLASS COMPANY 8296 L+O+F Building, Toledo, Ohio 43624



SANITATION

"PVC piping for drain, waste, and vent systems" is principally a collection of case studies on installations in housing projects, high-rise, etc., using "Geon" rigid vinyl. Text, photos, brief cost comparison chart, and a short section on making connections. 16 pages. B. F. Goodrich Chemical Co., 3135 Euclid Ave., Cleveland, Ohio 44115.

Circle 226, Readers' Service Card

A listing of plastic materials approved by the National Sanitation Foundation covers pipe, fittings, and appurtenances for potable water and waste water. Items are listed by manufacturer; material, material classification, and trade name are given. The Foundation, an independent organization with headquarters at the University of Michigan, maintains its own testing laboratory where performance testing is carried out against applicable U.S. Department of Commerce Standards and ASTM Specifications. A control program provides for annual reinspection of plants and random sampling of products. 50¢. The National Sanitation Foundation, P.O. Box 1468, Ann Arbor, Mich. 48106.

#### SPECIAL EQUIPMENT

Wood cabinets for kitchen, pantry, and bath are finished in walnut or honeywood applied with a hot vinyl for hard, stain-resistant surfaces. Clean-lined design has no handles or knobs; drawers and doors are opened by beveled edges. Three folders, showing the three basic design lines, catalog base and wall cabinets, and accessories. Accessories include built-in bread boards and lazy susans for corners. Noblecraft Industries, Inc., P.O. Box 441, Hillsboro, Ore.

Circle 227, Readers' Service Card



In case of fire, just reach for the Cotton Candy pink (or any one of 47 other subtle shades) 21/2-gal, glass-fiber Ansul Ensign extinguisher. No additional cost for color if extinguishers are purchased in quantities of 20 or more; color charge for less than 20 is said to be nominal. Glassfiber shell is corrosion resistant. Folder contains manufacturer's specifications, description, and samples of all 48 colors. The Ansul Co., Marinette, Wis. Circle 228, Readers' Service Card

Master distribution systems for television can be more easily understood by building designers with the aid of a booklet "Engineer's Guide to Specifications for Multiple Television Distribution Systems." It describes the scope of a master antenna system in general terms, and then with technical language delves into specific applications and equipment. \$2.50. Jerrold Electronics Corp., P.O. Box 1467, Philadelphia, Pa. 19105.

Don't worry about the dishes. This manufacturer has a "Flight type" dishwasher which handles 12,170 plates per hour, 1500 persons per meal. Brochure lists types and capacities of dishwashers for restaurants, hospitals, and other establishments concerned with feeding large numbers of people. Also listed are mixers (12 to 30 qts), and tank-type potato peelers which can spit out 15 to 60 lb in one minute plus.

## Now certified class E sound rating by NSSEA Richards-Wilcox 380 operable classroom wall



Under new sound testing standards and procedures supervised by the National School Supply and Equipment Association, Richards-Wilcox is authorized to say, "The manufacturer of this movable wall certifies that an NSSEA sponsored test of a 14 x 9 foot wall of this construction resulted in an NSSEA sound transmission rating of Class E." This certification is your protection that the R-W 380 is actually built to give you the sound retardation claimed for it. Soon, most movable and folding walls will be tested under these same standardized procedures and given reliable sound ratings.

Superb sound control is only one of the many attributes of the Incomparable 380. The easy, all-mechanical operation is another. It creates a new dimension in classroom space and flexibility. To discover the full facts on the R-W 380, write for Catalog F-266.

Reproduction of the official NSSEA certification of the R-W Incomparable 380.



On Readers' Service Card, Circle No. 439





The



- Automatic Water Cleaning Daily
- Centrifugal Grease Extraction
  - Requires less air
  - Removes grease, heat, odors
- 24 hour Automatic Fire Quenching

Fire System thermostatically controlled • Underwriters' Laboratories Inc. Listed • National

- Sanitation Foundation Approved
- Salitation Foundation Approved
- Regional Fire Underwriters Approved
  - Reduced Insurance Rates •
  - Reduced Maintenance Costs
    - Guaranteed Performance

### AUTOMATION WITH A FLAIR

**DESIGN SERVICE** – The Gaylord Ventilator is adaptable to all equipment – upon request we will provide design services and layout drawings for each of your installations showing notonly our recommendations for the utilization of the Gaylord Ventilators but complete air engineering for the job – at no cost or obligation.

#### For Complete Literature: GAYLORD INDUSTRIES P.O. BOX 19044 Portland, Ore. 97219 - 503-246-8835

On Readers' Service Card, Circle No. 350

Photos, descriptions, dimension/capacity charts. G. S. Blakeslee & Co., 1844 S. Laramie Ave., Chicago, III. 60650.

Circle 229, Readers' Service Card

#### SURFACING

**Resin terrazzo** trowels on over tile, steel, and concrete floors. Resin combined with mineral fillers and aggregate or chips is troweled on  $\frac{1}{8}$ "- $\frac{1}{4}$ " thick and weighs between 2 and 4 psf. Folder gives specs, physical characteristics, descriptions, and color photos. 4 pages. Beta Industries, Inc., Hiway 57, Collierville, Tenn. *Circle 230, Readers' Service Card* 

The vinyl word in counter tops and flooring comes in three vestpocket pamphlets illustrated principally with photos and pattern squares in color. Flooring (sheet and tile) and counter topping are available in smooth, textured, and "sculptured" surfaces in a host of colors and patterns. The Goodyear Tire & Rubber Co., Akron, Ohio 44316. *Circle 231, Readers' Service Card* 

Terrazzo specifications based on outlines and recommendations of the American Institute of Architects and the **Construction** Specifications Institute, are complete and may be copied verbatim. Ten pages of architectural details are drawn to scale and are suitable for tracing. Specs for Portland cement terrazzos sand cushion, bonded, conductive, monolithic - are included as well as sections on stairs, wainscots, radiant coils, cleaning, and others. Ring binder will accommodate additional sheets to be sent as new information or revisions are issued. 38 pages of text plus details. \$1.35. The National Terrazzo & Mosaic Assn., Inc., 1901 Fort Myer Dr., Arlington, Va. 22209.

#### PROGRESSIVE ARCHITECTURE MIEW/S RIEPORT

REINHOLD PUBLISHING CORPORATION 430 Park Avenue, New York, N.Y. 10022

Editor	Jan C. Rowan
Associate Editor	E. K. Carpenter
PublisherP	. H. Hubbard, Jr.
Advt. Sales Mgr	W. R. Evans, Jr.
Production MgrJ	oseph M. Scanlon

## BREAKPROOF

Think how wonderful it would be if someone invented vaportight globes that can't break, shatter, crack, burn, bubble, brittle, yellow, chip, fade or peel.

#### STONCO DID IT.

Here, at last, is a product that puts an end to hazardous glass breakage. Tough, lightweight, all-purpose Lexan<sup>®</sup> globes that keep their bounce and beauty through use and abuse, sticks and stones, heat or cold... and still snugly seal out moisture, dust or vapor.

Use Stonco Safety-Globes<sup>®</sup> in parks, playgrounds, public housing, food processing plants, shower rooms – any location where smashed glass spells trouble with a capital T.

For new installations – or as lifetime replacements – Stonco Safety-Globes are the most inexpensive accident insurance money can buy.



DECORATIVE / COMMERCIAL INCANDESCENT / MERCURY



© 1966 STONCO ELECTRIC PRODUCTS CO., KENILWORTH, N. J.

On Readers' Service Card, Circle No. 408

#### Just in Time for Your Summer Travel



THE ILLUSTRATED GUIDE TO GREAT ART IN EUROPE For Amateur Artists: Travel, History, Criticism by Frederic Taubes.

521 illustrations. Annotated index. Complete listing of artists and dates. 320 pages. Convenient 6 x 9 travel size. \$8.95

Not just for amateur artists, but for everyone who plans to go to Europe this year. PART ONE covers European art from the Scandinavian countries to Greece. PART TWO is devoted exclusively to travel hints, and all sorts of helpful information from how to save time, energy and money to how much time to spend in each country to appreciate its art.

Reinhold Book Division

430 Park Avenue New York, New York 10022

A Division of Reinhold Publishing Corporation

On Readers' Service Card, Circle No. 464



For the Driftwood Look



House in Portland, Oregon. Architect: Van Evera Bailey. Siding and trim stained with Cabot's Bleaching Oil.

Specify Cabot's #241 BLEACHING OIL Mildew Resistant

- actually bleaches exterior woodwork
- can be used on any kind of new wood
- gives a natural, silver gray weathered effect in 6 months
- high content of refined creosote prevents decay — permits painting over later if desired
- provides both beauty and protection with minimum upkeep

A quality product from Cabot Laboratories

Samuel babot

SAMUEL CABOT INC. 928 S. Terminal Trust Bldg. Boston, Mass. 02110 Please send Architectural Bulletins #1 and #2 and color card on Cabot's Bleaching Oil.

On Readers' Service Card, Circle No. 334



Any size ... to fit any space ... describes Norris walk-in coolers, freezers, and cooler-freezer combinations, for Norris walk-ins give you complete installation flexibility. Available with or without floors, Norris walk-ins are pre-fabricated in two- and three-foot wall sections, four-foot door sections ( $7\frac{1}{2}$ ' high), and can be set up in one-foot increments in any size—in almost any space —in new or existing buildings. A light hammer is the only tool necessary.

The modular panels of Norris walk-ins are all-metal, with no wood to absorb moisture, and extremely lightweight. Standard exteriors are bonderized steel finished in white baked enamel, interiors are 22-gauge metal, with custom exteriors or interiors optional at extra cost. Ideal for every industrial, commercial or institutional refrigeration need, Norris walk-ins can be supplied with the correct self-contained or remote refrigeration equipment to meet any application.





NORRIS-THE FIRST NAME IN MILK SERVING AND STORAGE EQUIPMENT!

On Readers' Service Card, Circle No. 437

MUSSON TREADS for SAFETY and DURABILITY



Modern, safety designed slair treads for many mass living, mass working and public buildings. Horizontal bar surface provides good foot traction, modern appearance and ease of cleaning. Molded rubber, ¼" thick, 12" deep; lengths of 24", 30", 36", 42", 48", 54", 60", 72". Black or marbleized colors of Red, Green, Gray, Mahogany, Birch, Black, Beige, Walnut.

Write For Catalog, Samples, Prices **THE R. C. MUSSON RUBBER CO.** 1320 Archwood Ave. Akron, Ohio 44306

On Readers' Service Card, Circle No. 445



#### New Clark lightweight steel door has heavyweight strength

New "hollow" steel door is filled with foamedin-place Urethane foam. Result is exceptional rigidity, light weight, better sound and temperature insulation and elimination of internal corrosion. Lighter weight means faster operation with less strain on automatic operators.

New FREE 12-page catalog shows the door you need. Dept. P-9, 69 Myrtle Street, Cranford, N. J.



On Readers' Service Card, Circle No. 335



WS

**CONCRETE:** Where Do We Go From Here? is the title and theme of next month's P | A. It has been six years since we took such an in-depth look at this material. Then, architects were just beginning tentative investigations in major use of concrete; today, it is in universal use.

**CONCRETE** has been well-used, ill-used, misused, imaginatively used, prosaically used, used to great effect, used to disguise lack of talent, used in office buildings, hospitals, houses, saloons, and state capitols. What is the state of concrete now? What are the architect and his consultants going to do with it in the future? These questions will be answered in September P/A by, among others:

- A. I. Cossutta of I. M. Pei & Partners
- August Komendant
- Edward Friedman
- A. I. Tenzer and Ray McNeal
- Caudill, Rowlett & Scott, Fred N. Severud, The Architects Collaborative, Wallace K. Harrison, Vincent Kling, Lev Zetlin, Gordon Bunshaft, Paul Rudolph, Thomas McNulty, Kelly & Gruzen, and Moshe Safdie of Habitat '67 fame.

**CEMENT YOURSELF** into this pacemaking issue and the 11 trendsetters to follow. Tear out the subscription card (see Table of Contents) and mail it to our Circulation Manager. You'll be precasting a wealth of concretely valuable reading for yourself.

### If you think silence is golden, get a load of lead!

Silence is a big premium in today's world, and you can get that premium with the great sound proofing qualities of lead. By using thin lead sheeting as a plenum or over-ceiling barrier, you can cut down all the irritating, distracting noises that invade privacy and upset nerves.

Lead is economical too, because it cuts and shapes easily to simplify installation around ductwork, lighting fixtures, piping, and conduits.

For more information write for our "PRACTICAL LEAD SOUND BARRIERS" brochure. Lead Industries Association Inc., Dept. N-9, 292 Madison Avenue, New York, New York 10017. 43



LEAD INDUSTRIES ASSOCIATION, INC.

Look Ahead with Lead



## The only thing in concrete block that can catch fire is its design versatility.

Concrete block, manufactured to Q BLOCK® specifications, is concrete block at its best

see other side ...



build it better with block manufactured under the national **Q BLOCK**<sup>®</sup> program

Building professionals have never had it so good. The variety of construction materials grows every day, giving the ways and means to more creative architectural flair and versatility.

Concrete block, for example, has suddenly made the building industry sit up and take notice. There are now more shapes and sizes of concrete block than ever before, more wall pattern possibilities than ever before.

But style doesn't count much without security to back it up. Concrete block has that security: complete fire-safety. *Block simply cannot burn*.

The excellent stability of concrete masonry proves consistent in fire tests by recognized laboratories.

The tests consist of exposing one side of a wall to fire of controlled intensity for a time equal to or greater than its rated fire-resistance time. Immediately, the hot face of the wall is subject to a fire-hose stream. Bearing walls also carry a load equal to 80 psi based on gross wall area. The wall must withstand the fire test without passage of flame or gases. Heat transmission must be limited to less than 250° F gain in temperature.

Little wonder concrete block is used so frequently in our modern schools, medical buildings, theaters and wherever large crowds of people congregate. (You'll even see the many faces of concrete block in local fire stations. What better testimonial is there for block's complete fire-safety?)

Make sure you have complete fire-safety in the next building or home you design.

You also receive the many other important qualities when you specify concrete block manufactured to the Q BLOCK<sup>®</sup> specifications established by the National Concrete Masonry Association. These specifications reflect all the high standards that modern research, technical development and testing facilities can provide.

To assure that these high standards are maintained, concrete block manufactured by members of the national Q BLOCK program must be tested at regular intervals. Following each test, the manufacturer is issued a certificate by the National Concrete Masonry Association indicating that his firm is a

qualified Q BLOCK producer.

Members of the national Q BLOCK program are identified by this registered mark. Look for it whenever you specify concrete block.



Write: Fire Safety • National Concrete Masonry Association • 2009 14th St., North • Arlington, Va. 22201

EXCITING FLOORS TAKE SHAPE ... AND STAY THAT WAY FOREVER! CONTOURED QUARRY TILE

ummitville,

Extruded contoured Quarry Tile promises more than any other floor... it lives up to its promise with unique beauty, shape and color. Summitville extruded tile resists wear, stains, impact and weather . . . will not fade, burn or dent. Available in 8 shapes, 5 exclusive textured antique glazes and 6 natural quarry tile colors. Ceramic tile contractors and distributors have all the facts. Summitville Tiles, Inc., Summitville, Ohio.

FLORETTE



FLEMISH LaVINCHY FLORENTINE MADRID

CAPRI VIKING





## **Put Telephone and Electric Service In One Fitting**

#### . . . anywhere it's needed with Cel-Way electrified floors

Best way to electrify structural floor slabs? Cel-Way! Here's the system that wraps up utility, economy, versatility, beauty and simplicity into one convenient package. The sturdy, large capacity steel cells carry both power and telephone lines. Cel-Way is available in double cell and triple cell units and can be used with all types of Granco permanent steel forms, particularly with Cofar and Cofar Composite. Unique pre-set inserts give easy access to cells for installation of floor outlets at practically any desired location. Lowsilhouette, dual service fittings provide a single outlet for both telephone and power lines. Roomy interiors easily accommodate 100-pair cable or two amphenol jacks. Cel-Way...simple, compact, efficient, low cost. Learn more about this new floor-electrification system. See Sweets file, or write today for Cel-Way Catalog. Granco Steel Products Company, 6506 North Broadway, St. Louis, Mo. 63147. A subsidiary of Granite City Steel Co.



On Readers' Service Card, Circle No. 353

MAGINATION IN STEEL On Readers' Service Card, Circle No. 454 ≯

## COOLITE



### Cool Blue Glass by Mississippi Repels Heat and Glare In New Bronx Terminal Market

"Raw" sunlight and excessive heat have no place in today's modern buildings. Comfort-conditioned COOLITE rejects up to 35% solar energy to reduce temperatures under the roof while its translucent light diffusing characteristics tend to soften and distribute light. And note how effectively COOLITE (all 25,000 sq. ft. of it!) blends with and compliments the blue porcelain enamel spandrels in this outstanding structure. Specify COOLITE heat absorbing glass . . . the glass that's "visioneered" for better light . . . greater comfort. For particulars see your nearby Mississippi glass distributor.









¼" COOLITE heat absorbing glass is installed in two elevations of new incinerator building, City of Amarillo, Texas. Mr. John Stiff, City Manager. Architect : Jimmy E. Bailey, A. I. A.; General Contractor: Page & Wirtz; Glazer: Pittsburgh Plate Glass Company.

## B under start backet interver

#### NEW WIDE COOLITE CATALOG

Contains heat absorption and transmission data, typical uses, installation suggestions. Send for your free copy today.

See our Catalog in Sweet's S

## COOLITE GLASS HAS THE ANSWER FOR AMARILLO

The importance of good daylighting is reflected in the expanse of COOLITE heat absorbing glass glazed in the City of Amarillo's new incinerator. Note how the clean, blue hue of COOLITE harmonizes with the crisp, modern design of the building. But even more important is the way in which COOLITE curbs unwanted solar heat, helps reduce eye-fatiguing glare and sharp contrast for greater comfort. Employees see better, feel better, work better with COOLITE-conditioned daylighting.

Specify COOLITE glass by Mississippi. Offered in two thicknesses:  $\frac{1}{8}$ " and  $\frac{1}{4}$ "—the latter in widths up to 60 inches, plain or with glare reducing finish, one or both sides.  $\frac{1}{4}$ " COOLITE is also available with MISCO diamond-shaped welded wire netting for shatter resistance and fire retardance. At better distributors of guality glass everywhere.



H#3 - 66

## MISSISSIPPI GLASS COMPANY

88 Angelica Street • St. Louis, Missouri 63147 NEW YORK • CHICAGO • FULLERTON, CALIF.

DISTRIBUTORS IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

QUINCY JONES FALLAL AND FREDERICK E. EMMONS, A.I.A. USE WOOD IN IMAGINATIVE WAYS TO CREATE A FEELING OF INTIMATE SCALE IN A PRIVATE UPPER SCHOOL

10000000

mannin

One of a series of design innovations commissioned by Weyerhaeuser Company

Weyerhaeuser Company has commissioned leading architectural firms to create design innovations which highlight the potential of wood in public and commercial buildings. This original design by A. Quincy Jones, F.A.I.A., and Frederick E. Emmons, A.I.A., of Los Angeles is the sixth in the series.

#### "THE SAME BASIC PYRAMIDAL AND BUTTERFLY ROOF FORMS WILL SERVE AS IDENTIFYING ELEMENTS FOR ADDED SPACES."

This proposed design for a private upper school is based on a special concept providing a broad range of experience in the educational process.

The plan meets the needs of a student body of 300 in six different grade levels with no more than 12 students in any given class.

The nature of the site—visualized as a pleasantly wooded, rolling valley—leads logically to an architectural scheme based on a cluster plan providing for both indoor and outdoor classroom spaces for small groups. The contours of the land would make it possible to develop four well-spaced cluster buildings—together with allied group and administrative elements.

Wood in a number of different forms is a particularly logical building medium since it helps to establish the kind of warm, intimate character in the buildings that is most appropriate to the proposed site and for an individualized curriculum.

This is reflected in the pinwheel arrangement

of the classrooms in the cluster buildings which afford each classroom wing with its own useable garden space.

Under the changing roof planes inside, students will enjoy pleasant visual surprises in their environment as ceiling heights slope upward from a low of 7' to a dramatic center height of 26'6".

This over-all concept permits maximum flexibility in terms of building use and potential expansion. When new structures are needed, the same basic pyramidal and butterfly roof forms will serve as identifying elements for the added spaces.

Above all, the plan should adapt itself with ease to the continuing changes in educational concepts sure to come in the years ahead.

uneer one



SITE PLAN SCALE

50 100 1





FINE ARTS BUILDING



SCIENCE & SHOP BUILDING



ENGLISH-LITERATURE & MATHEMATICS BUILDING

Floor plans are designed to offer a wide choice of classroom arrangement to suit the changing needs of the curriculum. Walls dividing classroom space from the center area may be movable. The center space can be enclosed or left open as a roofed area for exhibits and informal assemblies.



```
TYPICAL SECTION SCALE
```



TYPICAL INTERIOR PERSPECTIVE OF CLASSROOM

#### "THE STRUCTURE RESULTS FROM FOUR LAMINATED WOOD BEAMS OF SPECIAL BOOMERANG SHAPE THAT EXTEND THROUGH THE CENTER OF THE BUILDING."

Although the cross-shaped buildings in Quincy Jones' design are 80 feet long in each direction, they require no interior bearing walls. Instead, the structure results from four laminated wood beams of special boomerang shape that extend through the center of the building, forming two cantilevers. One leg ties to the high end of the classroom wing and the other meets the box which forms the lightwell at the top of the pyramid. Diagonal wood siding on the end walls is engineered as shear walls for lateral bracing. The roof is laminated wood decking exposed on the underside and topped by cedar shakes. These and other architectural wood products are offered through the Weyerhaeuser Architectural

Services Program. This service gives you immediate access to a wide range of specialty building products, in addition to the most comprehensive body of design and engineering data available from a single source in the wood products industry. Call your Weyerhaeuser Architectural Representative for details. Or write us at Box 2131, Tacoma, Washington 98401.





Seal of superb styling: personalized fired copper roses. SARGENT. Lustrous colors handcrafted with crests, trade-marks. Permanent. Part of a complete line of advanced architectural hardware featuring the Sargent Maximum Security System: SARGENT.

SARGENT AND COMPANY • 100 SARGENT DRIVE, NEW HAVEN 9, CONNECTICUT • PETERBOROUGH, ONTARIO • MEMBER PRODUCERS' COUNCIL On Readers' Service Card, Circle No. 402







#### New Pre-engineered Systems for Low rise / High rise / Loadbearing

Fenmark Grid Wall on the lower two floors combines gracefully with the pre-cast sections on the upper floors of the Lippold Building, by architect Leo A. Daly, Omaha, Nebraska. The thin line metal-glass arrangement provides an interesting and "airy" contrast with the massive concrete sections above. The Fenmark wall is color treated inside and out with the highest quality oven-cured copolymer coating to match the architect's and owner's selection. Available in colors to match or contrast with solar tinted glass. An unprecedented five year warranty insures the color finish, weather integrity and total performance of the Fenmark system. The Fenmark system may also serve as a load-bearing wall, supporting roof loads on one or two story buildings; Fenestra's long span "D" panel roof completes the structure providing a single responsibility for the entire roofwall system.

For the full story, check with your Fenestra representative or write Fenestra Incorporated, Lima, Ohio 45802.



## NESTRA FENMARK GRID WALL SYSTEMS

# What's the best renting agent in the country?



Styled by Thortel Fireproof Fabrics, Inc.



O. Roy Chalk, owner of the Chalk House West, Washington, D.C., put Fiberglas draperies in every window. Eight floors of Peacock Blue Fiberglas ... and what a great job they did in helping to rent the building.

This happens every day. And it's no miracle. Every day more people respond to Fiberglas. From prospective tenants to architects and interior designers all over the country. Knowledgeable people know they can rely on Fiberglas for a fabric that looks just as good as it acts. They know Fiberglas is:

Sturdy: Fiberglas is flame-resistant, unaffected by humidity, resistant to sun, won't stretch or shrink.

Economical: Fiberglas is washed, not dry cleaned, never needs pressing, or alterations due to change in size, and therefore is less costly to maintain than other fabrics.

