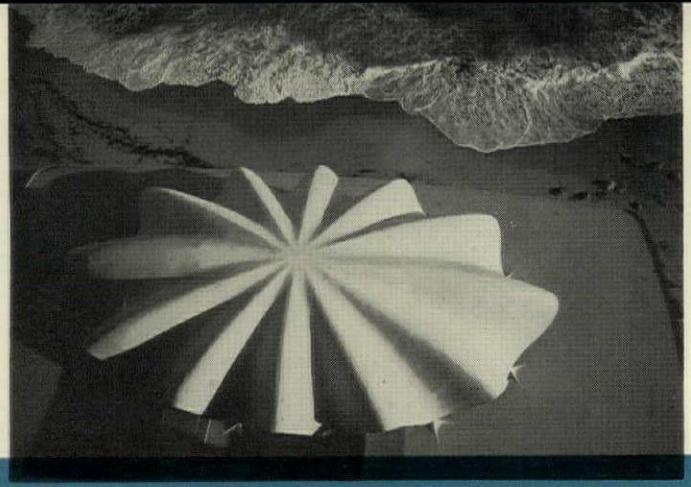

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