Beautiful: Fiberglas allows free play with color, texture and pattern on the inside, and looks uniformly beautiful from the outside.

No wonder Fiberglas draperies help rent buildings faster. Don't wait. Try it on your building. For more information and Fiberglas fabric resources write: Owens-Corning Fiberglas Corp., Decorative and Home Furnishings Div., 717 Fifth Ave., N.Y.C. 10022.

UWENS-CORNING



Chalk House West, Morris Lapidus Associates Architects. \*Fiberglas and Beta are Owens-Corning's trademarks. Owens-Corning Fiberglas makes the Beta yarn, not the fabrics.


Terrazzo installation made with ATLAS WHITE portland cement. Westland Shopping Center, Detroit. Architects: Victor Gruen Associates, Los Angeles & New York; and Louis G. Redstone, Associate Architects, Detroit. General Contractor: Darin & Armstrong, Inc., Detroit. Terrazzo Contractor: Boston Tile & Terrazzo Co., Detroit.

# The world's most unusual shopping center has the flooring of a lifetime—terrazzo

Detroit's new Westland Shopping Center is totally enclosed. It has two great courts, a mall and space for 55 stores and services under one roof. It also has a fountain, flowers, exotic fish, songbirds—and restful green-and-white terrazzo flooring. This flooring is invitingly beautiful now. And it will remain just as beautiful for decades to come. Long, high-traffic use cannot fade the color and pattern of terrazzo. It will never lift, curl or wear thin. The first installation is the last. ■ When you plan distinctive terrazzo floors, wainscots, counters, stairs for a lifetime of service, specify a matrix of ATLAS WHITE portland cement.

Its uniform whiteness brings out the true color tones of aggregates and pigments. Ask your local terrazzo contractor. Or for an informative brochure containing actualsize color plates, write direct to Universal Atlas, Box 2969, Pittsburgh, Pa. 15230.





ACOUSTICS -

**AIR DISTRIBUTION** 



# Fred's like a Sunbeam ceiling system

That's because our ceiling systems are people-matched function for function.

Like Fred, each system is a totallyintegrated package of illumination, air distribution and acoustical controls.

Sunbeam Lighting ceiling systems help create a *total environment*; an environment *controlled* for comfort.

Our Modu-Flo<sup>®</sup> linear air bars and heat exchange lighting fixtures deliver *just* the right air distribution pattern and lighting intensity to fit the task. Fred's office has individual requirements. So does the corridor and so does the lobby.

We accomplish this by building the systems in *modules*.

And whenever you go about moving the partitions, this same modular idea goes to work for you again and again.

There are seven basic system themes, like the coffered or the luminous ceiling. But like people, no two are quite the same. So, we do an incredible number of custom variations to make sure you get the flexibility you need to create a perfectly balanced interior environment.

Another part of our package is the Sunbeam Lighting representative. You can't talk to a more experienced or knowledgeable systems man.

Fred's an old friend of his. Has been for years.

We'd like to send you a copy of our new color brochure "Concepts on the Interior Environment." Write:



Los Angeles, California / Gary, Indiana = 777 East 14th Place, Los Angeles, Calif. 90021.

**ILLUMINATION** 

On Readers' Service Card, Circle No. 409

SEPTEMBER 1966 P/A







Tigers are everywhere. Gas tanks...automobiles ...even hair tonics. For advertising, it's the Year of the Tiger. Monarch's symbol, though, remains the lot as the lion is king of

lion — for just as the lion is king of beasts, so Monarch is the reigning name in ceramic tile.

Monarch products tell the tale — and it's a proverbial tiger of a story. Monarch Tile has been proved a veritable tiger on thousands of homeowners' walls, as well as in buildings like the new First National Bank Building in Dallas, Texas. The tallest building west of the Mississippi, the First National Bank Building in Dallas uses Monarch Tile throughout its restrooms and kitchens.

The key at Monarch is research — and an unending process of quality upgrading that has led to a new height in traditional products like Monarch Colorblend and Kristaline Glaze Ceramic Tile, and to products of creative flexibility and flair such as Monarch Monoscore and Monarch Sculptured Tile.

Monarch products look and act every bit as good on the wall as they sound on paper. This is no tiger by the tale. But the story Monarch products and Monarch customers tell is a good one — a story of dependability, flexibility, durability, all phase creative function and constant research. And only a tiger tale is fit for a king — like Monarch.











Factory and General Office, San Angelo, Texas

# From gingerbread to contemporary\_ but the steel frame's the same

The old Times Tower was 60 years old when they tore it down-tore it down to the steel skeleton, that is. If it had not been

built with a steel frame, the building would probably have been razed. Instead, they exposed the steel skeleton, made a few structural modifications, enlarged the service core, added more stairways, relocated partitions, replaced the flooring and plumbing, installed modern air conditioning, and gave the building a spanking new exterior.

There's a lesson here for you if you're planning a new building. Did you know, statistically speaking, that your new building will have to be remodeled in 15 years or less?

Take note that steel buildings can usually be altered to accommodate basic structural and service changes-economically! And without steel, a building may become a permanent victim of obsolescence. So when you're budgeting your new building, don't forget the change.

A United States Steel construction representative will be glad to discuss this subject with you in detail-contact him through our nearest sales office or write U.S. Steel, 525 William Penn Place, Pittsburgh, Pa. 15230.

# United States Steel: where the big idea is <u>innovation</u>

ñħ Πñ

ΠĨ ħŃ

i nri ñħ Πī

ΠĨ ΠĪ ĺΪ

'nΛ

ħħ 丽 λŲ 而 Π

ΠŊ

īΪ

TIT

m

16

# **BRICKPLATE-**A MASONRY VENEER FOR ALL SURFACES **PLUS**...

- Modular Dimensions
- Real Masonry Facing, in a Tile Thickness
- Lock Key Design for Secure Attachment
- Dramatic Glazed Colors
- Frostproof Characteristics allow Use in any Climate
- Warm Unglazed Colors
- **High Abrasion Resistance** Slight Texture gives a Non-Slip
- Quality even after Waxing Chemical Resistant
- Low Absorption, less than 2º/o, insures easy Maintenance - stays cleaner longer
- Premounting for Tilt-up, Precast













a product of GAIL INTERNATIONAL CORPORATION, 582 MARKET STREET, SAN FRANCISCO Stocked and distributed in the United States East of the Rockies by Mid-State Tile Supply, Skokie, Illinois with agents in principal cities: Casavan-Saivo Industries, Los Angeles, Calif.; Western Tile, Seattle, Wash.; Fritz Barthel, San Diego, Calif.; Brick Incorporated, Denver, Colo.; In Canada by Darlington-Haskins & Co., Vancouver, B. C.; Ravary Builders Supply, Montreal, Quebec; Gail International, Rexdale, Ontario. See our SWEETS Catalog Insert.



#### Now let's look at it a few years from now.



The illuminating engineer who designed this installation isn't worrying. To begin with, he had carefully considered problems of architecture and aesthetics. Calculated required lighting levels. Chosen optimum transmission and diffusion values for the shields. Decided on plastic shields to reduce weight and cut costs of installation and supporting structures.

Then he considered long-term color stability—as reflected in the aging test data shown in the charts above — and specified lighting panels made from Du Pont LUCITE\* acrylic plastic. Good for fifteen years or more, with no significant embrittlement, surface deterioration or loss of light transmittance. And the panels are easy to maintain throughout those years. So he's rightly looking forward to the continued satisfaction of his client.

How about *your* next lighting installation? For full background information, design data and comparative performance charts, send for your copy of "LUCITE for Lighting". Write: Du Pont Company, Room 4213A Wilmington, Delaware 19898. (Du Pont does not make or sell lighting shields, but supplies LUCITE acrylic resin and acrylic monomer to lighting manufacturers.)



HETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY



Paint, wash or remove sash from the inside just by pivoting the sash on this all-new PELLA Wood Double Hung Window. That's why this wood window is equally at home in high-rise buildings and residences. Exclusive spring-loaded, vinyl sash slides that are tough, resilient, insulate against heat or cold and never need painting are the secret of these PELLA windows. Slides are held snugly against the sash stiles by concealed continuous spring weather stripping which compresses to allow sash to pivot. There's a choice of a lower half screen or a full-length screen that swings out during washing. Both are removable from inside. Snap-in, snap-out wood muntin bars provide the traditional "look." And, a combination of stainless steel and woven pile weather stripping adds to year 'round comfort conditioning. Dual Glazing Panels or insulating glass make outside storms unnecessary.

ARCHITECT: PAUL SNOUFFER - BUILDER: WILLIAM DRAKE

BUILDER: WINTERS & ZINTEL, INC.



PELLA, IOWA

YES, via first class mail, rush me more color pictures and information about the following **PELLA** products:

- PELLA WOOD DOUBLE HUNG WINDOWS
- PELLA WOOD CASEMENT WINDOWS
- PELLA WOOD MULTI-PURPOSE AND TWINLITE® WINDOWS
- PELLA WOOD SLIDING GLASS DOORS
- PELLA WOOD FOLDING DOORS

PELLA WOOD FOLDING PARTITIONS

Name	
Firm	
Address	
City	State & Zip Code
0123	Printed in U.S.A

TODAY! (Your Request Answered within 24 Hours)

ARCHITECT: ROLAND SENSEMAN - CONTRACTOR: HARRY GOOD

WANT MORE INFORMATION ON PELLA PRODUCTS? Mail the postage-paid card at the left. Or, call your PELLA distributor. You can find his name in the Yellow Pages of your telephone directory. Or, see SWEET'S Architectural or Light Construction Files for PELLA product details. ROLSCREEN COMPANY, PELLA, IOWA.





PELLA MAKES QUALITY WOOD WINDOWS, WOOD FOLDING DOORS & PARTITIONS AND WOOD SLIDING GLASS DOORS

# Why did Winged Foot Golf Club select Downs?

Because only Downs could combine beauty and durability in a versatile wilton Acrilan® pile carpet to match the club's quiet elegance.







Ask any golfer about Winged Foot and he'll tell you this nationally renowned golf mecca in elegant Westchester County, N.Y., is indeed a splendor to behold. So only a carpet as prestigious as the club itself would do when it came time to re-carpet the Men's Grill, corridors and two locker rooms. The 1,300 yards of this heavy wilton carpet made especially for Winged Foot, is loomed of rugged Acrilan acrylic fiber that will stand up to spikes, spots and stains and come back for more, year after year after year. It should . . . it comes from Downs!

Write for FREE SWATCH of Actual Carpet Used at Winged Foot

DOWNS CARPET COMPANY, INC. CONTRACT DIVISION, DEPARTMENT PA966, PHILADELPHIA, PA. 19134

SEPTEMBER 1966 P/A

< On Readers' Service Card, Circle No. 401

On Readers' Service Card, Circle No. 435



**\$24,500 SAVING:** 35,400 sq. ft. Fair Park Gardens Apartments, Little Rock, Ark. *Architect:* Cowling and Roark, A.I.A., Little Rock, Ark. *Electrical Engineer:* George Ellefson. *Contractor:* Glenn Henry, Little Rock, Ark.



**\$10,000 SAVING:** 5,200 sq. ft. Home Federal Savings and Loan Association of Cincinnati Building, Wilmington, Ohio. *Architect/Engineer:* Richard R. Grant, A.I.A., P.E., Wilmington, Ohio. *Contractor:* A. P. Eveland and Sons, Wilmington, Ohio.



**\$13,700 SAVING:** 120,000 sq. ft. Wachovia Bank and Trust Co. Building, Raleigh, N.C. *Architect/Engineer:* A.G. Odell & Associates, Charlotte, N.C. *Contractor:* T. A. Loving Co., Goldsboro, N. C.



**\$20,000 SAVING:** 19,000 sq. ft. Den-Mar Nursing Home, Rockport, Mass. *Architect*: Di Meo Associates, Stoneham, Mass. *Engineer*: Joseph Sestito & Associates, Malden, Mass. *Contractor*: Feldman Construction Co., Rockport, Mass.



**\$10,000 SAVING:** 18,500 sq. ft. Gioria Dei Lutheran Church, Forestville, Conn. Architect: Jeter & Cook, Hartford, Conn. Engineer: James S. Minges & Associates. Contractor: Wadhams and May Co.



**\$63,000 SAVING:** 675-student, 60,000 sq. ft. Hampshire High School, Romney, W.Va. *Architect:* Robert J. Bennett, Morgantown, W. Va. *Engineer:* Ballard & Mayfield, Canton, Ohio. *Contractor:* Baker & Coombs, Inc., Morgantown, W. Va.



**\$13,000 SAVING:** 32,000 sq. ft. stamping plant of McIntosh, Inc., Berne, Ind. *Architect:* C. E. Notzel, Detroit, Mich. *Heating Engineer:* Berne Electric Co., Berne, Ind. *Contractor:* David Poor Construction Company, Warsaw, Ind.

# Look how all-electric design can cut first costs!

More and more architects and engineers are finding that allelectric design, with flameless electric heating and cooling, can hold down first costs for clients in buildings of all types through the elimination of such items as boiler rooms, fuel storage, stacks and long pipe or duct runs.

Annual costs can also be reduced, since simpler control systems and lower maintenance require fewer employees.

Moreover, because of the wide variety of equipment types to choose from, all-electric design permits greater architectural freedom and flexibility. Expansion becomes easier, too. And all-electric design can also provide from 5% to 10% more usable floor space for additional building capacity.

For more facts about the proven advantages of applying all-electric design to your industrial and commercial buildings, call your local electric utility company. They will welcome the opportunity to work with you.

This plaque identifies a modern building, meeting the standards of electric heating, cooling, lighting and other applications set by Edison Electric Institute.

#### LIVE BETTER ELECTRICALLY Edison Electric Institute, 750 Third Ave., New York, N.Y. 10017



On Readers' Service Card, Circle No. 344

#### September 1966 PROGRESSIVE ARCHITECTURE

"The r lationship between beauty and ugliness in the Victorian age is very much the relationship it is now. I don't think there is such a thing as beauty without ugliness... The beauty that the upper classes had in traditional Western culture was a highly artificial, conrived, intellectualized and limited kind of beauty. It was theirs and theirs alone. It was too good for the peasants. ... If we do not wish to limit ourselves to the artificial and the contrived, then I think we are free to say: There is no such thing as beauty without ugliness."

EDGAR KAUFMANN, JR.



The holding back of what is inevitable has occurred at every step of our history. Some consider it a healthy influence of conservatism; others, a deplorable stumbling block to natural development.

These rear-guard actions affect all aspects of our lives. Man's physical, mental, and spiritual existence is constantly kept unbalanced by the teeter-totter between forces that try to preserve old values and forces that admit the existence of new values. Contemporary examples, such as attempts at slowing down social benefits in this country, the distrust of a less doctrinaire and more liberal economic and political policy in the socialist countries still ruled by the old-line revolutionaries, the world-wide arguments between conservative and progressive factions at various ecumenical conferences, and many others, can easily be cited.

Architecture is also not immune to the tug-of-war between the past and the future. Every transitional style is a record of this conflict. Christopher Wren's St. Paul's Cathedral ended up as a Renaissance building with a Gothic plan; and most architecture today is a mixture of old ideas and new ambitions.

But stylistic and formal considerations do not affect our lives as much as the structure of the whole environment. The content of the way we live, rather than the wrapping, is far more crucial. An indecision in this area could be really dangerous, because it can result in the warping of the whole civilization and lead men into an explosive cul-de-sac, into a dead-ended situation ripe for violent upheavals.

This became evident at the Fourth Delos Symposion, which I attended. Tucked in the middle of the report summarizing the conference is this thought: "It is time to study what forms the new urban environment should take. Some will argue that since we live in an age in which the idea of static being has given way to process, platonic ideals to dynamic change, a closed universe to the immensities of time and space, this changed world-view may profoundly affect man's sensibility and image making. There are signs—in modern painting, sculpture, music, and architecture—of new trends emerging, based upon the co-existence and interpenetration of different systems in a constant process of dynamic change. On the other hand, it may well be found that the old forms of urban living, worked out over millenia of experience, will prove more satisfying."

Any conference on the future of human settlements (which is what the Delos Symposion was all about) should start with a statement of assumptions: Do the conferees assume that old forms based on old values are eternally satisfying and the problem is how to build a new world based on old concepts; or do they believe that the world indeed has changed and that the task is to create a new world very much *unlike* the old?

Without a commitment on this fundamental question, a discussion of details of the environment cannot have much meaning. When the ultimate aim is not clear and the totality is left as a question, the pieces cannot do more than lead to a mixed-up, half-way-house solution.

Which is what we are getting most often right now in an unplanned situation. New York City, for instance, is for all practical purposes a "plug-in" city already —a dynamic city in a state of constant transition. But this fact is not being admitted in the way services are handled ("Dig We Must"), or in the design and placement of the structures. The resulting mess is not only wasteful economically, but also a new aesthetic and a new way of life are prevented from being realized.

This historical drag, the hold-back process, whether conscious or unconscious, intentional or unintentional, planned or unplanned, inevitably creates a situation where the old is merely bastardized and the new cannot fully mature.  $\blacksquare$ 

Jan C Rowan

# THE ARCHITECT'S OWN OFFICE: SHOWPLACE AND WORKSPACE

It is more than a busman's holiday when an architect designs his own office. It is often good sense — good economics and a chance to advertise by displaying the skills of his craft. Some architects design their own buildings; others renovate an existing space. In either case, it is a chance to convey a special image, as well as create the kind of working environment he wants.

There are as many kinds of architectural offices as there are architects. Architect's offices can be found in the most varied spaces — in houseboats, stables, banks (at right, the San Francisco office of John Carl Warnecke & Associates); in townhouses, warehouses, meeting houses; in office buildings, large and small. Some architectural offices are indistinguishable from those of any corporation; a client may be barely aware of the drafting room, hidden away in the inner depths. Some of the most distinguished large firms, in fact, occupy Emery-Roth-type buildings in downtown areas.

Some architects' offices are never completed, the architect being too busy with other people's problems, rather like the proverbial shoemaker's child who is always barefoot. Some offices are illegal, like the case of the architect who created mezzanines in his high-ceilinged space, having called them trellises for the benefit of the Buildings Department.

There is a saying that a man who doctors himself has a fool for a patient. But the architect is a different kind of professional. His business is space, and it is good business to show what he can do with space, whether his firm is a well-established one with many works to its credit, or whether it is a new one that is unknown and unproven. In his own office, he can exercise his talents for creating rich spaces and workable spaces. He can innovate or translate or accommodate. And since he spends a good amount of time there, he might as well enjoy it. — EP





### DISTINGUISHED NEIGHBORS

From his one-room Manhattan floorthrough, Richard Meier looks out through rippled glass to SOM's Lever House at the front, and to McKim, Mead & White's Racquet Club at the rear. He occupies



half of the third floor in a four-story building that is part of the Racquet Club block; the two-year lease he has been given is perhaps an omen about the life expectancy of the stately Racquet Club. now probably considered as entering a useless senility. according to the usual diagnosis made in Manhattan about any building of mature years.

Meier is one of the architects whose work was recently selected for the American Federation of Arts "Forty Under Forty" exhibit. His completed buildings are few in number; but around the office are models of several works now in progress. A pedestal near the door holds the model of a residence soon to be built.

The office is quite bare: "I try to keep it that way," say Meier. The main item of furniture is a 6' x 18' conference and drafting table, made up of 3' x 6' sections of 2 in. butcher block (approximately \$70 each), and is supported on standard restaurant-supply bases (approximately \$25 each). The cane chairs are what Stendig calls the Corbu chair; the model of the Rietveld chair in the corner was made by students of Meier's when he taught at Princeton: "Not very comfortable, actually," he remarks.

# MINIMAL MAINTENANCE

Designed by Howard Barnstone & Partner, Eugene Aubry, and Burdett Keeland, Jr., for their joint use, is this compact office in Houston, Texas. Barnstone reports that the building cost about \$7.60/sq ft, including carpeting, awnings, and ten tons of air conditioning. "We've never been able to figure out how we got it so cheap, because the General Contractor said he made a couple of thousand dollars on it. The only savings we can figure are the sliding doors, which are the entire exterior surface and cost only \$52 per set, glazed and installed."

"We've been in the building for 25 months and there has been \$34 worth of maintenance so far, which was for painting the toilet," Barnstone adds.











MESSAGE FROM TELEGRAPH HILL

H

The deck of Lawrence Halprin's office is not on a tourist's map, but it might as well be: It provides an excellent vantage point for viewing San Francisco's Golden Gate Bridge and the Coit Tower on Telegraph Hill. Immediately surrounding the building are a fast-dwindling number of other old warehouses. Halprin and William W. Wurster jointly bought the building five years ago, when each was in need of more space, and the corporation that was formed at the time of purchase has subsequently invited an engineer and a graphics designer into the building.

Halprin's own area remains substantially unchanged from the time of original purchase, with the exception of the deck, which was added in two increments. Inside, he added the balcony (on which is located a photo library of 40,000 slides). The draftsmen have added their own touches—the moose head at the reception desk; a statue from Maybeck's Palace of Fine Arts, lifted when that building was being demolished; and a paint job (Pop style) on the ventilators that come up through the deck.

The space is a fluid one, which is important to Halprin. He feels that a static quality is wholly antithetical to creative work. He also believes in the importance of the process by which creative work develops—the intangibles of a creative atmosphere—as distinct from the tangible end-product. The ping-pong table is thus more than a place to let off steam, and the eating area is more than a place to have lunch.

Furnishings are crude and casual. Halprin's own small office combines an air of no-nonsense work (in the minimal "desk") with the highly individualized back-drop of the pin-up wall behind it.







# **DOWNTOWN DIGS**

IUGI

Until this past winter, the offices of Vincent G. Kling & Associates were on Corinthian Street in Philadelphia. Now, at double the space, the offices are on Arch Street, which has a certain poetic justice for an architect: The move is not from Greek to Roman, but from townhouse to high-rise, and to two-and-a-half floors of a high-ceilinged office building downtown that dates from the turn of the century.

"If we're going to be in the center of town, why not be as close as possible," comments Kling, looking one block over to City Hall, centerpoint of William Penn's plan of 300 years ago. "Everyone likes this better-the draftsmen and the clients. Before, we always went out to see clients."

"Actually, we created this parkland." Kling says, referring to the plaza between his office and City Hall. "All we've done is come perch on it, and watch its development. When we were looking for this office. there were quite a few places to choose from, but the exodus from the city now seems to be reversed." Kling's office also looks out on his new Municipal Services Building; the scale of the facade in the building he now occupies was, in fact, an influence on the design of the M.S.B.

Most interesting space in the office is the two-story reception area. All design work is done on the third and fourth floors of the building, while the second floor-only partly rented by Kling-is given over to model shop, print room, administration and finance, and communications. There are 170 employees, of whom 115 are architects.

Working areas have considerable flexibility of layout. Each project, from earliest design stage through final construction. is under the direction of a single team. a system that works well for all, Kling believes: The client feels a sense of continuity, young architects learn more quickly and are more totally engaged, and the building is a product of consistent thinking. Teams are grouped in different ways as space allows-in more formal alcoves in the large space at one end of the building, or more casually where there are smaller rooms to fill.

Kling's own work space is a handsomely paneled conference room. There is no drawing done here: "I leave drawings on everyone else's desk," he says. "And if I want to draw. I work at home."

## **DESIGN DISPLAY**



GROUND FLOOR PLAN

When George Nelson was looking for new office space in New York City, he wanted something "unusual." He bad looked "everywhere," including churches, and finally bought an ample-sized townhouse on East 22nd Street that was once used by the College of the City of New York as a recreation building. There are now 28 people working on the first, second, and third floors. Nelson has his own apartment on the top floor.

The designs that Nelson has created over the years are given star billing whenever possible throughout the office. In the entry is an imposing mural of the fronthanging Comprehensive Storage System (Herman Miller's CSS) that was developed in 1964. From these extruded-aluminum sections, slotted on one side, are dis-



played photos and maps of the work of George Nelson & Company around the world-architectural design, product design. furniture design, exhibition design. Also in the entry, in the stairwell, is an earlier Nelson design, here in triplicatethe Howard Miller bubble lamp that was a pioneer in the technique of blowing plastic onto a rotating wire frame. The drafting room on the first floor uses the CSS but in its free-standing form, the prototype that was introduced about six years ago. The anodized poles here have slots on each side, and storage units are suspended from them. (The mural wall in the entry can also support furniture. although at present is backdrop for the Nelson-designed Action office sofa.)









## COVERED COURTYARD

Building to suit themselves alone, but honoring the one- and two-story residences around them, the office of George Pierce & Abel Pierce in Houston is turned inward to a landscaped courtyard. All individual offices look into the courtyard, which is visually enclosed overhead by a cable-suspended grillwork of redwood for protection against the strong Texas sun.

The structure is of precast concrete flat beams on a light steel frame. Exterior materials are redwood, stained dark. and common brick, painted gray-green. If future needs should warrant, the drafting room could be expanded outward: first, under the carport, and later, to the property line. Total floor area at present is 5915 sq ft. The cost in 1962 was \$19.50/ sq ft, based on 100 per cent of enclosed area, 50 per cent of the carport area.

Detailing throughout is simple and handsome. Drafting tables are officedesigned, with welded frames made of  $1\frac{1}{4}$ -in. steel tubing.



#### TAILORED FOR ARCHITECTS



"We moved so as to be more accessible to our consultants, and closer to the business community." points out John Rauma of Griswold & Rauma. A block away in one direction is the commercial and business district of Minneapolis; a block away in another direction is the financial center.

The micro-neighborhood of the office is varied: The Minneapolis Club is across the street. a red brick neo-Gothic building; and the Lutheran Brotherhood Building is nearby. a 1950's curtain-wall structure. The architects' office is in a low

## FREEWAY LOFT

"Most of the lofts are downtown, and most of them are used for manufacturing." comments Gregory Walsh. Jr. "But this one is right off San Diego Freeway. just north of Wilshire Boulevard, and not far from U.C.L.A. It's a mixed-up area now, with some tall buildings going up across the street; we're renting on a year-to-year basis."

The loft has seen a lot of living for its years. During World War II. it was a manufacturing establishment of some sort; at another time. it was a dance hall: and. more recently, it was the studio of the late Rico LeBrun, a well-known Los Angeles painter.

Walsh and his partner Frank Gehry moved into the top floor almost two years ago, joined by Geré Kavanaugh, interior designer. It was then a large open space with an open-truss roof and open wood ceiling. They added all the partitions, trying to preserve the openness of the space while providing the necessary division of space. Partitions are of mineral fiberboard,





two-story block with leaded-glass windows; the shop's previous occupant was a custom tailor.

The architects made few basic changes. The mezzanine was already there, but was extended 4'-6". Then, to subdivide the upper floor into several work and conference spaces, the architects installed a floor-to-ceiling slab of 1/2-in, gray plate glass. The size as originally drawn, 15 ft long, had to be reduced to get the glass into the mezzanine.

The reception area is an impressive space. One detail that is a source of pleasure to the architects is the lighting niche behind the desk. On permanent display here is a terra cotta detail by Louis Sullivan, which was salvaged from the Owatonna Bank in Owatonna, Minnesota.



for acoustic value and at the same time to provide a pin-up surface. The architects stripped and refinished the floor, discovering that it was a handsome maple; painted the entrance door dark purple and the landing yellow-green. Everything else is white. Gehry and Walsh, both trained at the University of Southern California, have a growing young practice; one of their current jobs is for the reception center at the new town of Columbia, Maryland.







## **MASONIC RITES**

Watertown Square, overlooking the Charles River, is in one of the outlying sections of Boston, last stop on the rapid transit. In addition to the usual mixture of Woolworth's and wires, there are two large brick buildings—the larger one an old mill that is now a laundry, the smaller one previously used as a Masonic temple and now rented by Sasaki-Dawson-DeMay Associates, Inc.

The structure was put up as a speculative building at about the time of the Civil War. and is the product of sympathetic growth: It was built in two sections (notice the heavy fire wall down the center), although it reads as a single building.

"There wouldn't be any advantage to being in Boston, since several members of the firm teach at Harvard." says DeMay. "But because of the low square-foot rental out in Watertown, each person has more area than would be possible in a high-rent district such as Harvard Square." There are some 60 people in the office at present.

"We began by renting the full third floor, five years ago. Since then, we have rented parts of the second floor, as it has become available, for additional drafting space, model shop, print room. But the reception area remains on the upper floor." The meeting hall is now a large drafting area: the single large dining hall is now space for planners, conferences, and reception. DeMay explains that the planners have a single drafting room to themselves, because no one else will tolerate the noise of their typing.

Detailing was carried out by DeMay: The table in the conference room is his design, as is other special furniture.















# FLUID SPACE

Sharing the forty-seventh floor of a 1920's skyscraper in midtown Manhattan are four architects and one 15.000-gallon water tank. The architects are James Polshek, Walfredo Toscanini, Richard Kaplan, and Michael Zimmer, who renovated the 1400-sq-ft space in December 1964. (Polshek and Toscanini are in association, sharing studio space with the latter two, who are independents.) Since then, they have kept watch over growing practices, and over a series of views of New York City that are staggering. They have also been witness to some strange interior effects, as when high winds cause the upper tower of the building to sway, and the lights swing on their long wires.

The space already had natural work areas in the corners, and room for several large drafting tables in the middle. "The big problem." says Polshek. "was to cut out a private office without ruining the space." Two simple partitions of concrete block have a wall of 14-in, glass sections butted together at one end of the enclosure: this "conference room" is open at the other end. One of the few other changes in the space was to remove a sheetrock modesty screen that had shielded the drinking-water tank from view. The contents of the tank are also visible, from an upper rung of the ladder that goes to the roof. "It looks pretty scummy," says Polshek. "but I guess they filter it."

The entire space is full of surprises, and the combination of elements is also fresh: the refined lines of classic modern chairs against the forms of the other "furniture": the ladder to the roof: the pipes, from floor to ceiling: and the steel bolts and rivets of the water tank.





Concrete memorial, Villanueva's School of Architecture building, Caracas.

FTFR

CORBU.

LE CORBUSIER

1





Would you believe that South American architecture is on the surge of a New Wave — a Nouvelle Vague? Would you believe "Nueva Ola"?

#### BY C. RAY SMITH

What U. S. architects have read about the architecture of South America since 1960, when Brasilia opened, has been so limited that the only questions they know to ask are: What does the finished cathedral at Brasilia look like? and, How is the Helicoid in Caracas working out? Aside from this, most probably think of all South American architecture as looking like the work of Le Corbusier.

Much of that image is justifiable. After the international acclaim of the Ministry of Education Building in Rio in the early 40's, the great number of Le Corbusier's disciples in South America initiated and inspired the greatest amount of Corbusian design approach anywhere. Consequently, the French architect became the undisputed influence on both the architecture and the urban planning of that continent. This was not done without transforming his style, but it was done with an embracing recognition of the affinity between his Mediterranean sensibility and that of the Latin Americans and their markedly consistent climate.

Yet South America is a vast continent, and is sparsely populated in relation to total land area (220 million people for 7,500,000 million square miles as compared to the United States' 190 million people for 3 million square miles). Also, it has been subject to a wild diversity of foreign influences: The most obvious are Spanish and Portuguese, but there are French (in Peru), Oriental (along the west coast), German (everywhere), and Italian (almost everywhere). Brazilians point up the mixture by saying mockingly, "An Argentinian is an Italian who speaks Spanish and thinks he is English." Then there is a diverse Indian culture, which is another world—to the South American as well as to the tourist.

So it would be glib and presumptuous to attempt to treat such an area as a single, consistent entity. The only things that are constant in Latin America, as has often been said, are unevenness, imbalance, unrest, undependability, and emotionalism.

Yet the world is getting smaller, as every astronaut knows: The longest distances are those between the airport and midtown. And distances in the world of architecture are shrinking as rapidly perhaps as rapidly as magazine circulation carries structural discoveries to new areas and brings the world of style to an alltoo-quick sense of consciousness.

Still, some areas remain seemingly remote to us—perhaps because they are intellectually remote. South America, our closest continental neighbor, is usually approached by Christopher Columbus' two routes—from here to Europe and thence to South America. And, Latin Americans approach the U.S. in the same way.

It will seem only apocryphal, but one of their distinguished architects talked about "Yasamaki" (he must have known whom he meant, however, because he said he thought him "dangerous"). Another architect mentioned "Lois Kahn and Marcel Broil." A third said he admired "Saroyan—a Finnish architect living in the States." So we all, sadly, have much to learn.

In the U.S., we know precious little about the recent architecture of South America-perhaps because we have built up several resistances to the work there. For one thing, the character of their architectural photography is alien to our eyes: Pictures generally are flat and lacking in contrast. Another, doubtless more perverse reason on our part-and the fact that we expect all of South America to look like Le Corbusier may be due to it-is that all the tropical planting that exists there in such abundance was so popular in the days of the coarse-textured 40's and 50's, when the work of South American architects was first becoming known to us (remember the cut-leaf philodendron?) that it makes today's Latin American architectural photographs look dated.

Therefore, the initial impressions from

a one-month tour of six major cities reveal a number of surprises:



City of Pop Calla Lilies: Big, bustling, and brassy, choked by freeway snarls that cause it to be known as "Los Angeles without the smog," Caracas is exactly what one expects South America to look like. The exposed concrete structural frame, with infilling panels of white or red brick, show the influence of Le Corbusier's disciples and of Carlos Raul Villanueva-"the Ur-papa of Venezuelan architecture." (Now a robust 64, Villenueva is designing his country's pavilion for Montreal's Expo 67.) The main question arising here is whether what makes everything look consistent is a stylistic stranglehold-seemingly suppressing any new generation-or whether it is only a result of the now-ended building boom that had been supported by the previous regime of Perez Jiminez. The virile but monotonous structural rationalism seems antithetical to the predominantly gaudy, exuberant spirit of Caracas; that spirit is typified by flower stalls of fresh-cut white calla lilies that have their insides spray-painted with yellow, green, red, orange, or blue-Pop Calla Lilies.

#### **Bogot**á

Buses by Girard? Bogotá, relaxed and civilized, provides the first architectural surprise of South America. It is sited in the foothills of the Colombian Andes. much like that of a smaller Caracas, although its plain is miles wider and therefore less restricting, especially now that Le Corbusier's plan from the 50's has been definitely rejected. But whereas Caracas is still under the firm spell of the established architects, Bogotá is a young architect's city. There is, of course, a government complex that is strongly Corbusian, but the recent urban projects and the smaller projects by the younger architects, which show several influences, are of astonishingly high quality-and the most refined of the five countries visited. Here, too, is the first strongly felt native influence: All bus exteriors are splashily painted with handcraftsy doodling that make them look as though they had been designed by Alexander Girard. Perhaps he got his Braniff scheme here, or, as one wag suggested, "Perhaps the bus company is owned by Braniff."



Down Here They Spell It Llamasaki: Now a sleepy, sprawling country city nestled on a ridge of the Andes, the Ecuadorian capital was once the art center of colonial Latin America. From here, the craftsmen, architects, and painters went out to influence the building and decora-

tion of much of South America. To evidence this fact, Quito has the first great religious monument on that continentthe church and monastery of San Francisco-as well as the richest temple in Latin America-the sumptuous church, "La Compañia de Jesús." But the artistic leadership has gone-seemingly forever. Ecuadorians are like small unawakened children who have no confidence in their work. Anything copied from the outside -no matter how bad or how expensiveis thought better than what they might do themselves. Clients are said to insist on copying from foreign magazines rather than letting their architects go out on their own. And, as one architect said, pointing out a Corbu-inspired building, "The spirit of Latin America has more affinity for Europe than for North America."



Inca Kola at Match-a-Pucci: Sophisticated, urbane Lima, seemingly half Spanish and half French with its Barcelona-like atmosphere, is spread out on a plain of gray desert sand that rolls down from the barren, red-ore-topped Andes right to the sea. Since Lima is dusty graybrown by nature, the cool International Style of the new Lima-Callao Airport is a surprising, if proper, introduction to the vigorous geometric architecture of Peru-both the old and the new. And the New is just beginning to emerge, heralded by young architects proclaiming a "Nueva Ola"-a new wave of architecture-which seems to proceed more from North American influences than that of any of the other cities visited. But then, Lima in general seems closer in spirit to us, as is indicated by the Hotel Crillon, which provides visually oriented North Americans a welcome, homelike relief by means of elegant Knoll-designed interiors.

#### Saõ Paulo

**Buildings Swaddled in Pine Boards:** Here, in this half-built, half-demolished "Chicago of South America," one returns to an impression similar to that received in Caracas—a bustling, choking city, full



of abandoned, half-finished buildings, grand Corbusian schemes, and (more strongly than recognized before) the status symbol of "Neo Colonial." A massive, "stylish" return to colonial interior decoration (reproduction brass stirrups on the drapery pulls) and exterior decoration (a broken pediment above a lintel incised with the date 1963) is supported by magazines such as Casa e Jardim, which recently titled an article about Oscar Niemever's house in Brasilia (done with traditional roof tiles and rectangular forms but no historical allusions otherwise) as "Niemeyer Colonial." This mentality is the sign of the affluent society everywhere, it appears. But Sao Paulo, where Brazil's money is said to be, is a country town compared to Rio.

#### **Rio de Janeiro**

Hrio Means "Hreever": Rio, the perfect, unspoiled site, a metropolitan Capri, has its beaches and its boutiques three blocks from each other, with trees arching over the banking district, and with sun, sea, and mountains providing an envelope. The carioca carnival of the mosaic sidewalks must make it the proto op-art city. Here, of course, is where the strongest influence of Le Corbusier is apparent, not only because of his most dedicated and brilliant disciple, Oscar Nie-



meyer, but also because of the late Affonso Reidy, whose Modern Art Museum is now nearing completion, and because of the buildings of the late Roberto brothers. But the New Generation is moving up in this swingingest town of them all.



Prior to 20 years ago, there were no schools of architecture in South America; consequently, all Latin American architects were trained abroad—many of them in France, where they naturally came under the influence of Le Corbusier. In the last 15 or 20 years, all that has changed. Now Venezuela has three schools of architecture, Ecuador four, and Peru five; Colombia, on the other hand, has nine—the same number as huge Brazil. Today, most of the young Latin American architects are trained in these schools.

Caracas architect Dirk Bornhorst, educated at Berkeley and one of the three architects of the still unfinished Helicoid, outlines the history of architectural education in Venezuela as typical: In the 30's and 40's, the field was led and developed by a group of five to eight architects trained at the Beaux Arts—foremost among them Carlos Raul Villanueva who had broken away as architects from the established core of civil engineers that had done most of the building up to that time.

"Besides this," architect Tomás José Sanabria recalls, "architecture did not exist. It was only part of a service that contractors offered. Construction firms used the slogan, 'We design for you for nothing.' There were draftsmen who came to design things for stylishness—lacking in program, lacking in planning, lacking in techniques, interested only in 'the new look.' Villanueva changed all that."

"Then, in the middle-to-late 40's," Bornhorst continues, "a group of young architects returned to Venezuela from training in the United States, bringing with them the influences and methodologies of Internationalism. In this group are Martin Vegas, Juan Andrés Vegas (chief planner of the new Venezuelan city of Santo Tome de Guanana), José Galia, and Tomás José Sanabria." Sanabria explains that he was the first to found a practice in Caracas for private as opposed to government clients.

Then Caracas' university graduated its first class—11 men—in 1948.

No one can claim that throughout South America there now are countless examples of the architectural happening—of permissive designing that allows things to happen nearly accidentally. And the great Latin American example of Action Brutalism is yet to be found. At the moment, brutal packaging may be all we can discover. But the New Generation is asserting itself, and the hip motif of the diagonal is Happening There.

Beyond that, firmly placing the young Latin American architect in his own generation is an even stronger consciousness of the real problem of architecture today —how to provide huge quantities of inexpensive mass shelter in terms of a jewelry-like art form. This new direction may bring our two continents to a closer architectural understanding.



San Felipe housing, Lima; Junta de Vivienda, Architects.



SEPTEMBER 1966 P/A

Santa Cruz housing, Lima; Junta de Vivienda, Architects.





Apartment complex, Rio de Janeiro; Sergio Bernardes, Architect.



Auditorium building, SENATI school, Lima; Arano, Orrego & Torres, Architects,



Housing complex, Bogotá; Robledo & Velásquez, Architects.



Volkswagen assembly plant, Palma Sola, Venezuela; Dirk Rornborst Architect



COPAN apartments, São Paulo; Oscar Niemeyer, Architect.





Bavaria House complex, Bogotá; Obregon & Valenzuela, Architects.





The seemingly sudden explosion in urban populations, economy, and consequent building during the past two decades has left an image of two cities wherever the two ages of building have been superimposed. In Caracas and in Lima, new skyscrapers jostle the rugged Andean skyline, projecting above a quieter urban pattern of low tiled roofs. They are honest, workmanlike structures with carefully expressed, articulated elements, yet they stick out like the proverbial thumbs. It is no credit to architects if their buildings are good but in context produce only the effect of Miami conglomeration. The problem is one of making the city's roof line rise consistently as it did in other ages, rather than permitting isolated towers to project here and there—particularly when a mountainous contour provides skyline interest. In Rio, where the roof line limit is strictly adhered to, this danger seems to have been avoided and a consequent consistency maintained.

Yet these two ages of buildings proclaim the dramatic crusade of the modern movement in Latin America. The history of Internationalism there is outlined by A. Franz Heep, architect of Sao Paulo's Italia Building. "For nearly two decades, the predeliction for the architecture of Le Corbusier reigned supreme, and the evolution of the *plastique* seemed to preoccupy our architects. Then, buildings in North America, such as Lever House and the Seagram Building, left their marks on the works of many Brazilian architects."

However inappropriate it may have been to either their climate or, perhaps more importantly, to their resources, the glass-and-metal curtain wall, so beautifully detailed by Mies van der Rohe and his followers, was avidly adopted in the 50's by all the countries of Latin America. It is saddening to see the impoverished, nonindustrialized countries also grasping for status with imported, expensive curtain walls (or with foreign-designed interiors, such as those in Ecuador's spectacularly sited Hotel Quito, which was designed by a North American locally called, perhaps not inappropriately, "Henry the End.")

"In Caracas," Dirk Bornhorst explains, "architecture was freer and more expansive until the old regime ended in 1958. Then a 'New Rationalism' developed, which has a greater consciousness of social problems and urbanism."

#### Urbanism

It is not to be expected that young architects would have much opportunity or experience either to initiate or to execute urban programs, yet the prevalent custom of divided architectural practice in Latin America—to work for a planning or design agency of the government or a corporation in the morning and on one's own private practice in the afternoon—is giving many architects of all ages invaluable urban design experience.

Distinguished architects seem to have been more involved in urban planning projects in South America than in this country, at least until recently. And however disorganized the emotional Latin Americans may be, they have, in fact, executed some of the largest urban projects of this century—regardless of the social or artistic merits of those projects.

Oscar Niemeyer indicated how this was accomplished as he discussed his new plans for a city for 50,000 in Israel's Negev desert, an urban scheme for Gras, France, and a new town for Portugal, which he recently designed in sketches and model in 15 days. "You have to start quickly," he explained, "because if you don't, they change their minds." Then he added, "The disorganization of Brazil permits you to go ahead without discussion. In Europe, there is so much haggling that you never begin."

Villanueva (what a great name for a 20th-Century architect), whose University City and several housing projects are among the largest urban developments in Latin America, adds, "I think the most important thing now is city planning. We cannot make architecture without city planning. And the first thing is to know where we don't have to build: to take care of the mountains and the trees, and then to take care of the old good buildings -to take care of the old part of town. You can't make the town only one style. You must preserve not only the old buildings, the history of each town, but also take care of new buildings-the Robie House or the Villa Savoye, for instance. We must keep a relationship between the old and the new."

#### **New Cities**

How the Latin Americans complete an urban project may depend not so much on getting it done before they change their minds as before they change their governments-as Oscar Niemeyer must be all too aware. But as one new city scheme falters under the next regime, another seems to spring up elsewhere: Although building in Brasilia has slowed markedly since the change of government three years ago, Venezuela, since the overthrow of the Perez Jiminez government in 1958, has proceeded calmly and without brouhaha with the progressive planning for regional development and the building of another city at the edge of the forest-Ciudad Guayana. Planned on an existing roottown around an industrial resource, Ciudad Guayana is a new city being actively built with the assistance of many of the world's distinguished urban plan-

Besides complete new towns, South America is concerned, like the rest of the world, in revitalizing existing urban centers. In congested Saő Paulo, the Deparmento de Urbanismo, under the directorship of Luis Gomes Cardim, is considering decentralization of the city into sub-centers, while containing the 600-square-mile urban contour in the face of a 5 million population that has been doubling every 14 years. Yet with traffic density already strangling the center city, and with road construction proceeding at too slow a pace (as always) to cope with increasing demands (and with this felony compounded by the fact that street planning in Sao Paulo is done by the state government, not a city agency), Sao Paulo's Department of Urbanism still doubts that any form of rapid transit should be considered to reinforce their proposed scheme for decentralization.



As is recognized by both old and young alike, the really pressing problem of architecture today is the provision of low-cost housing, and nowhere in this hemisphere is the need so urgent as in the Latin countries. The hillside ranchitos of Caracas and the favellas of Rio are among those cities' most renowned legends. The overnight squatter tactics of their occupants have gained the name "spontaneous urbanization." And like the gaudy, spraypainted calla lilies, they flaunt their pauper vulgarity in garish color. In Lima, the barriados are sometimes literally in depressed areas-in physical, geological depressions below the level of the main highways leading into town. Built of gray, arid soil formed into adobe blocks and reed mats for walls (photo) or roofs (since, in the Lima desert, rain never falls), these *barriados* somehow seem to blend into the gray landscape and are not offensive to the eye so much as to the social conscience.

In this respect, Lima has been more fortunate than Caracas. The Peruvian Indians have saved their sense of color for their brilliant textiles.

As Caracas architect Tomás Sanabria reminds us, "Architecture is the expression of the social, economic structure of a history, of a civilization. Caracas' anarchy of building shows the thousands of immigrants who came hoping for a quick killing, looking at a boom town where they thought they could be millionaires overnight."

Oscar Niemeyer gives another example, "When Brasilia started, it seemed to the poor people that they could go there and have a good life. But they were from the country, and they lived in Brasilia just the same as they had done before."

Rio's iconoclastic architect Sergio Bernardes, whose open-ended schemes and visionary city planning place him among the most imaginative of the world's planners, says, "Favellas are an effect of progress: They appear when you have the demand of work. Then, when you increase work, the small favellas become big favellas."

Every tourist seems so struck by these slums that the subject has become, in Dirk Bornhorst's chiding opinion, the principal journalistic cliché about South America. Two facts ought to be remembered, he urges, in order to put the subject into proper perspective. First, the geologic revelation: The reason the slums of Caracas and Rio are so apparent is that they sit up on hills, where they are conspicuous.

Second, all cities have slums and have always had them, but the reason those of many cities, such as New York—or, he might have said, Quito—are less obvious is because they can be found in more permanent, old, midtown buildings with respectable façades hiding their decrepit interiors and overcrowded rooms.

"Traditionally," Sao Paulo engineer Ruben Rehder explains, "favellas are downtown, where the people can get to the civic facilities, without having to pay for transportation. In Rio, by contrast, they had to force the people to leave favellas for good housing because it was at some distance from their downtown work; they had to learn to pay for transportation."

#### **Low-Cost Housing**

Niemeyer comments further on this slum situation: "The worker does not need to be an owner but the renter of a house. Now they try to make themselves small owners, and since the level is so much lower in Brazil, they have no money for food. This is ridiculous. They even have no money to buy coffins."

Sergio Bernardes, to rectify this situation, has designed an economical house for favella districts and a plan for controlling their financing, layout, and growth. Bernardes' plan puts all the favellas together, not on streets, but along the contours of the hillsides, and up only to a specified height. His ingeniously simple structural scheme provides a sanitation system ("a new culture of sanitation for them") that supports the slab of the house; on it, the occupants can use their traditional construction methods to erect the shelter itself. "I create a remote control of the architecture," he beams, "by establishing contour lines for planning, by establishing a structural and sanitation system, and an economic system for purchasing the slabs of the new favella."

Also working to reduce the cost of housing construction is CINVA, the Centro Inter-Americano National de Vivienda y Planeamiento, which is sponsored by the OAS and the Government of Colombia and is located in Bogotá. Briefly, CINVA is a research institute at the National University where students from all over the world and from many professions-social workers, architects, anthropologists, lawyers, economists-study the means of speeding adequate good housing for our exploding populations. In this interprofessional study, which is based, according to Field Director Roberto Pineda, on the theory that "housing is a complex that relates to the totality of national life," CINVA teaches self-help construction techniques and the methodology of the housing cooperative.

Of their contributions since 1951, the "Cinvaram" and the book "Self-Help Housing Guide" are perhaps the most influential. The Cinvaram, designed by CINVA and an engineer named Ramirez, is a manually operated, one-man machine that makes soil-cement blocks; now standCINVA has also developed two prototype low-cost houses, which have been used in Colombia and Ecuador. Less artistically controlled than Bernardes' proposals, they rely almost solely on traditional construction techniques.

Bernardes' scheme may not have been put into effect, however clear-sighted it is, because there are those, at least in Brazil, who feel that "his proposal is only a solution to a building problem—not a sociological solution."

Oscar Niemeyer, who is planning prefabricated housing for his new town in Portugal, remarks, "The favella problem is not an architectural problem but a social one. It is not for architects to solve but for the government. Architecture reflects always the ambience, the society in which it is done," Niemeyer concludes. "If the society is well organized, the architecture is well organized. The favella is a reflection of Brazilian life-of the distinction between the very rich and the very poor. If the architect wants to better progress, then he has to go out and away from his drafting board and make the rich men less rich and the poor men less poor." That is, he has to get into social crusades and into political life and be a leader.

#### Government Programs

Such leadership as the governments of these countries are providing in housing programs is only beginning to be effective. Bogotá has its "Ciudad Kennedy," built in three years to house from 60,000 to 80,000 persons; Rio has a development called "Villa Kennedy," both obviously assisted with Alliance for Progress funds. Peru plans to build 100,000 low-income houses by 1969.

Ecuador's Banco Ecuatoriana de Vivienda and Brazil's Banco Nacional de Habitaçao both finance speculative builders' housing projects on sites previously laid out by the various Juntas de Planificacion or Mutualistas de Vivienda. Architects of the banks are involved both with the town planning and some of the houses. Only in this indirect way are there government housing programs. In Rio, the Instituto Arquitetos do Brasil is struggling for guidance of the bank's architectural schemes and considers as one of its main objectives the advancement of government housing for low incomes.

Again the goal of leadership by the architectural profession comes up. But in South America, the number of abandoned and incompleted buildings gives rise to doubts about the architect's ability to lead. One sees deserted, half-finished buildings on one hand, then buildings that are completed on the lower floors but still wrapped in their wood scaffolding the rest of their 20 stories. This is most noticeable in the two boom towns, Caracas and Sao Paulo. In Caracas, the present government seems to have used architectural projects as political footballs, to serve as visible blunders of the previous Perez Jiminez regime. But in other cases, one wonders how speculators start buildings before they know where they are going or where financing will come from.

Oscar Niemeyer explained why his cathedral at Brasilia is still unfinished, leaving only the above-ground structural ribs so far constructed. "In all times," he said, "a cathedral is a long-time project. The government helped with the structure, but now they do not provide help. The glazing is not a problem of anything but money. There are no technical problems, only monetary problems. And we don't want to make a provisionary solution; we prefer to wait to do the best thing."

Tomás Sanabria, whose Hotel Humboldt now stands virtually abandoned atop Mount Avila, concludes that at least in Caracas the matter of unfinished and abandoned buildings "is not an urbanistic or architectonic problem so much as a political problem."

Perhaps the ideal examples, and certainly the most dramatic illustrations of the architect as a leader of society, are to be found in Sao Paulo, whose mayor was an architect, and in Peru, whose national president, Fernando Belaunde-Terry, is an architect. That is what the International Establishment means.

Sao Paulo's Franz Heep concludes: "The next step in the architecture of South America will perhaps be the fusion of the two existing tendencies—the *plastique* of Le Corbusier's influence and the technical potential of construction systems learned from North America. This fusion could help in resolving the urgent social problem of good economical housing, which only the governments can carry forward."


Isra	I 675.95
ber a priceman	THE PRE
H D D D D D D D D D D D D D D D D D D D	and and and and
Filmer P	E SPE















Tomás José Sanabria's Banco Central de Venezuela, the recently opened first unit of a government complex, is the most distinguished new building in Caracas. Combining the functions of a commercial bank, the Treasury, and Fort Knox, it is properly monumental, being raised on a podium to negotiate a sloping grade. With the exception of precast window elements and louvers and of precast vertical ribs enclosing patios on the upper floor, the building is of cast-in-place concrete -including the horizontal sun grids and the concrete panels with corrugated texture that are used both inside and out. Inspiration for this texture-and the aesthetic rationale of this building-is the corrugated interlocking mechanism on the hinge side of the vault door itself (middle left). Slabs are cast on a reticulated pan system in 33-ft bays. The belowpodium area has a completely separate surveillance corridor sandwiched between service and security areas.



























**Rio's biggest news** is about the Gloria-Flamengo Embankment, an urban improvement project designed by a team including the late Affonso Reidy and Roberto Burle-Marx, in which a small midtown mountain was removed as landfill for a new bayside parkway, beach, playgrounds, ballfields, and other civic facilities. Burle-Marx's landscaping shows the squiggle lines of vegetation and benches and the fine selection of Brazilian plant specimens that are his trademarks. He has caused a juror by objecting vehemently

MODERN

SEIDY'S MUSEUM OF

CORCOUVE

DEAD

Q

GLORIA CHURCH

to the Embankment's outdoor lighting, designed by New York's Richard Kelly. Into what was envisioned as a horizontal scheme, broken only by the Monument and the Gloria Church, Kelly has placed dozens of lamp poles 150-ft tall, Kelly says fewer tall poles can light a bigger area. To a newcomer, the lighting seems a brilliantly daring concept with a forward vision of tomorrow's giant scale. And architect Ulysses P. Burlamaqui's service stations are handsomely minimal and also sensitively lighted.

MUSEUM

GLORIA



"We have to respect the older generation," the young Brazilian architect Paulo Casé affirms, "because they reformed the teaching and had more problems in architecture than we have now. In Brazil, they had to open the door to architects. Only with their idealism was it possible to make this change. But Brazil must make a similar change now. We need to open the field to the young generation."

The whole goal of young architects in South America, as in this country, is to break out of the ideological box of their predecessors and to break further out of the physical package that the Internationalists began exploding. They seem to have found the same two ways to investigate as the new generation in this country: First, by exploding all the architectural elements. One extreme of this is the permissive Architectural Happening, which is played on Accidentals—a technique not entirely without precedent, as Carlos Villanueva's work surprisingly shows. (In fact, Villanueva exhibits a number of precursive elements, including the asymmetrical diagonal as a motif, **4**, **5**.) The second method of breaking out of the package seems to be by minimizing architecture itself. The extreme of the minimal is underground nonarchitecture, and they've got that, too.

What appeals to this younger Latin generation in Peru, where 29-year old Emilio Soyer proclaims the "Nueva Ola," is a new, harsher, geometric *plastique*, which he is striving for and which his contemporaries feel is ideally exemplified by the restored Inca hacienda Puruchuco (2). In practice for only three years, Soyer has already built two apartment buildings (one of four stories, one of eight), two houses, and some dormitories for the S.E.N.A.T.I. school by Arana, Orrego & Torres, Architects, of which firm he is now a partner. Soyer's enthusiasm for the young and vital profession in Lima is infectious.

In Bogotá, the modern hero is Alvar Aalto, whose work is taken as a point of departure by Fernando Martínez and others. The Spanish-born Martínez has built schools (3) and some of the most elegant new houses in Latin America (18-21). Constructed of Bogotá's handsome orange-red brick, with smooth white plaster on the inside, his houses show a controlled sense of the exploding diagonal contrasted with curving forms and of the tense, acutely angled bay window oriented toward views of the spectacular surrounding mountains. There is also a hint of pre-Columbian forms in his work (21, 22).

Of a more whimsically detailed nature are the crisp houses of Guillermo Bermúdez, whose work includes apartment buildings (25), an American school, and a university building. His recent residences (23, 24) are elegantly refined, with hidden skylights and built-in troffers, primarily of white plaster inside and white stucco outside. Some of his ingenious details evoke a surprised but immediate "of course."

Quito's Ernesto Iturralde has moved on recently from a controlled, heavy-lintel motif (15) to exploding the seams of a panel system (14). But the difficulty in Ecuador today, according to architects Juan Espinosa and Rodrigo Samaniego, who at 29 have already built 14 houses, is that "since the art movement that once made Quito the art center of South America has not continued to the present time, the problem is one of finding out what is truly Ecuadorian. There is no Ecuadorian tradition," they point out, "so foreign influences are strongest today."

Espinosa and Samaniego are doing something about that. In their houses (9-13), they show a tendency toward a free agglomeration of boxes unified with strong, simple sculptural elements. They also exhibit a tendency toward minimal, underground architecture in several works, and their interior spaces, if somewhat small and mean at times, are rich with spatial and lighting surprises and conveniences.

"We have a strong Indian traditional culture, with its architecture," Juan





Espinosa explains, "but there is a socialstatus problem in that Ecuadorians feel they should not have anything that the Indians have." Those things are considered too peasant-like and undignified, it seems. As a consequence, indigenous materials and textures, such as the rich woven cane mats seen at Indian dwellings (page 145), are neglected and not put to the use of a new tradition.

One counter-direction to this situation is the furniture for OCA, by Rio's Sergio Rodriguez, who harks back to the tradition, not of the Indians, but the Gaucho herders for his local-wood-framed, floppy saddle-bag-like cushioned chairs and sofas which are traditional in spirit but modern in construction.

Rio's Paulo Casé and Luiz Acioli, concurring with Espinosa's feelings, remark. "Brazil has not a hard tradition." But Casé continues, "I feel that architects must not have a preoccupation with tradition as a formal thing. Tradition in architecture must respect three things: the historic moment (social and economic factors), the construction method (of the area), and the space itself. Interior space. the way of living, and the environment make the true tradition; the other is that of form. Tradition should never be concerned with form, which is changed by subjective things."

It follows, according to Casé, that architects "must know the traditions, use the true construction methods and the proper economical aspect; then it will work out. Even with a revolution in materials and methods, it would be possible to make an indigenous architecture."

The latest work of Casé and Acioli uses traditional roof forms and at the same time breaks out of the cube with interior volumes following the outlines of the exterior forms, which never have right angles. The interior spaces are now more important to them. Their resort hotel project indicates that, with an open-ended Italian-village motif, they may soon find some new tradition (16, 17).



Clearly, the old viewpoints no longer appeal, and the new view of the young generation is made even more forceful by contrasting comments of two established South American architects:

One. Oscar Niemeyer, was explaining why he placed the cathedral at Brasilia in an underground space. "In the cathedral. I wanted something like an object." he said, pointing to a water glass on his desk. "and I could not have an object if I put a door into it, so I put the door away, as from an outside baptistry. And the tradition of a Catholic church is underground," he added.

The other, Carlos Villanueva, comments, "I think that drawing is dangerous for an architect, because the talent of the architect is too big for drawing. Architecture should be in the mind, not in the paper. The paper is the enemy of the architect. We need drawing for the new technique," he continues. "We need drawing of fantastic architecture. We need everything. But the important thing is what is done after the drawing. We have to change and make it grow as the building is built. I want to see that the building built is more important. The drawing is the enemy of architecture."

Again Niemeyer, whose recent scheme for a new airport at Brasilia is reminiscent of the inverted arches of his presidential

palace there, points out. "I try to make a work more of fantasy. I think architecture today needs to be a moment of surprise. something of a different character. I saw in the United States a telephone building that had arches like the Presidential Palace in Brasilia. So I guess that proves they like it."

Villanueva, looking down from his university library to the roof of his Aula Magna, explained, "I don't try to make something especial for outside structure. I try to make the inside good and make it work. First you make the inside form. And today, the architect can do anything he wants outside. But I don't think the architect is a sculptor. Thinking about form is not the important thing."

Like the new generation. Villanueva adds, "I think you can only express the people, the climate, the space, and the new technique."

Bogotá's young architects Rogelio Salmona and Hernán Vieco, agreeing about formal considerations, feel strongly that. however high the quality of new work, a major criticism of architecture in Bogotá is that it is failing to cope with the single most important problem of architecture today: "It is producing isolated monuments instead of urbanism." What is done is well done, Salmona and Vieco agree. but it is the wrong thing. Their apartment complex for the Christiana Foundation. however, which is one of the most exciting new projects in these five countries (1, 26-28), is both inexpensive housing planned as a tight complex and uses the form of the tense diagonal, which negotiates the concept of differently sized apartments on each floor.

Like the others, Caracas' Oscar Tereiro says. "I think there are more important things in architecture than stylistic expressions." Another young Caracas architect said that, anyway, the diagonal motif "is all a misunderstood influence of Kahn -one of the great misunderstood architects," and went on to remark that he thought Venturi was "dreadful . . . superfluous. It is completely contradictory to Kahn's example. Besides Kahn." he continued. "there is nothing else worthwhile in North America."

Caracas' Jesus Tereiro went further, "I think we touch a very important problem. I think the talk about stylistic expressions is produced by some confusion of real goals in architecture. We need cheap housing for many, many people, and we have no cheap means to make good housing. Many architects drop their standards in order to lower the costs to meet this need, and many of them are trying to make economic architecture. But the aim should be to reach a quality goal with a quality standard."

Paradoxically, one of the young Caracas architects credited Kahn's method of taking as long as he wanted to design and build a single architectural gem. "Kahn's goals." he said. "are completely different from those of the materialistic society, and from the factories or architecture in North America." he said approvingly.

The remarkable unanimity of both opinion and work in Caracas may well be due, in part at least, to the central gathering point of the university's School of Architecture, which provides a discussion center every afternoon between five and eight for the large body of practicing architects who come together to conduct design courses in Villanueva's airy, foldedplate-roofed ateliers. Because of the rapidly increasing demand for architects, there are some very young teachers in South America; and, at least in Venezuela, young architects are working even before they get out of school.

Contrastingly, younger architects in Brazil, such as Casé and Acioli, are "looking for an idiom without having conversation." They feel a need for "dialogue with all practitioners and for an intellec-



tual leader who could meld the profession together." In Quito, 34-year-old Milton Barragán, who clearly studied with Le Corbusier (6, 7), concurs.

For such guidance, students everywhere in South America, as here, pore over magazines from all over the world in a desire both to learn what's happening elsewhere and to assert themselves and find their own means of self-expression. Yet today there is a new danger: By the time they build something that they think is of their own inspiration, some magazine has come along to show that the same thing is being done elsewhere. This sometimes undermines confidence. How can they cope with this problem, which is bothering young architects all over the world--the increasing pressure caused by the diminishing time lag? The shrinking world is making the possibility of unself-conscious artistic development more and more difficult. And the world of quick communications is getting the blame.

South American architectural magazines are not numerous. The architectural institutes of Brazil. Colombia. Peru, and Venezuela each produce a magazine. and most countries have one other architec-



tural publication. Only Ecuador has none. Many Latin American architects feel their magazines are inadequate.

Foreign magazines, particularly those of the United States, come in for criticism. "Whatever you do in the States in architecture," says Tomás Sanabria, "is reflected like a mirror not only in South America, but in the rest of the world. Now, the standards cannot be the same: Materials are not produced in the same ways in different countries: factories are not in the same conditions; capabilities are not the same. This does not mean that it is a fault of North America or that North Americans should be more conscious of their responsibilities. No, no, no. But there is an influence."

Yet no Latin American architect has turned for inspiration and departure to the strong and vital indigenous Indian culture of building for the prejudical reasons that Juan Espinosa has explained. To North Americans, who are struck by the great continuing disparity between the two distinct, other-world cultures of Latin America -between the Iberian settlers and the indigenous Indians, between the very rich and the very poor—the crossfertilization of ideas seems strangely lacking. Immigrants from any place in the world, from Asia. Europe, or elsewhere in Latin America—so long as they are not Indians—find more acceptance in "civilized" or in artistic circles.

With their English-speaking backgrounds. North American's sympathies are on the side of the underdog, even though- or perhaps because---our record with our own Indians is equally shameful. But in addition, North Americans have recognized the South American Indian as a source of almost instinctive, traditional creativity-a creativity as yet unfettered, not materially disturbed by outside influences of seasons or daily change in fad and fashion. And the commercial production of that anonymous handcraft tradition is being supported by government programs, including Products of the Alianza and the Peace Corps. as well as merchandizing interests, such as Vivian Burns Imports and South American firms. It has also been a source of inspiration to any number of designers-mainly in the decorative arts-such as Alexander Girard. who has used Latin American handcrafted objects and motifs in many of his designs, including the recent scheme for Baniff International Airways, and Jack Lenor Larsen, who has drawn on several periods of that tradition for his new and imaginative "Andean Collection" of fabrics.

Yet the contemporary indigenous construction methods and architecture, which are a part of this tradition. seem not generally admitted as any influence by Latin American architects, although at the same time they show the influence of some sterile imitations of international architecture (8)--as well as some amusing ones (6). Architects cannot justifiably castigate the world of instant communications if they continue to resist world-approved influences in their own provinces. Disregarding all romantic notions of the noble savage, there must be lessons to be learned from the "spontaneous towns" of ranchitos. favellas, and barriados other than ugliness.

What can be learned of their principles of siting, of their materials and textures, if not their forms? Today's problem is not one so much of learning how to do town planning as *town building*, of finding economical yet interesting-looking means of construction. Would the almost detailless, minimal geometry of the "spontaneous towns" provide a clue for today?

What kind of New Cities will come surfing in on this Nueva Ola?



Samaniego. both 29, have built 14 houses that are primarily of concrete with white stucco and plaster and that indicate their interest in minimal architecture. The modest exteriors usually have a single local or unifying element, such as a sculptural chimney (11) or a strong fascia (12), and these do not prepare one for the surprises on the interior: They've got "light grabbers"-- both hip diagonal ones (10) and semicircular ones (13)—and they use them to practical advantage in lighting stairways as well as to emphasize pieces of pre-Columbian pottery or colonial sculpture. At the entry of one of their houses (12), a convex wood screen divides circulation: behind, the screen is revealed as a skylighted stair well (13) that leads to the roof (9), which the architects have planted with grass, dotted with pavers and benches, and generally treated as an extra lawn. As a consequence, the house is

actually, if only slightly, underground.

S

In Quito, Juan Espinosa and Rodrigo





High on the Andean slopes of Quito, Ernesto Iturralde uses strong projecting lintels to give some shading and more definition to a simple office building, which has a chamfered corner on the ground floor (15). One of his houses (14) has walls of large, plain panels exploding from an interior lighted by long slit windows that are literally groovey.





In Rio, Paulo Casé and Luiz Acioli, both in their early thirties, search for a personal style through traditional construction techniques and roof forms. One of the houses is a cluster of cylinders with tiled pointed roofs. In a project for a resort hotel at Ponto do Sino (16, 17), they work out a hillside village effect with a single repeated apartment plan, and a system of passageways and patios, and with diagonals played against distended and truncated arcade motifs. They're going from Wrightlessness to Weightlessness.





**Bogotá's Fernando Martínez** combines Aalto's influence with the good local red-orange brick and piles his diagonals up to grab views of the Andes for his elegant houses. A complex of five residences climbing up the mountainside (18, 19, 20, 21) shows particular sensitivity to the site: window in 20 is under upper most peak of house in 18. Martínez and his partner Guillermo Avedaño have also designed a starkly geometric school in Sesquilé, Colombia (3), have refurbished the main square of Bogotá and are working on several highrise projects elsewhere in Colombia.

-

18

Guillermo Bermúdez' refined houses in Bogotá present plain white stucco façades with occasional focal points such as an ingeniously detailed gate or a half hidden patio (23) or the triangular bay window of the residence for the Japanese ambassador. Inside, diagonal archways, shed roofs, and skylights of refreshing variety provide surprise and continuing change of light and color (24). Bermúdez has also built a school with shed roofs and skylights and several apartment buildings, such as the one (25) visible from Bogotá's Hotel Tequendama.















PHOTO: COURTESY, BANCO DE LA REPUBLICA, BOGOTA







Housing complex for the Cristiana Foundation in Bogotá, by Rogelio Salmona and Hernán Vieco, swings with the biggest diagonals in South America (1, 26, 27, 28). The long diagonal section is more than merely stylistic: it negotiates a scheme of smaller apartments on ascending floors. Apartments have amenities such as terraces and laundry rooms (a spatially intriguing South American tradition) and are oriented to the view of the mountains; each top-floor studio apartment has a two-story living area. Colombian brick and corrugated asbestos-cement roofing are the inexpensive materials employed. Spatially and sculpturally, the first two units are wild enough to indicate that the completed complex will be one of the most distinguished low-cost housing projects anywhere. And the strong diagonal motif is evidence of the theory of simultaneous evolution: for the New Generation in South America is making the same things happen that are happening in architecture world-wide.

### EARLY TEXAS GEOMETRY: AN ALBUM

Texas, which, in 1845, joined the Union as the twenty-eighth state, has a culture and heritage all its own. Architecturally, there is an integrity in its anonymous buildings that compares well with the best of the early New England construction. A close student of the architecture of the Texas hill country is Texas-born architect Clovis B. Heimsath, who, after studying architecture at Yale, now heads his own firm in Houston. The following text and visual presentation are the preliminary material for a book to be published by the University of Texas Press in 1968, date of the HemisFair in San Antonio, and date of an election that will bring continued attention to Texas as birthplace of LBJ. All sketches are by Clovis Heimsath; all photographs are by his wife Maryann Heimsath.











TEXAS CAN BE VERY COLD.



FIREPLACE SHAPE COVERS UP THE "FIRE BOX" WHICH IS WIDE AND THE FLUE WHICH IS NARROW.





CUT OUT A PORCH-SQUARE







THE EARLY TEXAS BUILDER HAD ONLY SIMPLE MATERIALS TO BUILD SHELTER FOR FAMILY AND ANIMALS. TREES FOR WOOD MUD FOR STUCCO ROCKS FOR WALLS













STORES ARE IN TOWNS.



RECTANGLES FACE THE STREET, SHEDS COVER THE ENTRANCE. GLASS LETS YOU SEE IT. BUT IT IS STILL A TRIANGLE ROOF ON A RECTANGLE BASE.









### THE PRAIRIE SCHOOT IN PUERTO RICO

The roofs, designed as deeply protruding planes over concrete walls, the elegantly curved, mosaic-lined arches, the thoroughly crafted detailing, and the open planning of the structures shown on the following pages are the work of Antonin Nechodoma, the "Frank Lloyd Wright of Puerto Rico." These are three of his four major designs: the Korber residence (now a Jewish Community Center); the McCormick house (not shown); the Georgetti Mansion; and the Bank of





Nova Scotia. All show Sullivan's influence, especially the Georgetti house, in the rich detailing, and that of Wright in the large rooms conceived as continuous, adjoining spaces that flow into central halls. It is the "organic" architecture preached by Wright and the "total design" approach that is so well articulated in Nechodoma's designs that give visual impact to his buildings.

Nechodoma was a strange character by all accounts and little is known for certain about his life. He was born in Prague, Bohemia, in 1877, and graduated from the university there around 1898. Nothing is known about his life from then until 1908, when he turned up in Chicago, where, it is supposed, he worked for one of Sullivan's disciples—Walter Burley Griffin, William Gray, George Elsie, or Wright (although Wright vehemently denied all knowledge of the "toad"). Nechodoma disappeared for a while and then bobbed to the surface again in Florida, where he met an architect-builder named Frank B. Hatch, who introduced him to all the "right people" in Santo Domingo and Puerto Rico. He married the daughter of a Methodist minister and was accepted as one of the respectable members of society —even though, it is said, he had a sufficient amorous reputation to discourage women servants from passing his home after dark. Nechodoma designed about 100 buildings, many of them in the Santurce section of Puerto Rico, before he died in 1928, in a freak car accident. His family left the island shortly thereafter and nothing has been heard of them since.







Views of the Georgetti Mansion (1, 2, 6), the Korber Residence (3, 7), and interiors of the Nova Scotia Bank (4, 5). Mosaic tilework, glasswork, urns, and all interior details were designed by Nechodoma.

The Prairie School in Puerto Rico 169

## EXTERIOR CORES GET LEFT RIGHT OUT

A conventional core design replaced a trussed-wall structure to economically accommodate small renting spaces.

Architects, like fishermen, often tell about the big one that got away. The bigness may not be in over-all size of a project, but in the breadth of design innovation. Again alluding to anglers, the reasons for not landing the big one can be varied and valid.

A changed evaluation of renting requirements caused architects Hellmuth, Obata & Kassabaum of St. Louis, Mo., to abandon an interesting approach to multi-



Exterior service towers of the original design kept floors free of all obstructions.







Smaller renting areas demand a more economical floor plan built around a service core.



story office framing. In place of its initial concept, HO&K developed a more conventional design to suit the prevailing space requirements.

The firm originally called for a 19-story rectangular building with all services located in towers outside the main floor plan. The two side walls would have been built as Vierendeel trusses spanning between pairs of towers containing stairs. elevators, toilets and mechanical services. By locating the towers 40 ft from each end of the 230-ft-long by 80-ft-wide building. HO&K reduced the midspan moments of the Vierendeels with a cantilever action. To emphasize the truss construction, the architects set the glass walls behind the steelwork.

With this design, the owner, Alcoa, would have had large floor areas free of columns and services that it could rent to tenants requiring uninterrupted areas. However, architect and owner reevaluated space requirements in the light of additional information, and realized that the major renting potential would be for small spaces.

This made it necessary to reconsider the original design because its large, flexible spaces could not economically be divided into small office suites. And, adding to the reasons for a redesign, the city building codes would have necessitated building interior corridors to connect the suites with fire exits and other services.

HO&K has used the principle of separating the service cores from the office space in previous projects, but the Century City office would have been the first building in which the external cores carried the structure. Speaking about the abandoned project. Gyo Obata said. "The core building grew from plans to create big loft spaces with a structure touching the ground at only four points. There is a real potential for this kind of building in a city where a variety of functions could be located under the office spaces."

Obata's final solution for small tenant spaces offers a 110' x 240' floor plan with service cores in the center. It grosses about 500,000 sq ft, and yields a higher ratio of rentable to gross space than the first scheme. Contributing to this advantage is a reduction in the number of eleva tors: from 19 to 11.

Like the original Vierendeel truss wall, the final wall will stand 2 ft in front of a glass curtain wall, and will be clad in Duranodic-finish, sheet aluminum.

## NON-DESTRUCTIVE TESTING IN BUILDING CON-STRUCTION

Four scientific methods for testing construction without destroying a building or materials.

By Carl B. Yoder and E. J. Dadson of the United States Testing Company, Inc., Hoboken, N.J.

When cracks began to appear in a large reinforced concrete structure, and the upper floors appeared to be sagging, the architect and engineer suspected that the contractor had not properly spliced the floor slabs' reinforcing bars to the bars in the columns.

At first, the designers thought the best method of investigating each of the more than 100 columns was to chip away the surface concrete with a jack hammer. After examining several columns in this manner, the architect realized that the unnecessary cost of chipping concrete and repairing columns found to contain correctly located reinforcing bars would approach \$3000 per column.

Furthermore, the building owner was

concerned about the effect the dust would have on production in the occupied floors. Our company was therefore called in to investigate the situation with nondestructive testing methods. Technicians surveyed all the beam to column joints radiographically in only 14 working days, which is one-third of the time required with the original method. Radiography located the faulty connections, and resolved the problem. Using nondestructive methods in this case resulted in an estimated saving of \$250,000. In addition, the owner continued production with very little inconvenience during the inspection.

Nondestructive testing can be applied to three phases of construction: during new construction, prior to reconstruction, and for investigating problems in existing structures. Recently, an owner of a renovated building saved time, money and perhaps life, by X-raying 24-in.-thick concrete floors to locate buried conduits.

#### **Those Reassuring Tests**

Architects and engineers traditionally use some means of inspection to assure that the materials and methods they specify are actually being used as intended. For this, designers employ a small army of skilled overseers that scrutinize the efforts of the contractors.

As structures and engineering materials grow more complex, elaborate sampling plans are developed, and representative samples of the materials used are subjected to tests for strength and durability. For example, hundreds of sample concrete cylinders are cast daily, taken to a laboratory, and, after a suitable curing period, tested for compressive strength.

While statistical methods are used to increase the significance of a limited number of tests, the value of destructive testing depends on the similarity of the sample that is destroyed in a test with that of the balance of the material. No one can guarantee that this similarity will be 100 per cent.

However, nondestructive testing avoids the uncertainty of sampling because it can be applied to all the test objects, leaving no doubt that the unit tested has properties similar to those used in service. The reliability of nondestructive tests depends on the correlation between the properties actually measured and the properties to be evaluated. It is therefore apparent that both destructive and nondestructive test methods must be used to assure the integrity of the material tested.

Not by X-Ray Alone

The construction industry has relied on the science of nondestructive testing to evaluate the properties and soundness of structures since the early days of radium radiography. But, just as architectural concepts have widened over the years, so has the field of nondestructive testing.

The present-day laboratory does not restrict itself to radiography alone. Four common inspection procedures are used in the building industry: ultrasonic, magnetic particle, liquid penetrant, and isotope radiography.



#### **Ultrasonic Inspection**

The principle of ultrasonic inspection is based on the ability of high-frequency sound waves (those above the upper limit of the audible range) to travel with little loss through a homogeneous material, except when they are intercepted and reflected by discontinuities in the interior of the material.

The basic ultrasonic system consists of a signal generator, a transducer to convert electrical energy into mechanical energy, a similar transducer to reverse the process after receiving the transmitted or reflected signal, and a means of displaying the signal.

There are two types of ultrasonic tests. In one, a beam of ultrasonic energy directed into a test specimen is transmitted through the material and is picked up by a receiver on the opposite side. This is called the through-transmission method. The other method, called the pulse-echo method, reflects the energy back to the same side of the material as the transmitter.

In addition to detecting flaws, ultrasonic testing is suitable for determining the thickness of material that is inaccessible on two sides. Engineers use it to measure corrosion in tanks and pipes.

Among the advantages of ultrasonic testing are: high sensitivity that permits the detection of minute subsurface defects; great penetrating power that allows very thick sections to be examined; accuracy in determining flaw position and size: fast response for rapid and automated inspection; and ability to work with only one available surface (pulse-echo method).

However, unfavorable sample geometry, such as size, contour, complexity, defect orientation with relation to the surface, and normal inclusions, such as aggregate in concrete. limit the application of the ultrasonic method.



#### **Magnetic Particles**

Magnetic particle inspection is limited to ferromagnetic materials that can be intensely magnetized. It is not applicable to materials such as aluminum, bronze, brass, and copper.

The parts to be inspected are magnetized with a permanent magnet, or, more often, with an electromagnetic field. Small magnetic particles, which may be red, black, or contain fluorescent pigment, are applied to the surface of the test item. Surface defects, or, in some cases, subsurface defects, create a north and south magnetic pole around the outline of the discontinuity, and the colored particles tend to collect at this point.

This method is excellent for finding cracks in ferrous materials, which may be caused by fatigue, heat treating, and quenching or grinding. In construction, it is used to discover incomplete weld penetrations. There is no practical limit to the size and configuration of the test item.



#### Liquid Penetrants

Liquid penetrant inspection is descended from the old oil-and-whiting process. It

relies on the ability of the penetrant to seep, through surface tension and capillary action, into a surface discontinuity.

The method is limited to surface defects, or subsurface defects with surface openings. Penetrant testing is best adapted to inspecting all types of surface cracks, porosity, laminations, and lack of bond at exposed edges of joined materials, and of leaks in tubing, tanks, welds, and similar items.

The liquid penetrant, which may contain a fluorescent dye, is applied to the surface of the test item by dipping, spraying, or wiping, and is allowed to penetrate the surface of the material. Excess penetrant on the surface is washed off, and an absorbent, light-colored powder, called a developer, applied to the surface. The developer draws the penetrant out of the surface openings, and the penetrant stains an area much wider than the corresponding surface flaw. The flaws are then examined under ultraviolet light.



#### Radiography

Radiographic inspection is the only testing method that makes a permanent photographic record of the internal condition of the material being tested. Either X-rays from an electronic radiation source, or gamma rays emitted by radioactive isotopes may be used. (A radiograph is produced when the rays pass through a test sample onto a film.)

The short-wavelength characteristic of both X-rays and gamma rays permits the beam to penetrate opaque materials. The composition, thickness, and density of materials affect their absorption of X-rays or gamma rays.

With a homogeneous test specimen, the darkness, or film density, of the exposed and processed film will be uniform. Internal discontinuities and flaws, as well as intentional holes, appear darker than the surrounding area in a well-defined radiograph. If the material being examined contains a foreign body with a density different from the base material, a corresponding difference in darkness will appear in the developed film.

The over-all quality of a radiographic inspection can be checked with a penetrameter. A penetrameter is a thin plaque of metal containing three holes of graded diameters, usually 2t, 3t, and 4t, where tis the thickness of the penetrameter itself. This thickness is related to the sample being inspected, and is usually 2 per cent of the sample.

The penetrameter is placed on the source side of a specimen before it is exposed to radiography. The radiograph may be considered satisfactory if the penetrameter and its holes show clearly on the radiograph.

Portable-tank type X-ray machines enable testers to make field inspections where electric power is available. For areas without electric power, or where it is considered desirable to make a full 360<sup>°</sup> peripheral inspection of a welded joint in a pipe or similar structure, a radioactive isotope gamma ray source is used.

Radioactive isotopes are used for this application because they radiate in all directions, whereas the output from conventional X-rays is essentially straight line. By wrapping a strip of film around the circumference of a pipe and inserting a suitably shielded radioactive isotope into the pipe, the whole perimeter can be radiographed.



Like a circle of circus horses resting front legs on the horse ahead, nine rafters support each other in the center of a 30-ftdia. cupola atop a small library in Dunedin. Fla.

In plan, the cupola rafters look like the iris of a camera. The outer ends of the rafters rise from concrete columns; the inner ends, which carry adjacent rafters, frame a nine-sided roof light. This cupola provides natural lighting and a lofty ceiling over a reading area. The rafters are roughly T-shaped in elevation. The legs rise from the concrete columns, the cross member extends on one side into the center of the cupola, and on the other side a short arm of the cross member overhangs the main roof. Glass panels installed in the eaves of the overhang admit additional daylight.

#### **Outward Bound**

To allow the library to be extended outward, when more space is required, the designers, Fasnacht & Schultz, of Dunedin, planned an 80-ft-dia., singlestory building with exterior walls that can be relocated when the diameter of the building is increased. If the extension is made within a reasonable time, the architect believes the cost would be less than the \$12 per sq ft of the original building.

Structural changes for expanding the building will be kept to a minimum. The main roof deck is supported on laminated timber beams spanning 29 ft between the





nine columns supporting the cupola rafters and perimeter columns.

These outside concrete columns are designed to carry half the roof load of an extension to the building. New roof beams would span from these columns to a new ring of columns located 20 ft away. This distance will allow the doubling of the 5000 sq ft of floor area.

#### Paneled Roof and Walls

The laminated timber beams support a

roof deck of the same material and similar construction as the exterior walls. Both comprise 6-in.-wide cedar boards of alternate 3 in. and 4 in. thicknesses. The wall panels are backed with gypsumboard, and the changing thicknesses of the boards show outside the building. On the roof panels, however, the alternate thicknesses show on the inside.

Wall panels were field-fabricated in 9-ft-high by 4'-4"-wide sections, and joined into 13-ft-wide panels. Then they were bolted to the edge of the floor slab and a spandrel beam extending between the roof beams. Roof beams, which were also shop-fabricated, were lifted atop the columns with hand-operated jacks mounted on dollies. The mobile jacks enabled workmen to move the raised beams precisely over anchor bolts projecting above the column caps.

The structural engineer was H. Joseph Diaz of Tampa, Fla. Koppers Co., Inc., fabricated the structural timber.







Strain hardening prevents stainless steel yielding suddenly under constant loading.

Stainless-steel ribs span 45 ft over power plant intake at Oroville Dam.



Thin-gage stainless steel is more than a decorative material; the author shows how industrial designers use it structurally, and suggests architects could develop uses for construction.

#### By Albert C. Kuentz, The International Nickel Co., Inc.

Like a lady who commits one small indiscretion, stainless steel has acquired a reputation it would prefer to shake off. Traditionally, stainless steel has been used as an ornamental metal that offers corrosion-resistance and clean lines to highlight and complement other materials. But stainless steel also possesses high strength that can be combined with its corrosion-resisting properties to create lightweight, functional designs.

If architects and structural engineers borrow from the thin-gage concepts of aerospace engineers, they can develop many applications for stainless steel.

In the past, stainless steel was considered expensive, because its initial cost was high. Later materials were evaluated more carefully and a high first cost could be inexpensive if the material lasts a long time. Now, the price difference has narrowed between stainless steel and structural, carbon steel.

#### How It's Been Used

Six varied applications of stainless steel follow. Each is based on design theory applicable to any structure, and all comprise thin-gage construction made possible by stainless steel's high strength



and resistance to corrosion.

• Trashracks: The intake structure for the Oroville Dam power plant protects the turbines from floating and submerged debris. Supporting this structure are stainless-steel arches spaced nearly 7 ft apart and spanning 45 ft. These arch ribs were fabricated with plates to form 14-in.-deep box sections.

This austenitic stainless steel structure cost less than a coated carbon steel unit because the designers selected the optimum temper and grade to produce the most economical structure. Hence, the flanges of the arch ribs are quarter-hard material, and the lower stressed webs are of annealed stainless steel. The nomenclature of steels is explained below in the section, "Many to Choose From."

• Mullions: Stainless-steel mullions extend between cantilevered floor slabs at the twin towers of the Toronto City Hall. The shape of the towers and their relationship to one another create wind pressures of 30 psf and suctions of 70 psf. The 8-ft-long mullions transferring these high forces to the slabs, spaced 6 ft apart, are fabricated with 0.06-in.thick, Type 302 stainless steel, without any internal structural members.

• Semi-Trailer Tank: A tank for transporting liquids could be modified and adapted for use as a pedestrian bridge or a barrel roof. Six-ft-dia. trailer tanks, fabricated with 1/16-in.-thick stainlesssteel, span 22 ft between axles. The thin-wall tanks, stiffened with rings at 3 ft centers, prevent local buckling. In this type of structure, bending stresses are low enough to allow the use of Type 304 stainless steel in its annealed condition, and the harder temper is not required.

• Subway Car: Corrugated or fluted panels stiffen sheet steel for the bodies of subway cars. A 10-ft-high by 12-ftwide car can be built with Type 201 stainless steel in both quarter and half hard conditions. Wall panels can be 0.014 in. thick, and roof panels 0.016 in. This construction weighs 4600 lb less than a 60-ft-long, low-alloy steel car. Fluted panels could be used for ground level or elevated storage tanks, and, with imagination, could be applied to foldedplate roof construction.

• Van Trailer: The body of a van trailer is not far removed from the requirements of prefabricated buildings. With the addition of a door and windows, the van body could fit into the concept of plugging housing units into a giant structural frame. Bodies for trailers are built with 0.018-in.-thick stainless steel fluted to a depth of  $\frac{1}{4}$  in. Panels are reinforced with vertical and horizontal rails.

• Lighting Standard: Stainless-steel light poles were fabricated with a flat octagonal cross-section with a wall thickness of about 0.07 in. The material is Type 301 with a quarter-hard temper. This pole principle could be applied to towers for floodlights, power lines, or even an elevated water tank.

#### Many to Choose From

To be stainless, steel must contain at least 12 per cent chromium. Meeting this requirement are a number of steels that can be classified in three metallurgical types: austenitic, martensitic, and ferritic steels. Classification depends on the microstructure of a stainless steel, which in turn depends on the alloy content and heat treatment of the steel.

Within the three classes of steel, the types are cataloged so that each alloy is represented by an AISI (American Iron and Steel Institute) number. The most widely used stainless steel in building construction is Type 304. This is an austenitic steel, which is a suitable class of stainless for structural applications. Austenitic steels combine high strength with good ductility, weldability, formability, and resistance to corrosion. It also offers a hard, smooth surface with attractive appearance.

Cold-worked stainless steels have five degrees of strength, which are signified by the amount of tempering. (Tempering is a mechanical or thermal treatment for strengthening steel.) The chromium-nickel steels (designated in the 200 and 300 series) are tempered mechanically by compressing cold steel through rollers.

The amount of reduction in the thickness of a steel determines its strength or temper. Reducing the thickness 40 per cent will raise the strength of the material to its maximum, which is called full hard temper. Less reduction in cold rolling produces correspondingly lower strengths.

Tempering also occurs when steel is cold-formed during fabrication. Bending, roll-forming, brake-forming, and stretchforming all contribute to the increased strength of steel. Thus, if a sheet of steel certified as quarter hard were bent, it would be significantly stronger near the bend and may be equal to a half hard temper value.

#### Ah, But It Can!

For architects encountering engineers who maintain "It can't be done," the following compendium of design data will support their belief in the potential uses of thin-gage stainless steel.

"Strength of Stainless Steel Structural Members as a Function of Design," by Michael Watter and Rush Lincoln, Allegheny Ludlum Steel Corporation, 1950: An imposing assemblage of data describing the basic properties of the lightgage stainless steel, and design procedures for calculating allowable loads.

"Column Curves for Type 301 Stainless Steel," by Walter Hammer and Robert Peterson; Aeronautical Engineering Review, Vol. 14, No. 12, December, 1955: A presentation of research sponsored by the American Iron and Steel Institute to be used in the preparation of stainless-steel design specifications.

"A Guide to the Structural Considerations for Design in Stainless Steel," by Paul Gilbert and Alvin Griffith; Department of Water Resources State of California, Technical Memorandum No. 15, 1965: A discussion of computational techniques, including the design of the stainless-steel intake structure for the power plant at the Oroville Dam.

"Behavior of Stainless Steel Columns and Beams," by Albert Johnson and George Winter; Conference Preprint 275, 1966 Structural Engineering Conference: An excellent paper, presenting methods for predicting flexural strength and deflections of simply supported beams, and comparing these methods with experimental values. Column behavior is also discussed. This report is part of a continuing investigation into the structural behavior of stainless steel and is being sponsored by the American Iron and Steel Institute.

Stainless-steel mullions resisted 70-psf wind pressure in tests for Toronto City Hall.



### Some Modest Proposals

The problem of the starving and overreproductive poor in the Ireland of 1729 was the subject of a famous satire by Jonathan Swift, "A Modest Proposal," in which he proposed as a solution that the children of the fecund poor be raised and sold as a profitable delicacy for the tables of the rich.

In today's affluent society, fortunately, few in this country are confronted with such extreme measures. The body and soul we have trouble keeping together in these times are of a less corporeal nature, having to do with such "intangibles" as culture, amenity, aesthetics, continuity -singly or in combination. This poverty of spirit had as its most recent manifestation the proposal to erect a colossal false face on the West Front of the United States Capitol, the last remaining original section of the façade. Responsible voices against such an outrage were raised at the recent AIA Convention in Denver, to be shouted down at one point by proponents of petty intraprofessional "courtesy" toward the architects involved on the project, but eventually to be heard against the Congressional juggernaut threatening the historic place.

In the light of the Capitol matter (which can be by no means called dead), it would seem that, in the manner of Swift, we must make the best of a bad thing: This is also known as, "If you can't beat 'em, join 'em," or, "Get there fustest with the wustest."

The huge space of Piazza San Pietro, between Bernini's colonnades, exposes tourists and worshippers to the rigors of the Roman climate and therefore cuts down on optimum use of the area. Enclosing it with a geodesic dome In this spirit, we offer a few modest proposals of our own for several historic structures. These proposals, if followed, will tend to eliminate any odious historicity, extraneous beauty, inconvenience, or uneconomical aspects of these places, and make them up-to-date, clean safe, and profitable. The national AIA should get behind these proposals right now in order to be in on the ground floor and not get caught again in its West Front position of defending an old, mouldy, impractical structure.

would permit the use of the piazza in all weather for block parties, saints' feast days, and local festivals. In addition, the Vatican could gain money for its many charities by renting the space to convention groups and sports associations. Beauty could be added by having a famous artist—Andy Warhol or Norman Rockwell—fresco the inside of the dome as Michelangelo did the Sistine Chapel. One of the prime cultural spots of Europe is the great outdoor staircase in Rome's Piazza di Spagna. American Express is nearby, as is the American Academy, via Veneto, and the quaint artist section of via Margutta. Right on the stairs, one can buy flowers of many and varied kinds, particularly after dark. What a pity that, with the Latin insousciance that is as maddening as it is charming to more practical people, the Romans have not seen fit to make an obvious improvement to this facility. Today, the tourist, exhausted by claiming mail, arguing about reservations, or burdened down by an original oil painting, must climb one-hundred and thirty-seven steps before he reaches the consolation of an aperi-tivo in the bar of the Albergo de la Ville on via Sistina. Think what the installation of a handsome, speedy sys-tem of moving stairs would do for the

area. It not only would greatly lessen arch strain, but would probably get some people up to Santa Trinità dei Monti who would otherwise never make the climb. Those still interested in patronizing the ladies on the stairs (that's the florists, of course), would just have to mount them in the old, time-honored manner.

00000000000

ALLUN.

FUT WIND DAM

TOTE 1111 110 110



Two of the most wasteful building projects of this century are the Cathedral of St. John the Divine in New York and Antonio Gaudí's Iglesia de la Sagrada Familia in Barcelona; they just don't seem to be able to finish them. How much more economical, then, would it be to combine them. St. John's has a nave, which Sagrada Familia has not; Sagrada Familia has towers, which are lacking at St. John's. The miracles of modern technology could certainly be used to devise a manner in which Gaudi's church could be shipped to Morningside Heights and superimposed on St. John's. Think of the improvement in our Hispano-American image-neat, but not Gaudí.



The Aztec Pyramid of the Sun at Teotihuacan, ca. 100 A.D., coronary-inducer to many a North American climbing tourist, used to have the temple to the god on its top level. There is nothing there now; an ideal spot for a go-ahead speculator is just going to waste. Our proposal is that the tremendous views and captive clientele (tourists have to stay until they catch their breaths for the descent) be capitalized on through the erection of a viewing tower with a rotating restaurant at its summit. In this manner, an old pile that isn't doing anybody any good now can be made to pay off.

Every visitor to Venice knows that it might be nice to walk or sit in Piazza San Marco, as G.E. Kidder-Smith tells us to, but it is nigh impossible because of the pigeons. Well, the main façade of the Basilica of St. Mark's has been there since the 11th Century, and hence must be in worse condition than the West Front of the Capitol. What more logical, useful course to take than to advance the façade, rebuild it of some durable material, and use the space thus created for a monumental pigeonnier, thus simultaneously improving an old building and getting the pesky birds out of tourists' hair? The mystery of the great monoliths on the Salisbury Plain at Stonehenge will continue to occupy the minds of scholars for some time to come. Meantime, there the giant stones stand, attracting tourists but not otherwise pulling their weight economically. Perhaps utilizing them as the sculpture court of a regional shopping center would be a trifle crass (what a parking lot all around!), but certainly fish-and-chips stalls, coconut shies, and postcard and souvenir booths could be installed for the convenience of tourists. To insure quality control, all graphics would be handled by an especially selected designer, needless to say.



We had thought to propose a few other improvements: construction of elevated expressways between the historic sections of New Orleans and Philadelphia and their riverfronts; tearing down Pennsylvania Station for a sports arena; demolishing Sullivan's Schiller Theater for a parking garage; destroying Horta's Maison du Peuple to make way for a commercial structure; filling the Grand Canyon with water for the benefit of a few citizens: uprooting milleniaold tombs in the Nile Valley for a dam project; letting Corbu's Villa Savoye and Wright's Imperial Hotel become downgraded because of their "impracticability." But no, this is the Age of Beautification in the latter half of the 20th Century, and such proposals would be deemed too far-out and ridiculous even in jest. Woudn't they?-JTB

# CASINO INTO CINEMA INTO CHURCH

When the Harlem Casino was built in the 1890's, it was one of the prides of the community, featuring many internationally famed music hall artists. Later, in 1910, it was converted into a moving picture theater for Loew's by architect S. S. Sugar, and was a good example of the Never-Never Land architecture of film houses of that era. In recent years, it has declined noticeably in glitter, even though it is situated across from the Hotel Theresa, the social keystone of the area, which stands at the crossroads of Harlem.

In 1963, Bishop William H. Bonner of the Church of Our Lord Jesus Christ of the Apostolic Faith, which had been using the theater as a sanctuary, determined that a new place of worship was needed, and that the casino building, remodeled, would fill his congregation's needs. After consultations with three Negro and



Section: Redesign of Harlem Casino into movie house.



Section: Redesign of movie house into Greater Refuge Temple.

two white architects, he gave the job to one of the white designers, Costas Machlouzarides, an ex-Cypriote who moved to this country to attend Columbia University architectural school a dozen years ago.

While the congregation worshiped in another run-down ex-theater nearby, the casino was stripped to its steel frame and exterior walls, and new volumes and areas created inside. The architect says that the major elimination was the removal of the second balcony and boxes. Even with this loss of seats, the accommodations actually increased slightly, from 1556 with the second balcony to 1650 in the church, through enlargement of the remaining balcony and increasing floor space in the orchestra by disposing of the lobby and ticket office. Offices and conference rooms occupy what used to be mezzanine lobby space at









the rear of the auditorium. Other church rooms for choir practice and other activities are in the old stagehouse or in the basement. Usable floor space was increased from 19,-100 sq ft to 33,500 sq ft.

The most impressive thing about the new Greater Refuge Temple is the main worship space. Machlouzarides underplayed his statement, depending on off-white hung ceiling, a 50-ft-high plaster, onion-shaped dome hung from a steel frame over the sanctuary, and the sweeping line of the balcony, sedately detailed in wood strips. The only forceful color element is the architect-designed, back-lighted, stained-glass section of the dome that rises from the baptismal pool (the sect practices total immersion) to an "oculus" brilliantly flooded by concealed light. Seating is comfortably upholstered regulation theater seating.

The space is an enormous change from the dingy old movie house of yesterday. The architect says that one of the "tremendous, unexpected things about the new church is that the people are different." Before, as though oppressed by its dismal surroundings, the congregation was generally listless and drab itself. Today, the church has become a social as well as religious part of the people's lives, and dressing up to go there is a pleasure and adventure, perhaps a needed escape from the ugly streets of Harlem.

Certainly, when P/A editors were at the Greater Refuge Temple during a Friday evening service to take these photographs, a fine exuberance and joy communicated itself from the congregation to the jaded visitors from downtown. We have not in many months seen people so obviously enjoying a building, so intensely benefiting from it. That must be good for an architect to see.


One of the main points to emerge from P/A's investigation of LSD and its effect on architectural designers (AUGUST 1966 P/A) was that, desirable as undergoing a psychedelic experience might be for most people, it should always be conducted under controlled circumstances. It is interesting, therefore, that none of the architects we contacted have designed an LSD center while under the influence of the chemical. This is too bad, since such a structure would obviously have to be a different sort of building than the usual treat-andobserve center we are used to now.

A brave try at what an LSD research, treatment, and observation center might be like has been made by a recently graduated architectural student at Pratt Institute. Leland Cott is the son of a New York psychiatrist, and has experienced LSD



under professional supervision (not his father's, of course). Consequently, when he designed an LSD center as his bachelor's thesis, he knew whereof he spoke in terms of personal experience.

Cott's proposal utilizes a site in North Shrewsbury, Vermont, a region of rugged terrain and sweeping views. The terrain is used to create a four-level complex for the treatment of patients through LSD therapy. In addition, there are provisions for people who come to the center in order to have psychedelic experiences. In such cases, the first day is devoted to the actual experience, and two additional days to consultation with a psychiatrist on the staff. The design provides accommodation for 15 people undergoing LSD experiences. There are living and clinical accommodations

EXPANDING ARCHITECTURE

for five psychiatrists, including a lecture room and a laboratory for biochemical research. Spaces for doctor-patient intereaction and patient-patient relations consist of six individual treatment rooms and two group treatment rooms. Cott has taken care that these spaces possess their own individuality, but at the same time are of a nature that will not disturb the more alienated patients. One objection we see might

Section AA

First level: (1) dining room; (2) en-

try; (3) psychiatrists' offices; (4) waiting; (5) director's office; (6)

laboratory; (7) conference.

munity to the center.

patients' minds.

be that the bathrooms and the medi-

tation areas are both circular and

could conceivably become linked in

To this non-LSD-exposed observer,

there seems to be a good relation-

ship between patients' bedrooms and

the rural site. Interesting, too, is the

manner in which these rooms open

onto the central meeting and dis-

cussion area, giving a sense of com-

Perhaps objections could be made to an overabundance of shapes in the design, but this is a place where people would go for a consciousnessexpanding "adventure," and such a unique emphasis on varying forms might be in order. At any rate, Cott's research into what is really a new kind of building to house a new kind of activity is commendably pioneering and deserves study by the profession.



Section BB

Second level: (1) patients' living; (2) central meeting and discussion; (3) dining room; (4) director's office; (5) laboratory; (6) conference.





Third level: (1) mechanical equipment and stair; (2) central meeting and discussion; (3) dining room; (4) kitchen; (5) service.





Fourth level: (1) treatment rooms; (2) group-therapy rooms; (3) service and stair; (4) patients' living; (5) mechanical equipment and stair.

# fun city, fun park, fun café



Admirer watches from beneath a café-provided parasol as Commissioner Hoving drinks a glass of sangria.

The Terrace in New York's Central Park has been the scene of many activities in its 100-year-plus life: from sailors rowing their girls in the boat pond to Caroline and John Kennedy, Jr., playing in nearby playgrounds; from being the site of a 1908 Vitagraph film of Romeo and Juliet to a recent sex-and-pistols comedy: from strolling after concerts or rallies on the Mall to children splashing in the Bethesda Fountain when parents' backs are turned. It has until now, however, been a focal point without its own real focus. People wandered around in it, but usually aimlessly or on their way somewhere else. This has now been remedied by the provision of a beguiling al fresco Café on the Terrace. designed by New Orleans architect James Lamantia (Elizabeth Gordon, special consultant) for New York's ubiquitous Restaurant Associates as concessionaires.

When Olmsted and Vaux designed the park in 1858, they said of the Mall and Terrace area: "Although averse on general principles to a symmetrical arrangement of trees, we consider it an essential feature of a metropolitan park that it should contain a grand promenade, level, spacious, and thoroughly shaded." They brilliantly terminated the Mall with a staircase under the throughroad opening onto the "surprise" of the great fountain and the romantic boat pond and landscape beyond. Two other grand staircases descend from the upper roadway level at either side. The outdoor space thus

created is one of the most elegant in New York, but one that has been cursed with a kind of impersonal monumentality of feeling. This has been banished by the Café, which gives the place a use as well as a more convivial ambiance.

The Café is in two sections: a sitdown-and-be-waited-on area for 200 diners on the upper terrace, where one can dine very well, for instance, on gazpacho soup, veal and duckling terrine, and a carafe of wine, for under \$4. For less expansive palates and pocketbooks, there are two pavilions at pondside dispensing sandwiches, soft drinks, and beer. Tables for an additional 200 trenchermen are located here. Kitchen and service areas are discreetly hidden away in recesses in the under-road arcade designed by Vaux and his associate architect on the Terrace, Jacob Wrey Mould. The use of space heaters under the gaily-colored canopies and umbrellas of the Café will permit its use well into cool weather.

Comparison will inevitably be made between this eating facility and the notorious Huntington Hartford Café that the Lindsay administration finally quashed. It should be noted that Lamantia's plan utilizes with tact and sympathy an existing park landmark that needed such a solid *raison d'être*, whereas the Hartford building would have been erected over virgin parkland right at the main entrance to the park, for all the world like a highclass Coney Island. It was also rumored that the range of prices in Hartford's establishment would have been less democratic than those at the Terrace. Be that as it may, costs of the facilities themselves differ significantly. By the time it was turned down, Hartford's donation was estimated to nudge \$2 million, while the cost of the more modest and appropriate Terrace Café, underwritten by publisher George Delacorte, a long-time Central Park "angel," was \$200,000.

Things started lively at the new Café. At a jolly press brunch last month, Mayor John Lindsay and Parks Commissioner Thomas Hoving almost capsized their boat, containing donor Delacorte, former Miss America Bess Meyerson, and city hostess Sharman Douglas, by having a spirited water fight with press photographers in another skiff. Throughout the adventure, neither the Mayor nor the Commissioner lost a drop from the champagne glasses they had providentially taken aboard. Things have not been like this since Jimmy Walker danced into the dawn at the old Central Park Casino. Mayor Lindsay has called New York the "Fun City." While events in other areas of town might seem to make this an overoptimistic appelation, it cannot be denied that municipal merriment has certainly taken over from civic solemnity in Manhattan. Things like the Terrace Café are a good startlike Friedberg's housing parks (pp. 170-172, JULY 1966 P/A)-toward making the metropolis a human place to be .-- JTB









View north over Terrace Café.



Kitchen is within arcade.





# **COLLECTOR'S CAVE AND ANDEAN AERIE**

In the hectic activity of New York's design life, the people who supply the materials with which designers design, range from second-hand furniture salesmen all the way up to the real creators—designers and craftsmen themselves, like fabrics man Jack Lenor Larsen and designer-collector Karl Mann. Similarly, the professional quarters these men occupy to show their wares vary from storefront showrooms to elegant studios.

When Larsen and Mann had cause recently to seek expanded space because of increases in business, they decided to open showrooms in the East Fifties, scene of a burgeoning design life. The ground floor and basement of an older building became the site of the new showrooms, the studio on the ground floor going to Larsen for the exhibition of his exciting new Andean Collection, and the basement reconverted for Mann's showing of paintings, sculpture, wallpapers, and other artifacts. Right now, Larsen also has the show window-it is hung with tubes of fabrics over a ground of beach pebbles. The lobby, that area leading from the entrance past the stairwell to the Larsen showroom (see plan), is shared by the two firms for display. This makes for a slightly jarring note, since the wares of the two designers clash in places, but it does announce that there are two separate studios on the premises.

Larsen's showroom, designed by architect Charles Forberg, is high, light, and airy, befitting the exhibition of designer fabrics. An old stamped tin ceiling is disguised by Forberg's current trademark-white stretch nylon panels twisted in plane and hung on a white-painted metal frame. Nobly proportioned cast iron pillars painted warm brownish gray assert themselves benignly, not obtrusively; walls are rough-finished, off-white plaster; a neutral color carpet covers the floor. All of the visual excitement, therefore, is left to the fabrics. Great panels of it drop from



Ground-floor plan.



Entrance area.



Larsen's show-and-store units.



ceiling to floor, concealing storage areas and ventilating facilities at the same time. A few pieces from Larsen's travels - primitive headdresses right now-point up the connection of the fabric design with antique Andean counterparts. Furniture, used sparely, is covered with the firm's fabrics. Triangular-shaped storage and display units are used to create flexible areas for showing materials or for conferences. The units can be rearranged, using a small lift truck. Along the wide corridor leading to the showroom are another conference room and more storage spaces.

Descending a flight of stairs that is a trifle grand in scale for the spatial experience to come, one arrives in Karl Mann's showroom. Here, contrasting with the lightness of Larsen's space, the visitor gets the interesting feeling of the wine cellar or trunk room, where there are always odd and interesting things to be found. The space here is divided by a hung plywood ceiling module of 3'-4"x3'-4". William Wright of Edelman & Salzman designed panels that can be lifted on and off wooden columns, which can themselves be unbolted and moved if need be. The whole exhibition area is a delightful warren of different sized viewing spaces. Like the gallery upstairs, the color scheme here was kept quiet to let the art objects speak for themselves. The palette is much warmer, however, featuring wood tones, fabric-covered panels, exposed brick, and a dark sisal rug. Storage area for paintings behind the brick walls (Mann has a tiny office here, too) is "open" to designers and decorators, giving them a feeling of seeing things backstage. The reception desk, the wallpaper department, and a small relaxing area fit as neatly into the plan as do the objects in the collection. Children would probably love this place on a rainy day: it's just like an overstuffed attic playroom.



Larsen's showroom (above) and Karl Mann's gallery (below).





# Americans will never lose their love for the Great Indoors

### ... safeguard their heritage with Corbin Hardware!

There's nothing that is seen and touched more often in the course of a day than doors and door hardware. So why shouldn't door hardware be both beautiful and functional? Ask any Indoorsman what make of hardware combines these features and he'll probably say "Corbin." It's a name he knows and trusts.

So specify Corbin. Accept no Corbin copies. *Insist* on Corbin hardware.

Send for an illustrated brochure on Corbin architectural hardware to: P. & F. Corbin, Division of Emhart Corp., New Britain, Conn. 06050



NEW BRITAIN, CONNECTICUT 06050



## ... and you're specifying a benefit-packed carpet

Low maintenance cost . . . easy care . . . enduring good looks. DURALOK offers beauty without bother — years of wear with little care. Spills won't mar its youthful appearance. And DURALOK takes less time to clean than most floor coverings. Specify resilient DURALOK and you get Hardwick's personal service . . . speedy delivery to meet your contract needs fast . . . a better edge on price through streamlined operations . . . and custom carpeting woven to your specifications.

Write today for your free DURALOK Selector and informative reprints and brochure on the merits of  $Acrilan^{\mbox{\tiny ®}}$  acrylic carpet fiber.

	ARDWICK & MAGEE CO. ehigh Ave. at 7th St., Phila., Pa. 19133
	lease send me, at no cost or obligation, your Duralok elector and Acrilan reprints and brochure.
Na	ame
Fi	rm Name
	rm Name

HARDWICK & MAGEE CO., Lehigh Ave. at 7th St., Phila., Pa. 19133 Chicago • Dallas • Detroit • New York • San Francisco • Los Angeles On Readers' Service Card, Circle No. 447



On Readers' Service Card, Circle No. 388

SEPTEMBER 1966 P/A



Atrium garden view at ground level—Professional Office Building.

# An uncomplex complex of office buildings

#### **Designed** by Wilson, Morris, Crain & Anderson, A.I.A., Houston, Tex.

LA MESA is an ingenious combination of variety and unity comprising four buildings.

(1) A six-story insurance company headquarters. (2) A four-story oil company home office. (3) A three-story professional office building. (4) A small Cafe Circulo.

All are grouped around a double-decked parking area: a lower level, connecting the first floors of all buildings, and an upper terrace level.

Plans of the two taller buildings reflect their single-purpose occupancies and their low ratio of private offices to large bull-pen areas, in that the perimeter walls alternate large full-glass expanses with panels of concrete. More conventional in its distribution of glass in perimeter wall is the professional office building which is designed for multiple occupancy, and easy convertibility of short-term lease space. Half of the lease space in this building opens into an atrium garden.





Cafe Circulo is a Heat Absorbing plate glass enclosed concrete tree, within a square concrete enclosure. A tropical or cactus garden occupies the space between the concrete square and the glass circle.

The architectural expression of LA MESA's buildings contrasts simple, strong, concrete surfaces with deeply sheltered full-glass walls; floor construction is clear span and the last beam over the glass walls forms a sloping concrete sunshade. In addition, sky glare is reduced by the use of *Parallel*·O·Grey<sup>®</sup> plate glass.

LA MESA's character evolves from the use of jack-hammered or otherwise coarsely textured concrete surfaces rising up out of the plateau which is created by the parking terrace; the buildings intentionally recall natural desert formations.



Ground view of LA MESA looking toward Professional Office Building.



Interior view of Cafe Circulo.



#### L·O·F GLASS FOR OFFICE BUILDINGS

POLISHED PLATE GLASS Parallel-O-Plate<sup>®</sup>, <sup>13</sup>/<sub>64</sub>", <sup>1</sup>/<sub>4</sub>" Heavy-Duty Parallel-O-Plate, <sup>5</sup>/<sub>16</sub>" to 1" Parallel-O-Grey<sup>®</sup>, <sup>13</sup>/<sub>64</sub>", <sup>1</sup>/<sub>4</sub>" Parallel-O-Bronze<sup>®</sup>, <sup>13</sup>/<sub>64</sub>", <sup>1</sup>/<sub>4</sub>" Heat Absorbing, <sup>1</sup>/<sub>4</sub>" (grey, bronze and heat absorbing plate are available in heavy-duty thicknesses.)



L·O·F makes a particular type of glass for every purpose in Open World design. Refer to Sweet's Architectural File, or call your L·O·F glass distributor or dealer, listed under "Glass" in the Yellow Pages. Or write to Libbey Owens Ford Glass Company, 811 Madison Avenue, Toledo, Ohio 43624.



Libbey · Owens · Ford Glass Co.

Architect: Tucker, Sadler & Bennett Contractor: Trepte Construction Company

# It isn't really true that everybody has a private elevator at the First National Bank Building, San Diego

New Haughton 1090 Elevator Supervisory System just makes it seem that way...



HAUGHTON ELEVATOR COMPANY DIVISION OF TOLEDO SCALE CORPORATION, TOLEDO, OHIO 43609



If you've visited the new First National Bank Building in San Diego —or any other building with new Haughton 1090 System Elevator Supervisory Control—you know what we mean.

Nudge a car call button, and your elevator is there. Almost before you can say "1090 System."

No wonder people in buildings served by our 1090 System get the feeling there's a private car always waiting.

Our 1090 System teams a remarkable new solid state electronic computer with electronic "demand response" modules. The System constantly monitors traffic flow, and puts elevators where the action is. No aimless cruising up and down. Cars are automatically placed on stand-by at strategic locations from lobby to top floor. When a call is registered, the nearest car responds instantly. Our 1090 Supervisory System is a significant advancement in elevator technology, created through our work in Elevonics.\*

Your Haughton representative is ready to assist you with design counsel, technical advice or any information you might need in designing new buildings or modernizing existing ones to incorporate the incomparable 1090 System. Call him today, or write us for specification data.

\*Haughton's advanced program in systems research and engineering, with specific emphasis on the creative application of electronic devices and instrumentation for betterment of systems design and performance. Reg. U. S. Patent Office.



Haughton developed the 1090 Elevator Supervisory System for people who haven't time for the waiting game.



Exclusively new styling for outdoor, indoor and wet location...in the tradition of mcPhilben quality I fully vaportight, bug-tight, corrosion resistant I all cast aluminum precision construction I triple ground satin or black anodized finish for lasting beauty I 100W. or 200W. sizes with or without protective guard I When it comes to the selection of lighting there is no "equal" for mcPhilben originality, quality, performance - You can take our word for it or write for specification data and convince yourself.

# 

270 LONG ISLAND EXPRESSWAY, MELVILLE, N.Y. 11746 CANADA: 2275 Midland Avenue, Scarborough, Ontario

On Readers' Service Card, Circle No. 379 211 Book Reviews

#### Continued from page 204

Gustav Künstler, director of the publishing house of the original German version of the book, assembled the volume on the basis of visual material and notes collected by Ludwig Münz, a deceased friend of the architect. It contains a few brief but touching reminiscences and penetrating observations by Oscar Kokoschka, and there is an introduction by Nikolaus Pevsner that puts Loos into historical perspective and comes closer than seems possible to explaining how he could have entered the Chicago Tribune tower competition with his giant Doric column.

Maybe architects will concentrate on the illustrations and not really read the text, and maybe historians enjoy solving mysteries, but it is regrettable that this publication fails to adequately integrate its visual and written material. Layout, however, is not an overriding concern in evaluating this book; it is very important because Loos was very important.

#### International City Growth Studied BY RICHARD STOPFEL

URBAN DEVELOPMENT IN THE ALPINE AND SCANDINAVIAN COUNTRIES. Volume II in the International History of City Development. By E. A. Gutkind. The Free Press, Div. of The Macmillan Co., 50 Fifth Ave., New York, N.Y., 1965. 500 pp., illus., S25. The reviewer, an architect with the Boston firm of E. Verner Johnson, studied housing in Denmark under a Fulbright grant and has traveled extensively in Scandinavia.

When the intended eight volumes of this series (of which this is the second) are completed, the total will certainly be the most exhaustive survey ever attempted of cities, towns, villages, and hamlets, covering the entire earth's surface. As the title reveals, this latest volume treats urban development in Austria, Switzerland, Denmark, Norway, and Sweden, the two distinctive regions (the Alpine and Scandinavian countries) having been combined to illustrate the ways in which strong geographic differences and variations in the pace and direction of cultural growth stimulated greatly different responses in the functional and formal aspects of urban developments.

Dr. Gutkind employs a multidisciplined approach to his subject. The jacket flap blurb assigns to him the hats of architect, planner, sociologist, and historian, and while all his talents have surely served him in the preparation of

Continued on page 222



Offers thin-line seat design with deep upholstered comfort.

New concept replaces bulk and obsolete spring construction. In use in furniture, automotive, aircraft, truck, boat seating.

First really new idea in seat suspension in 50 years. It's a complete seat platform, scientifically designed to cradle a person in floating comfort. Exceptionally durable.

When in search of modern design and comfort, incorporate the elastaSEAT Suspension in your seating specs.

Send for 8-page brochure in full color. Shows uses, constructions, test data.





On Readers' Service Card, Circle No. 321 SEPTEMBER 1966 P. V



American colleges and universities face a tremendous challenge in housing their students, despite record-breaking building programs now under way. The problem: current enrollment —6,200,000 men and women. Total residential accommodations are adequate for handling about 1,300,000 students\*. Around the country architects are busy designing new college dormitories. And many of them will be steel framed.

\*Figures from Office of Education, U.S. Department of Health, Education, and Welfare, and projected from 1964 data.



#### HEDGES HALL-Montana State University, Bozeman, Montana

Two 11-story towers, one complete, the other under construction, will provide dormitory space for a total of 1,300 students. Between is a circular dining room. The steel-framed towers, which so well express the beauty of steel framing as an architectural element, are placed on lower ground than the rest of the campus. ENGINEER: Hurlbut & Kersich STEEL FABRICATORS: (First tower and dining facility) Paper-Calmenson & Company (Second tower) Crown Iron Works STEEL ERECTOR: Industrial Steel, Inc. GENERAL CONTRACTOR: Haggerty-Messmer Co.

ARCHITECTS: Berg & Grabow, Associated Architects

### HENDRICK HOUSE-University of Illinois, Urbana, Illinois

A luxury, seven-story dormitory for 249 men, air-conditioned, soundproofed, with two elevators. Tinted windows on west and south. Dining room, lounges, barber shop and four-man suites are included.

One of the main reasons the architects chose a steel frame was speed of erection. They were not disappointed. Total time between arrival of steel on the site until the frame was complete—including joists and solid centering: seven weeks.

ARCHITECTS: Doyle/Brotherson GENERAL CONTRACTOR: Skoog Construction Co. STEEL FABRICATOR: International Steel Co. STEEL ERECTOR: Casserly Construction Co. OWNERS: Hendrick Dorms, Inc.



### PROSSER HALL-Muhlenberg College, Allentown, Pa.

This steel-framed structure houses several hundred women, yet blends into the residential character of the neighborhood. Triangular bay windows run the full height of the building.

After a nation-wide survey of costs for dormitories housing over 200 students was made, it was found that steel framing gave the architects a better price—lower than the national average.

ARCHITECTS: Everett Associates GENERAL CONTRACTOR: Thomas A. Armbruster, Inc. STEEL FABRICATOR: Reading Steel Products

### BETHLEHEM STEEL







### DORMITOR Y Canisius College, Buffalo, N.Y.

This 298-student dormitory was constructed with a steel frame of about 400 tons. The L-shaped building contains a 12-bed infirmary and a student lounge on the street floor. The steel frame permitted large expanses of open space in the social areas of the building. Service facilities are housed in the basement.

#### ARCHITECTS:

Pauly, Hauck & Welch STRUCTURAL ENGINEER: Duchscherer and Oberst STEEL FABRICATOR: Rebco Steel Corp. GENERAL CONTRACTOR: Balling Construction, Inc.





### CHARLES EVANS HUGHES RESIDENCE HALL Cornell University, Ithaca, N.Y.

Built for students in Cornell's law school, this 60,000 sq ft dormitory rises six stories at its highest point, though the architects adapted it to its multi-level terrain. Some 200 tons of steel are in the framing. The residence hall is a good example of how steel framing can be adapted to traditional architecture as well as to completely contemporary buildings.

ARCHITECTS: Eggers and Higgins ENGINEER: Distasio & Van Buren STEEL FABRICATOR: Bethlehem Contracting Co. GENERAL CONTRACTOR: A. Friederich & Sons Co.



### S. TOWN STEPHENSON RESIDENCE CENTER Washington State University Pullman, Washington

These two dormitory towers (with a third slated for the future) were designed with structural steel and composite slab. Steel framing was chosen because it offers architectural flexibility and decreased clear-height requirements. The towers are the University's latest high-rise structures.

ARCHITECTS: Walker & McGough ENGINEER: Lyerla & Peden STEEL FABRICATOR: Artistic Iron Works GENERAL CONTRACTOR: Max Kuney Construction Co.



TWO DORMITORIES-State University Agricultural & Technical College, Alfred, N.Y.

Designed and built for the Dormitory Authority of the State of New York, each of these two 4-story units at Alfred, N.Y., houses 200 students. The architects selected steel framing because structural steel helped simplify erection on the site, which has a 30 per cent grade. Each of the four floors contains lounges as well as student rooms.

ARCHITECTS: John S. Burrows ENGINEER: Goldreich, Page & Thropp STEEL FABRICATOR: Rogers Structural Steel GENERAL CONTRACTOR: Decker Construction Corp.





The Pollock Chair for the Electronic Age

Transistors. Integrated circuits. Computers. Photoconductors. This is the electronic age. And this is the chair for it. A tufted bucket seat made of a satiny shell of plastic fitted into a polished aluminum frame. A seat lavished with hand work, to make it look machine made. If you'd like to see variations on this Charles Pollock design, in fabric or plastic, as well as leather, we'd be happy to send you our booklet. Knoll Associates, Inc. Furniture and Textiles, 320 Park Avenue, New York, New York 10022

### INDEPENDENT RESEARCH CONCLUDES :

# Linseed oil anti-spalling compound best protection for exterior concrete...

Spalling caused by the increased use of deicing chemicals for snow and ice control has become a very real problem ... and has been the subject of extensive research and field testing.

Recent laboratory test programs confirm field observations that concrete pitting and spalling, from winter freeze-thaw cycles and deicing chemicals can be effectively prevented. The National Cooperative Highway Research Program Report #16\* evaluates the protection afforded by a variety of materials. The report concludes, "Considering both economy and performance, the best results by far were obtained with vegetable oils, and in particular, linseed oil solutions." It also cites the practical difficulties in obtaining adequate air entrainment in the field, and suggests the application of linseed oil coatings to new exposed concrete.

According to special Report #60 prepared by the Engineering Experiment Station of Kansas State University, linseed oil appears to act as a selective membrane. The oil permits the penetration of water at a greatly reduced rate, but prevents the penetration of salt. The report suggests that spalling is a physical process rather than a chemical or electrochemical reaction. Thus linseed oil is effective since it prevents the entrance of *deicing salts*. This report further suggests that the most effective technique in preventing damage is the use of both air entrained concrete, and a linseed oil surface coating.

Tests like these, plus over four years' practical experience in commercial, industrial, and highway usage, conclusively demonstrate the protection provided by linseed oil coatings. For less than  $1\frac{1}{2}$ ¢ per sq. ft. material cost, a two-coat spray or roller application provides lasting protection for your clients' investment... and your design. Get the facts on SK Linseed Oil Anti-Spalling Compound from your building supply salesman, Sweet's Architectural

File, 9/Sp, or write Spencer Kellogg Division of Textron Inc., Buffalo, New York 14240. Also available in Canada.



A textron Division

\*Library of Congress Catalog Card Number: 65-61650 On Readers' Service Card, Circle No. 406

### SPECIFY WITH CONFIDENCE...CHOOSE FROM THE COMPLETE PARKER LINE!



The most complete line of quality lavatory and bathroom cabinets, mirrors, accessories and washroom equipment manufactured by a single company! Craftsmanship and functional beauty are built into every product . . . specials are easily obtainable upon request! Write for complete 32 page catalog or technical data sheets to:



SEPTEMBER 1966 P/A



and Party a bundle of the

### The Low Cost of the Long View

The unparalleled beauty of Hauserman Engineered Wall Systems, such as the Signature partition shown here, reflects an appreciation of value. Their recognized sound control and full function, however, are only part of the story.



A lifetime financial bonus appears on closer examination of the facts. Hauserman Systems are fully movable. The entire wall, or full floors of it, can be relocated, cleanly and quickly, when the need arises. The inevitable interior layout changes, over the life of the building, are resolved at a fraction of the cost of destroying and rebuilding fixed walls. A return of 8% or more each year on the partition investment is the Hauserman movability bonus. For the full story, write today for "The Low Cost of Quality." The E. F. Hauserman Co., 5855 Grant Ave., Cleveland, Ohio.

### HAUSERMAN





# REMOTE PACKAGE COOLING UNITS

*the sensible way to deliver cold water <u>in factory work</u> areas* 

> Here's a water cooling unit that can be mounted overhead and out of the way-takes up no valuable floor space-is less apt to be damaged. Easy to installmounting shelf can be bolted or welded to post or column. Can also be tucked away in wall recesses, under counters, on shelves, or secluded in closets. Remote cooling units are available in a wide range of capacities and can be connected to serve more than one fountain outlet. In addition to the stainless steel fountain shown above, these remote cooling units can be equipped with many other types and designs of Halsey Taylor fountains.

> THE HALSEY W. TAYLOR CO. • 1562 Thomas Rd. Warren, Ohio

Please send me complete information about Halsey Taylor remote cooling units for plant and factory installations.

NAME	
TITLE	
COMPANY	
ADDRESS-	

#### Continued from page 214

the current volume, the main emphasis of the text is strongly historical. This is a bit surprising if one has first scanned the rich mosaic of illustrations, consisting of 482 items: old and recent engravings, drawings, plans, maps and photographs in pleasing profusion. A brief passage from the discussion of Geneva, Switzerland, though not exactly typical, serves to illustrate the author's attitude:

"The symbol of the history of Geneva is the bridge over the Rhone, which Caesar mentions in De Bello Gallico. Without it Geneva would not be what it has been in the past, and its history would be incomprehensible. The bridge united two worlds: the Roman world on the south bank of the river and the world of the Barbarians on the northern bank stretching to the British Isles. Caesar destroyed the bridge. But it was soon rebuilt, and Geneva became the guardian of the passage between the South and the North.... This fact and its situation are more important than the details of its physical appearance." And yet the exciting and thorough graphic treatment of the subject reveals no lack of concern with planning and architecture. The illustrations and the captions are often strikingly effective at depicting the physical effects on cities and towns of historical ascents and declines, movements and countermovements. Though architecture is not discussed as such, the drawings and photographs are sufficiently articulate in relating architecture and town planning. Throughout, the abundance of aerial photographs produces fresh images and reveals some not so well-known relationships of buildings and sites in rather well-known places-for example, the composition of monastery, town, and river at Melk in Austria, and the juxtaposition of Amalienborg Palace and the commercial waterfront in Copenhagen, Denmark. Indeed, one of the strengths of this book is the author's acknowledgment of the limitations of both the written word and the graphic image, and his use of each for that part of the story each tells best.

The five countries are treated separately, but with a recurring outline. In each case, Gutkind discusses first the land, its geography, and geological evolution. Then he relates briefly the history and prehistory of its inhabitants, especially as they bear on the beginnings and transformations of settlements. Fol-

Continued on page 232



the season's always summer with an ACRYLITE® pool cover Guests at George Page's Colonial Motor Inn in Lynnfield, Mass., can enjoy a refreshing swim any time of the year thanks to this bubbletop pool cover glazed with ACRYLITE<sup>®</sup> Acrylic Sheets. Optically clear and heat-formed, they seal weather out, keep heat in, won't fade or discolor with age. ACRYLITE is shatter-resistant, light-weight, easily cut, formed and fabricated. Over 70 patterns and colors are available in smooth or textured surfaces, standard sheet sizes and thicknesses. Moreover, it's classified

as a slow-burning plastic by Underwriters' Laboratories, Inc. ACRYLITE is being used in countless other ways in hotels and motels ... as room dividers, decorative partitions, shower and bath enclosures, just to name a few. For further information, refer to Sweet's Architectural File 7d/Am. And for full-color brochure and free set of samples, write to: Dept. PR, American Cyanamid Company, Building Products Division, 595 North Avenue, Wakefield, Mass. 01880.

POOL DOME CONSTRUCTED BY ICKES-BRAUN, CHICAGO, ILL.





### Thunderbird Motel, Miami, Okla., reports



# NOTHING BUT COMPLIMENTS FROM GUESTS ON TEMCO<sup>°</sup> 4-SEASONS

J. D. Harrelson, Owner, THUNDERBIRD MOTEL, Miami, Okla., says, "The Temco 4-Seasons does everything and more than Temco claims in their advertising. We have had nothing but compliments as everyone can please themselves when it comes to individualized temperature control. As a matter of fact, I have people staying at my motel because they prefer our heating and air conditioning over centralized units which other motels have in the area."

Your guests can be just as pleased as the Thunderbird's . . . when you install Temco 4-Seasons units at your motel. This system permits each guest to choose either thermostatically-controlled heating or cooling INSTANTLY by the touch of a button. In addition, 4-Seasons saves on operating costs, when compared with a cen-tralized system . . . it operates only as needed in each room . . . and removes the hazards of central breakdown. For full information on Temco 4-Seasons Heating and Air Conditioning units, mail coupon. units, mail coupon.

e the complete facts on Temco 4-Seasons oling Units. Dept. PA-9
State

# Sea-side curtain wall features Reynolds Aluminum



New Holiday Inn on the ocean front, Atlantic Cityadjacent to Convention Hall

OWNER AND BUILDER: John McShain, Philadelphia, Pa. ARCHITECT: Aaron Colish, Philadelphia, Pa. CURTAIN WALL AND ENTRANCE FABRICATOR: The Alumiline Corp., Pawtucket, R. I. CURTAIN WALL ERECTOR: Products Corp. of America, Philadelphia, Pa.

A 400-room inn right on the ocean front presents obvious attractions – and poses some problems. Notably, corrosion by salt-laden air and spray, and abrasion by wind-driven sand.

The beautiful solution to these problems – with a beauty that lasts and lasts – is Reynolds Aluminum extrusions in the Reynocolor 5000 series. "Light Bronze" is the hardcoat finish selected for Holiday Inn's curtain wall...for its mullions and panel frames, also coping and trim in pool and patio areas.

Reynolds offers a choice of Reynocolor finishes, ranging from "gold" to "the boldest

black yet achieved." Write for booklet showing the other Reynocolor colors, plus information on all the finishes presently available for aluminum. Dept. PA-9. Reynolds Metals Company, Richmond, Va. 23218. On Readers' Service Card, Circle No. 399





The pre-assembled, aluminum framed panels, fabricated by Alumiline, are quickly and economically set in place.



# Big beams create a lightweight roof of simple design.

Here's a perfect example of Western Wood meeting an unique challenge. The architect needed a roof structure to clear-span 100 feet...have as few and small members as possible ... give the indoor pool the attributes of an outdoor *pool*... and all at a reasonable cost. Tough requirements?

Not for Western Wood. The lightweight framed roof of laminated Western Wood beams and purlins was a natural and easy solution. The main beams of the super-structure are Douglas Fir glu-lams (measuring 11" thick, 70" high and 67'2" long). The decking is Western Wood tongue-and-groove, treated

to withstand the high humidity. Yet the entire roof structure is light enough to allow sufficient open area for three glass walls, providing the outdoor feeling desired. The total cost of the pool structure was \$7.59 per square foot. The completed job is a clean, strong, simple design. Structural members of Western Wood may be designed for both appearance and structural strength. They may be large, solid timbers; or glued-laminated beams fabricated for specific assignments. Or, they may be smaller structural members for truss systems and other light construction uses.

Western Wood can meet any structural challenge with beauty, strength and price. For more information on Western Lumber, clip the coupon and we'll send you the Western Lumber Technical Manual, free of cost.

WP As	estern Wood	d Products
	6, Yeon Bldg., Por me the Western L lanual.	
Name		
Firm		
Address		
City	State	Zip





Architects: Donald J. Stephens Associates, Loudonville, N.Y.

# Glazed with PLEXIGLAS<sup>®</sup> for control of breakage, glare and solar heat

The windows in the new athletic building of Albany Academy, Albany, N. Y., are glazed with transparent grey #2064PLEXIGLAS acrylic plastic,  $\frac{1}{4}''$  thick, framed in aluminum in light sizes of 4'8'' by 6'. The window design and the PLEXIGLAS provide a comfortably daylighted interior environment with low initial, operating and maintenance costs.

Solar Heat and Glare Control-Grey

#2064 PLEXIGLAS transmits only 44 per cent of total solar energy with a light transmittance value of 27 per cent. The light filtering characteristic of this acrylic plastic reduces sky and solar glare with the effectiveness of sunglasses.

Breakage Resistance—One-quarter inch thickness PLEXIGLAS has nearly twice the breakage resistance of tempered glass in the same thickness, based on falling ball tests. Test data available on request.

To Get Further Information—For technical, specification and installation data on the full range of transparent PLEXIGLAS tints to suit varying solar energy and light transmittance values, just write to us for our new cata-

log, "PLEXIGLAS in Architecture, PL-688".



®Trademark Reg. U.S. Pat. Off., Canada and principal Western Hemisphere countries. Sold as OROGLAS® in other countries.

SEPTEMBER 1966 P/A

On Readers' Service Card, Circle No. 400



Two-slot SLAD installation in conference rooms of Irving Trust Company, 1 Wall Street, New York Single-slot SLAD diffusers are used beside ceiling light panels at right.

### yet it's the most versatile linear diffuser you can specify

Anemostat's Straight Line Adjustable Diffuser (SLAD) mounts flush and clean without visible screws or fasteners. Whether installed in ceiling or side wall, or in the sill beneath windows, SLAD never intrudes on your design. Concealed key-ways and alignment clips let you mount the units endto-end in a clean, unbroken line.

**Air handling flexibility.** SLAD's unique pattern control element lets you adjust volume and distribute air vertically, in either hori-



zontal direction, or in *both* horizontal directions. SLAD serves as a supply unit, return unit or a combination supply-return, and is available with from one to eight slots. It's manufactured of attractively finished extruded aluminum, with natural-anodized face.

For full mechanical and performance data on this versatile linear diffuser, write for Catalog 66S, Anemostat Products Division, P.O. Box 1083, Scranton, Pa. 18501.



### ANEMOSTAT® PRODUCTS DIVISION DYNAMICS CORPORATION OF AMERICA



SEPTEMBER 1966 P/A



**Texture is the thing about Tectum... but not the only thing.** It makes a beautiful ceiling, doesn't it? But Tectum is also a lot of things you can't see on the surface. Like a strong form plank. Or a rigid roof deck. An insulator with an 0.55 "K" value. A sound absorber with noise-reduction coefficients up to .80-.90.

Texture is the thing about Tectum<sup>®</sup>...but not the only thing. That's the beauty of it.

Call your Gold Bond<sup>®</sup> Representative. Or write to National Gypsum Company, Dept. T-36, Buffalo, N.Y. 14225.

It's actually four products in one.







If natural light, beauty and versatility are factors in your project... then look to FILON, the leader in job-rated fiberglass panels. FILON offers a new medium in creative expression and construction simplicity for the cost-conscious architect...the maximum design effect and function at the lowest cost.

A complete range of product line is at your disposal — whether it be for a simple roof or a complete translucent curtain wall system, FILON supplies the panel to do the job.

Why not design glare free natural light into your next project? ...we'll be glad to show you the many applications of FILON translucent panels.



On Readers' Service Card, Circle No. 348

#### 232 Book Reviews

#### Continued from page 222

lowing is an examination of the development of communities and urban centers, and, to conclude, a series of very brief descriptions of specific towns and cities, from 43 for Austria to a low of 5 for Denmark.

Perhaps it was necessary to establish so strong a discipline for a series that intends ultimately to record urban development over the whole globe, but to eliminate comparisons when comparisons would be so easy and so potentially instructive is a mistake. We can take as an example Gutkin's lament over the destruction in the 1850's of Old Vienna by the Ringstrasse, a Brobdingnagian boulevard in the Haussmann tradition that encircles the old heart of Vienna on the site of its former fortifications. He describes very convincingly the destructive nature of this ancestor of the freeway and even points out that numerous other cities made far better use of the land freed when they pulled down their defensive walls. But how much more vividly the point could have been made had be described and illustrated the contrasting case of Copenhagen, where moats and defense works have been converted into a necklace of lakes, lush parks, and promenades.

Another unfortunate shortcoming of the book is its tendency to neglect the 20th Century and its very considerable influence on the nature of urban agglomerations. The discussion of Vienna ends with the Ringstrasse; Zürich is carried only as far as suburban extensions in the 17th and 18th Centuries; Stockholm is abandoned in 1850 with regrets about the advent of big industry and the disappearance of barns and windmills. As history, the book is incomplete, and as comment on planning attempts and failures of recent times -- an area in which this series could make important contributions-it fails altogether. It is to be hoped that the volumes to come, especially that on the Americas, where so much of what is relevant to the subject of urban development has taken place in the last 50 years, will be more closely related to conditions in our time.

#### A High Caliber of Design

#### BY C. RAY SMITH

The New York Times Book of Interior Design and Decoration. Edited by George O'Brien. Farrar, Straus & Giroux, 19 Union Square West, New York, N. Y., 1965, 240 pp., illus., 815. The New York Times Guide to Home Furnishing. By Barbara Plumb and Continued on page 242

SEPTEMBER 1966 P/A



Coppermetals are not the cheapest material you can specify for architectural accents—nor are they always the most expensive. But no other metal offers the inherent beauty, range of colors, forms, versatility and durability of true copper alloys. Furthermore, you can attain *all* these advantages without upsetting budgets, by using coppermetals in locations where the eye can appreciate fine design and component quality. And remember, the texture and colors of copper architectural metals are more than skin-deep. Copper may cost a bit more than substitutes. Don't you think it's worth it?



To see what imaginative designers can accomplish through the judicious use of coppermetals, turn page \_\_\_\_

### Here's why leading architects use the coppermetals in modern design

Enduring and consistent color Distinctive elegance, yet friendly and warm Combine beauty with durability Offer greater opportunities for creative design Unequaled in providing the desirable accent to other high-quality building materials.

Consider these advantages when you are selecting metals and don't overlook the wide range of true, **natural** colors available in the copper alloys—from the red of copper to the warm, rich golds of the brasses and bronzes to the soft, silvery white of the nickel silvers. And for the most economical use of these quality metals, consult with fabricators in the early planning stages. They can help you apply standard forms and sizes of sheet, rod, wire, tube, extruded and drawn shapes to your designs. Write for publication, "Architectural Metals by Anaconda," A.I.A. File No. 15. Anaconda American Brass Company, Waterbury, Connecticut 06720. In Canada, Anaconda American Brass, Ltd., Ontario.



Lehigh County Courthouse, Allentown, Pa. Architects: Wolf & Hahn, Allentown, Pa. Fabricator: Trio Industries, Inc., Bridgeport, Conn.

Window Frames and Reversible Sash are Everdur<sup>®</sup>, an Anaconda high-strength engineering and architectural copper alloy. Tubular components are fabricated from strip by the economical rollforming process.

First National Bank, Wilkes-Barre, Pa. Architects: Lacy, Atherton & Davis, Wilkes-Barre, Pa. Fabricator: J. W. Fiske Architectural Metals Inc., Paterson, N.J.

Here the rich beauty of bronze in sheet, rod and tube products accentuates the fine marble, ceramic tile and wood used in this circular stairway and elevator shaft. This is a typical example of architectural beauty with bronze.

First National Bank Bldg., Lincoln, Nebr. Architects: Davis & Wilson; Clark & Enersen, Lincoln, Nebr. Fabricator: Fenestra, Inc., Lima, Ohio

Bronze-clad steel standard curtainwall units on the eight-story section of this building provide the beauty and durability of bronze at a cost considerably lower than for custom-built, solid bronze curtainwall construction. 65-0733



# GJ's variety of door control devices meet every budget requirement

The cost and function of GJ devices vary, but *never* do they deviate from a set "quality" standard. No device is made with inferior workmanship or materials to meet a price.

It's always good judgement to specify GJ throughout, for regardless of price you can always be certain of this set "quality" standard.



 ← On Readers' Service Card, Circle No. 329


Why square holes handle more rolled drawings - easier





Plan Hold Square Tubes take only half the space needed to store an equal number of round tubes

Square corners give easy access to rolled drawings — no binding against sides as in round tubes

#### Plan Hold. Square Tube Files

No waste space! Every square inch of these 15% square steel cabinets can be utilized for rolled drawings up to 50" in length. Modular units come in 36, 16 or 9 tube sections. Can be used singly on desk or stacked to form a permanent master file. Write

for Catalog of 31 Filing Systems to Dept. PA67, P.O. Box 3458, Torrance, California 90510.

PLAN HOLD CORPORATION: TORRANCE, CALIF. 
AURORA, ILL.
Plan Hold Company of Canada, Toronto 18

On Readers' Service Card, Circle No. 395

#### **SREINHOLD**

#### Authoritative

#### THEATRES AND AUDITORIUMS Second Edition

by Harold Burris-Meyer and Edward G. Cole

#### 1964 384 pages \$22.00

This book makes it possible for anyone concerned with the planning of theatres to understand what constitutes a good theatre and to make his plans accordingly. Intended for both the architect and those who need better theatres and auditoriums, this new and enlarged second edition is the only book which approaches the problem of planning theatres and auditoriums by analyzing the functions which are to be performed within the building. Trends and innovations in theatre form which have become evident since the publication of the first edition are thoroughly examined from an analytical as well as a critical point of view. Profusely illustrated with drawings, photographs, and plans.

> Available at your bookstore or write Dept. M-315 REINHOLD BOOK DIVISION, 430 Park Avenue, New York, N.Y. 10022

> On Readers' Service Card, Circle No. 461





Aside from the scale of major structural features, consider the impact of singularity on the intimate scale. If you banked at Huntington National in Columbus, Ohio, your eye surely would be arrested by the custom fabricated bronze doors, a part of the Skidmore, Owings, and Merrill design. Such a feature might cause you to reflect on how worthwhile it is to budget distinguished metalwork. So little can do so much for a building. Michaels' craftsmen are oriented for efficient execution of this kind of work. May we help you give a touch of singularity to your next building, as well as the long-term economy of custom architectural metalwork?

#### THE MICHAELS ART BRONZE CO.



On Readers' Service Card, Circle No. 380

# BEAUTY AND DURABILITY AND ECONOMY

These are, of course, the normal criteria employed by most architects in the selection of a building material, and wherever metal roofing or mansard fascia is involved, we believe Follansbee Terne unique in the degree to which it satisfies them. For terne delights the eye, lasts indefinitely, and is relatively inexpensive when measured by the standards of those to whom ultimate performance is no less significant than initial cost.

# FOLLANSBEE STEEL CORPORATION Follansbee, West Virginia

Follansbee is the world's pioneer producer of seamless terne roofing

Avon Products Inc., Laboratory and Office Building, Springdale, Ohio Architect: Sol King, F.A.I.A. Consultants: Albert Kahn Associates, Detroit, Michigan Roofing Contractor: Tri-State Roofing Co., Charleston, W. Va.



# The hurry-up school. Queensboro Community College. 22 buildings. 62 days from footings to completion.

Plywood components.

This new college in New York City couldn't have opened its doors to 1600 students last January without plywood stressed skin panels. According to the contractor's architectural consultant, the plywood component system was the best possible solution to the tight schedule – less than three months

How?

from plans to finish. The panels were used for floors, walls and roof.

The 22 buildings were prefabricated in Tulsa at the rate of one a day. Panels were prepainted, then trucked or piggy-backed to New York. Floor components are 24 feet long, the full width of the building. Roof panels span 12' 6", and are supported by a ridge gluelam, 7" by  $17\frac{7}{8}$ ".

On-site finishing consisted largely of installing carpet, furniture, plumbing, and equipment. Actual site work took just over two months.



Queensboro Community College, Queens, New York City/Owner-Lessor: CIT Educational Buildings, Inc., New York City/Fabricator and Contractor: Southern Mill Fabricators, Inc., Tulsa, Oklahoma / Architects: H. A. Tucker, Tulsa; and M. J. Goodman, consulting architectural engineer for CIT



The 18 classroom buildings are 24x40; the library, faculty offices and rest rooms are 24x32.

This is another example of the way plywood components can provide simple, good-looking structures in a hurry. But they're also versatile enough to solve sophisticated design problems involving unusual shapes such as curved roofs, folded plates and space planes. For more information on plywood components and other plywood building systems, send the coupon.

AMERICAN	PLYWU		JUIATION
American Plywood Asso Tacoma, Washington 984			(DFPA) QUALITY
Please send me your port components and plywood co			olywood
Name			
FirmAddress			
City	State	Zip	(USA only)

# IF YOU HAVEN'T SPECIFIED NATCOR YET...



# here are six solid reasons why you will soon!

Quality materials and advanced engineering principles of Natcor doors add six solid reasons why the beauty and dependability you specify will remain throughout a lifetime of trouble-free operation.

1. Patented, adjustable Butt Hinge — Ball Bearing with frame reinforcement for extra endurance.

2. Snap-In Vinyl Glazing Bead — Just one member to snap in during glazing — saves labor.

3. Quality Extrusions — Door stiles and rails of fully extruded aluminum, 1/8" wall thickness throughout, as specified by architects.

4. Maximum Security Lock — Extra Safe — with 13%" throw, case hardened steel bolt and weatherstripped face plate for pairs of doors.

5. "Sure-Grip" Pull Handle — Broad selection of contemporary styled stock, interchangeable — Push-Pull Hardware.

6. Reinforced Corner Construction — Heavy, concealed reinforcement brackets are firmly bolted to door stiles. Tri-Clad welding of each joint after bolting results in complete rigidity.

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, Tenn.

SEPTEMBER 1966 P/A

If it weren't for expansion and contraction, you wouldn't need Dow Corning<sup>®</sup> 780 building sealant!

Expansion, contraction, water seeping into open cracks will finally reduce this unprotected cliff to rubble.

The only way we can protect our man-made structures against these same destructive forces is with *flexible* joints which absorb movement and seal out weather. The protection, though, lasts only as long as the sealant stays flexible.

That's where Dow Corning 780 building sealant is in a class by itself. It's a true silicone rubber. It's the most durable of all flexible sealants made. Flexible to start with...it's *still flexible* a dozen years later. It keeps the rain out long after other sealants have hardened, weather-checked and cracked.

An added plus: Dow Corning 780 building sealant is a totally acid-free system. It adheres as readily to concrete, mortar, limestone as it does to other building materials.

FREE EXPANSION BEATER. Write today for prove-it-yourself sample kit. Offer good only in U.S.A.

torture test of flexibility



Address Dow Corning Corporation, hemical Products Division, Dept. 8709, Midland, Michigan 48640 For nearest distributor, see Sweet's Architectural File.



Wells Fargo Building, San Francisco, tallest building west of Dallas. Owner: Dillingham Corp. Honolulu, San Francisco. Architect and Engineer: John Graham and Company, Seattle and New York. Plumbing Contractor: Scott Co., Oakland, California.

#### SUNROC SPECIFIED FOR WEST'S TALLEST BUILDING

Good looks, practical features and timeless styling of this semi-recessed, stainless steel drinking fountain made it a natural choice for Wells Fargo. Sunroc offers aircooled or water-cooled models in capacities from 5 to 12 gph. Vinyl or stainless steel aprons.

The unique, patented cooling package simplifies installation, effects more efficient service with far less maintenance. Install it as a fountain, convert it any time to a water cooler. Get complete specifications and roughing-in dimensions.



508

SUNROC	iddle Bonne 1002		
CORPORATION – Box 23, Glen F Send data on SUNROC fountains.	diddle, Penna. 1903.	'	
Name	14 14 14 14		
Company		1.0.1.1.1.	2
Address			

#### Continued from page 232

Elizabeth Sverbeyeff. Atheneum Publishers, 162 E. 38 Street, New York, N. Y., 1965. 374 pp., \$2.95. The reviewer is an Associate Editor of P/A who covers Interior Design.

The New York Times, long the leading newspaper commentator on modern interior design, has shown its faith in that subject by sponsoring two books that are the best of their respective types on the market. The primary subject of the daily "Women's" pages now, however, is the camperie of pop fashion, and one wonders when the paper will return to its broader vision. Unlike those pages, these two books should be known to everyone seriously interested in design.

George O'Brien's book is an anthology of material drawn from both the daily and Sunday Home Furnishings sections of the *Times*, and it is, among the current rash of picture-books on American interiors, the one that presents the most consistently high calibre of design.

During O'Brien's nearly four-year tenure as Home Furnishings editor of the newspaper, carpers were occasionally heard to contend that all of the published interiors looked alike. (One wag even suggested that, in order to insure this, the editor and photographers carried the same white spiral staircase to every apartment.)

What caused this suspicion is that George O'Brien had hitched his wagon firmly to the modern movement-as much as his editor would allow-and espoused, in particular, the stylistic idiom of the Benjamin Baldwin/Ward Bennett school. So convincing was his dedication to fairly progressive (yet established) interior design, that he was able to attract many notable architects, designers, and clients-even that reticent leader of progressive decorators, William Baldwinto permit their interiors to be published. Among the designers whose work was shown are Ward Bennett, William Baldwin, Edward Benesch, David Whitcomb, Braswell Cook, Albert Herbert, and Emily Malino. Among the architects are Benjamin Baldwin, Paul Lester Wiener with Ala Damaz, Eliot Noyes, Serge Chermayeff. Charles Gwathmey, Louis Sauer, James Polschek, and Richard Meier with Elaine Lustig Cohen. This distinguished roster is responsible for the high caliber of design, which is the distinction of this book.

No work is perfect, however. The misleading title should include the words "American" and "home furnishings" (homes are the only interiors, one suspects, that the *Times* ever considered as *Continued on page 250* 

On Readers' Service Card, Circle No. 410

242 Book Reviews



KolorMate<sup>®</sup> gives you the

#### of any asbestos-cement product for research-laboratory table tops.



Research-Laboratory Counter Top

Fume Hood and Table Top



Nicolet's KolorMate, a monolithic asbestos-cement material, is fast becoming the first choice of architects, industrial designers, and laboratory planners for use in laboratory-furniture applications. KolorMate is well known as an acid and corrosion-resistant material which can be machined and cut using techniques common to stone fabrication.

The superior finish of this monolithic asbestos-cement material is a unique attribute of Nicolet's KolorMate, and it provides the architect with a product which combines the elements of functional design with the esthetic appeal desired in today's working environments. KolorMate is available in Charcoal Grey, Cocoa Tan and Bermuda Green, in all popular thicknesses.

To all the advantages of KolorMate, add finish for the final touch, by Nicolet, naturally. Send for our 1966 KolorMate brochure. Write Nicolet Industries, Inc. Florham Park New Jersey.

On Readers' Service Card, Circle No. 389



# **SREINHOLD** books

# SEND TODAY

for this important and timely book:



#### **CAMPUS PLANNING**

by Richard P. Dober

Between now and 1980, the population explosion will make it necessary to provide campus space equivalent to all the campuses constructed from 1936 to 1960. This is an urgent problem facing the entire nation, and CAMPUS PLANNING provides vital information on the approaches to a solution.

This copiously illustrated and intriguingly written volume contains design programs both for existing facilities and institutional expansion. Significant trends on site design and landscape planning are described, with special attention to the relationship of community and campus. Plans outlined include complexes of buildings, housing, research laboratories, and individual structures . . . all illustrated by outstanding examples.

The author, Richard P. Dober, has served as consultant on planning and design to M.I.T., Harvard University, Drake University and Goucher College. He has prepared master plans for the University of Rhode Island, University of Colorado, Dana Hall School and others.

A book with wide appeal for architects, planners, administrators, educators, and libraries. 1963.  $8\frac{1}{2}$ " x 11". 320 pages.

30-Day Approval
Reinhold Book Division
430 Park Avenue, New York, N. Y. 10022
Please send mecopy(ies) of CAMPUS PLANNING by Dober at \$25.00, for 30 days' approval under the following terms:
Total payment enclosed (Reinhold pays regular delivery charges)
Bill me (plus delivery charges)
Print Name
Address
City & ZoneState
Save Money! Send full payment with order and Reinhold pays regular delivery charges. Same return privilege guaranteed. Please include sales tax on Ohio, Pa., and N.Y. orders. For your protection—do not send cash. Send check or money order. Dept. M-314.

\$25.00

#### REINHOLD BOOK DIVISION. 430 Park Avenue, New York, N. Y. 10022



#### There is a Grant Drawer Slide designed for every need.

Grant's exclusive slide design and development department is constantly engaged in research and planning activity, to stay abreast of the varied requirements of slide users.

Pictured here are but four of the broad array of Grant Slides — slides expressly engineered for application to specific products such as: desks, store fixtures, kitchen cabinets, general furniture, phono units and other special areas.

Whatever your specific requirements, you can be certain Grant has a slide — or can efficiently make a slide, to meet the need.

Do you have a copy of Grant's Manual? It's yours, free for the asking!



GRANT PULLEY & HARDWARE CORPORATION ■ EASTERN DIVISION / 49 High Street, West Nyack, N.Y. ■ WESTERN DIVISION/944 Long Beach Ave., Los Angeles 21, Calif. A four-pipe system isn't always the answer.

# Want extra space for a pool and a garage?



Then consider a General Electric Zoneline heating/cooling system. The way architects Nowicki & Pollilo did with the William Penn House, Philadelphia, Pennsylvania, shown here.

G-E Zoneline gives you all the benefits of a four-pipe system. But, because it does away with pipes, ducts, boilers and cooling towers, it frees space – for a garage in the basement or a pool on the roof or both.

Other benefits:

FIRST COST can be cut drastically. The General

Electric system used for William Penn House was much Jess than estimates for a four-pipe system. **ROOM-BY-ROOM CONTROLS** enable a tenant who is chilly to turn on the heat, even though everyone else has the

air conditioning on.

**CHOICE OF GRILLWORK** is one you make. G-E Zoneline grille comes in two standard designs or can be treated architecturally to blend with building appearance. **INTERIOR FLEXIBILITY** allows you to fit units over doors (Marina Towers, Chicago) or under window seats (Century House, Lincoln, Nebraska).

From motels to high-rise construction, Zoneline systems can make dramatic economies in space and first cost. Call your General Electric Zoneline Air Conditioning Representative for the facts.

Air Conditioning Department, Appliance Park, Louisville, Kentucky



On Readers' Service Card, Circle No. 351

G-E Zoneline heating/cooling unit

Owner: William Penn House, Inc. Architect: Nowicki & Pollilo General Contractor: E. J. Frankel Enterprises

16

# More deck for the buck.



That's all that Zonolite<sup>®</sup> lightweight insulating concrete roof decks offer you... but more and more architects and engineers seem to think that's plenty.

Now Approved Zonolite Roof Deck Applicators have cut costs. They have developed methods to pour and level 30,000 square feet of roof deck per day.

That's fast. So fast that Zonolite Roof Deck Applicators are able to submit low bids. Low bids on a roof deck with a combination of features no other roof deck can offer.

- Lightweight...Zonolite concrete has as little as 1/6th the weight of ordinary concrete, so supporting structures can be considerably lighter in weight and cost.
- Specified insulation value can be obtained by simply varying the thickness of Zonolite vermiculite concrete.
- **3. Permanent**... composed of completely inorganic materials; won't rot or decompose, lasts the life of the building.
- 4. Monolithic . . . continuous surface; no seams to allow tar drip and combustion in the event of fire.
- 5. Incombustible . . . vermiculite concrete is all mineral, cannot possibly burn.

- 6. Flexible . . . can be used with form boards, paperbacked wire lath, galvanized metal decks or structural concrete.
- 7. Slopes for drainage . . . as prescribed by the builtup roofing industry, are easily and economically provided.
- 8. Economical . . . original cost is low, maintenance costs are nil. Insulation efficiency can allow use of smaller heating and cooling units.
- **9. Certified application** . . . the approved Zonolite applicator maintains a continuous log of the job; day by day mix proportions, water content, densities and weather conditions. Deck specimens are taken periodically and tested for proper dry density and compressive strength at our labs in Skokie, Illinois.

All that and low cost, too.

For complete specifications and data file, have your secretary drop us a note at 135 S. LaSalle Street, Chicago, Illinois 60603.



ZONOLITE DIVISION W. R. GRACE & CO. 135 SO. LA SALLE ST., CHICAGO, ILL.

# modern communications... a MUST FACTOR in industrial and commercial building design



Even if you've never designed or specified a television system for industrial or commercial use, chances are you'll be consulted in the near future.

Any new building designed without full capability for present and future communications requirements is severely limited. For example, modern hotels and apartment houses distribute TV and FM entertainment through master antenna systems and over closed-circuit television. Tenants can view the lobby, the restaurant, and the playground over unused TV channels.

In vast industrial plants, two-way audio and video communications can permit that indispensable element—human judgment to mastermind an otherwise automatic control operation. In hospitals, critical patients and vital equipment can be kept under constant watch through television. Business executives now conduct TV conferences through private closed-circuit systems.

The company with the longest and broadest experience in television signal distribution is Jerrold. Flexible and non-obsolescent Jerrold "J-Jacks" systems open the entire frequency spectrum from dc through VHF for industrial communications by coaxial cable. "J-Jacks" has found wide use in schools, hospitals, and industry.

The authorized Jerrold engineering-contractor who works directly with you is an expert in the industrial and commercial applications of television. The planning information he provides, the Jerrold equipment he represents, the system he installs—all are the finest in this specialized field. Write for his name, and for a free



copy of our new booklet "The Engineer's Guide to Specifying Multiple Television Distribution Systems." Jerrold Electronics Corporation, Systems Products, Distributor Sales Div., 401 Walnut St., Phila., Pa. 19106.

... THE MOST EXPERIENCED NAME IN TELEVISION SIGNAL DISTRIBUTION

On Readers' Service Card, Circle No. 429

#### Continued from page 242

being furnished). Pictorial emphasis is on the over-all pretty picture (layed out spaciously and clearly reproduced) rather than on ingenious invention (of which several examples go unmentioned in the text), on exquisite detailing, or on contributions to planning, which are evident in many of the interiors illustrated. Nor are plans included anywhere, and for some of the houses they are essential to orientation and understanding.

The text, which begins with a broad and clear-eyed view of the field, is devoted primarily to how-to's and how-notto's. Not many why's or critical comments on the contribution or any new methods of analysis beyond the customary descriptive reportage of the newspaper are offered, but it is to O'Brien's credit that nearly half the caption space is devoted to descriptions and documentation of the art works with which the interiors selected were so judiciously filled.

The Guide to Home Furnishing, which is all text and no pictures, is, in the author's own analogy, a treasure map to the hidden furnishings sources in New York and environs. (It is not in any way a guide to how to furnish a home and should therefore more properly be titled Guide to Home Furnishings. Publishers are increasingly guilty of such salesmanship.)

Detailed, sometimes critical, descriptions of retail outlets, shops, department stores, and professional showrooms and services are grouped under five general headings: Furnishings, Antiques, Art for the Home, Auctions, and Services and Repairs (the latter an especially valuable list). It is an interesting division-between new and old, contemporary and antique, the necessary and the art object -rather than between stylistic subdivisions (modern versus historical or traditional). The authors emphasize modern furniture in the first section, but make up for that with the separate section on antiques. The distinction does break down, however, in that, whereas adaptations of historical pieces are generally omitted, several "good" lines of reproductions are pointed out.

Something new and valuable (even to the knowledgeable professional designer) in New York can be learned from this selective sourcebook—even if it involves pointing out where *not* to go. But the most enjoyable part of the work is the critical circus provided by the authors' readable evaluations of shops, shop owners, designers, and designs—where they place all these in the hierarchy of furni-

> Continued on page 259 SEPTEMBER 1966 P/A

# DeSoto found the way

The need was great for a long life exterior metal coating...a coating which would bring new beauty and protection for a period of many years—far in excess of the capability of conventional paints, enamels and lacquers.

De Soto research in the field of fluorocarbon polymers found the way. The need is now fulfilled by De Soto Fluropon.™

Fluropon is actually a color plating, *fused* to the metal it protects and beautifies. For exterior building panels and extrusions, it gives wide latitude in choice of colors and decorative treatments. It stays beautiful through prolonged exposure to most corrosive atmospheres. Adhesion of dirt is minimized by its extremely smooth surface. It cleans easily, undisturbed by commercial cleaners and detergents. It does not delaminate, chip or shatter.

Fluropon provides maintenance-free exterior color and protection with a 20-year life. It saves the cost of frequent re-paintings.

We invite your investigation of De Soto Fluropon and its use in designing structures of distinction and low maintenance. A personal conference will be welcomed. A letter or phone call will receive prompt attention. De Soto Chemical Coatings, Inc., 1700 S. Mt. Prospect Road, Des Plaines, Illinois 60018.

On Readers' Service Card, Circle No. 339





On Readers' Service Card, Circle No. 345

SEPTEMBER 1966 P/A

On Readers' Service Card, Circle No.  $322 \rightarrow$ 



Amarlite Sliding Glass Doors...featured in Skylines throughout the Free World!



METROPOLITAN MARK II AND SUBURBAN MARK II

#### Amarlite Sliding Doors ...a bold new engineering and design concept!

The rolling x-unit has been moved to the outside track ... engineered to form the ideal WeatherWall for all seasons!

Our new sliding glass door WeatherWall rolls right . . . fits tight . . . seals out wind, rain, heat and cold!

#### WE PUT THE FIXED DOOR ON THE INSIDE ... THE SLIDING DOOR ON THE OUTSIDE

... so wind-driven rain or gusts of hot or cold air . . . actually force the WeatherWall sliding glass door tighter against the weather-stripping. The door is surrounded on both sides by tough polypile weather-stripping . . . creating the most effective sliding glass door weather-seal known!



Amarlite WeatherWall design is used in both the monumental Metropolitan Mark II and the (basic construction) Suburban Mark II.

Architect-designed . . . balanced symmetrical sight lines . . . tubular construction for quality and strength for the life of the building.





Deeper penetration (9/16 inch) of stile into jamb offers better weather seal. The deep-set jamb maintains its tight seal from top to bottom to compensate for building settlement and less than perfect installation.



Anti-lift feature provides maximum security. Easily locked....can't break fingernails. Door pull is mounted on the sliding outer door. It fits flush with the inner room wall. Pull can't snag draperies....allows drapery tracks to be hung even with interior of unit.



Snap-in cover creates smooth threshold... prevents heels from catching in door guides. Threshold cover provides a completely engineered drainage control. Polypile weatherstripping at **both sides of door stiles** and top rail provides positive weather seal for both **inward** and **outward** wind pressures. It's resilient, mildew and rot-proof.



Telescoped corner construction working in conjunction with roller assembly housing creates a strong, rigid, positively positioned corner. Stainless steel rollers with sealed, unitized ball bearings offer full 1/2 inch adjustment.





It's **reversible!** The fixed door may be placed left or right... on the same basic frame now or later. Glass requirements may be changed at any time from '/4" glass to insulating glass with only the change of vinyl.

**next job** specify the Mark II... Suburban or Metropolitan sliding glass door offering you more... at the most competitive price! We continue to search for better ways of engineer-

ing architectural aluminum for functional, elegant ... spacious structures! And our bold new WeatherWall sliding glass door is the result of our research, laboratory testing and field experience. Its Tubular construction provides hidden strength ... greater resistance to wind loading. Furthermore, WeatherWall has true, flush balanced sight lines ... opened or closed ... inside or out! Why specify less when you can build a WeatherWall? Use the SUBURBAN Mark II for basic construction ... the METROPOLITAN Mark II for monumental jobs. For more information, see your Amarlite representative, or write to Amarlite, Division of Anaconda Aluminum, Main Office, P.O. Box 1719, Atlanta, Ga. 30301.





We operate one of the world's largest and most modern plants for the manufacture of precision architectural aluminum products. We package curtain wall, new lines of symmetrical slide/action and vault/action windows
... store fronts, entrances, the new LaPorte foam-core door, versatile Mark II sliding glass doors ... and more. Everything we make is architect-designed for beauty, function and easy installation. Our aluminum finish is available in conventional anodizing and our new Amanodic hard coat finishes.

Prices are competitive and we deliver on time. So, when next you need aluminum . . . engineered, packaged,

and designed for distinguished architecture,

think of us. Specify Amarlite!



# When you set your mind to dreaming, think of us!



Catalogs Available!

ENGINEERED FOR DISTINGUISHED ARCHITECTURE . .

Atlanta • Chicago • Cleveland • Dallas • Paramus, N.J. • Los Angeles • Export throughout the Free World



# **BALONEY-BUSTER**

This Trend folder contains no flowery carpet words, no soft carpet sell.

It just gives you the straight scoop on contract carpet specifications like *pitch, gauge,* and *density*. It tells how they relate to the ultimate performance of the carpet. And explains why economic factors like tax depreciation may affect the type of carpet you specify. Naturally, we also include a few of our own carefully engineered specifications for your inspection. Why do we want you to be fussy about specifications when a lot of other guys are just trying to sell you good-looking carpet? Because specification selling is what made us America's fifth largest carpet manufacturers in only five years.

When we get a chance to show you what we can deliver, and at what price, we almost always beat out the other guy. And if you think *that's* baloney just try us.



Please send me The Contract Carpet Specification Guide. Name Title
Title
Company
Address
City
StateZip Code

SEPTEMBER 1966 P/A



# For contemporary elegance, nothing beats wool. Except Acrilan.

The carpet below looks just like wool, doesn't it?

Well, it isn't.

That deep luxurious pile is pure Acrilan<sup>\*</sup> acrylic fiber. It's warm as wool. As rich-looking as wool. In fact, it has all the advantages of wool, plus something extra.

Acrilan acrylic is easier to clean than wool. It's non-allergenic, mothproof, mildewproof. And the bounciness of Acrilan is built right into the fiber.

These are the practical reasons for

specifying Acrilan. But the best reason, of course, is this: carpets of Acrilan acrylic fiber are beautiful.

The finest carpet mills make carpets of Acrilan acrylic...all labeled with the bigred Acrilan "A." In rich colors and patterns, and in hundreds of styles—from the supermodern to Early American.

Demand carpets with the red "A." It means you are getting genuine Acrilan acrylic fiber.

For additional information write: Contract Carpet Dept., Chemstrand, 350 Fifth Ave., New York, N. Y. 10001.

These are among the mills now licensed by Chemstrand: for Acrilan: Barwick, Bigelow, Cabin Crafts, Callaway, Coronet, Crestline, Downs, Forrest, Gulistan, Hardwick and Magee, Hightstown, James Lees, Loomweve, Magee, Masland, Monarch, Philadelphia Car-

pet, Roxbury, Wunda Weve. In Canada: Barrymore Carpets, Crossley/Karastan, Harding Carpets.

CHEMSTRAND Chemstrand, N.Y. 10001. Division of Monsanto





Random shades of popular cork-Kentile<sup>®</sup> Custom Cork Tile. 12" x 12" x 3/<sub>16</sub>" tiles. Ideal in libraries, boardrooms, offices, bedrooms, and living rooms.



All the deep beauty of natural cork! Use Kentile's Custom Cork tiles for comfort, quiet, and warmth underfoot. As easy to clean—and as carefree—as vinyl! Custom Cork is sturdily finished to resist scuffing, grease, and dirt. The look of natural cork enriches both modern and traditional rooms and halls—residential, institutional, or commercial. For samples, call your Kentile Representative.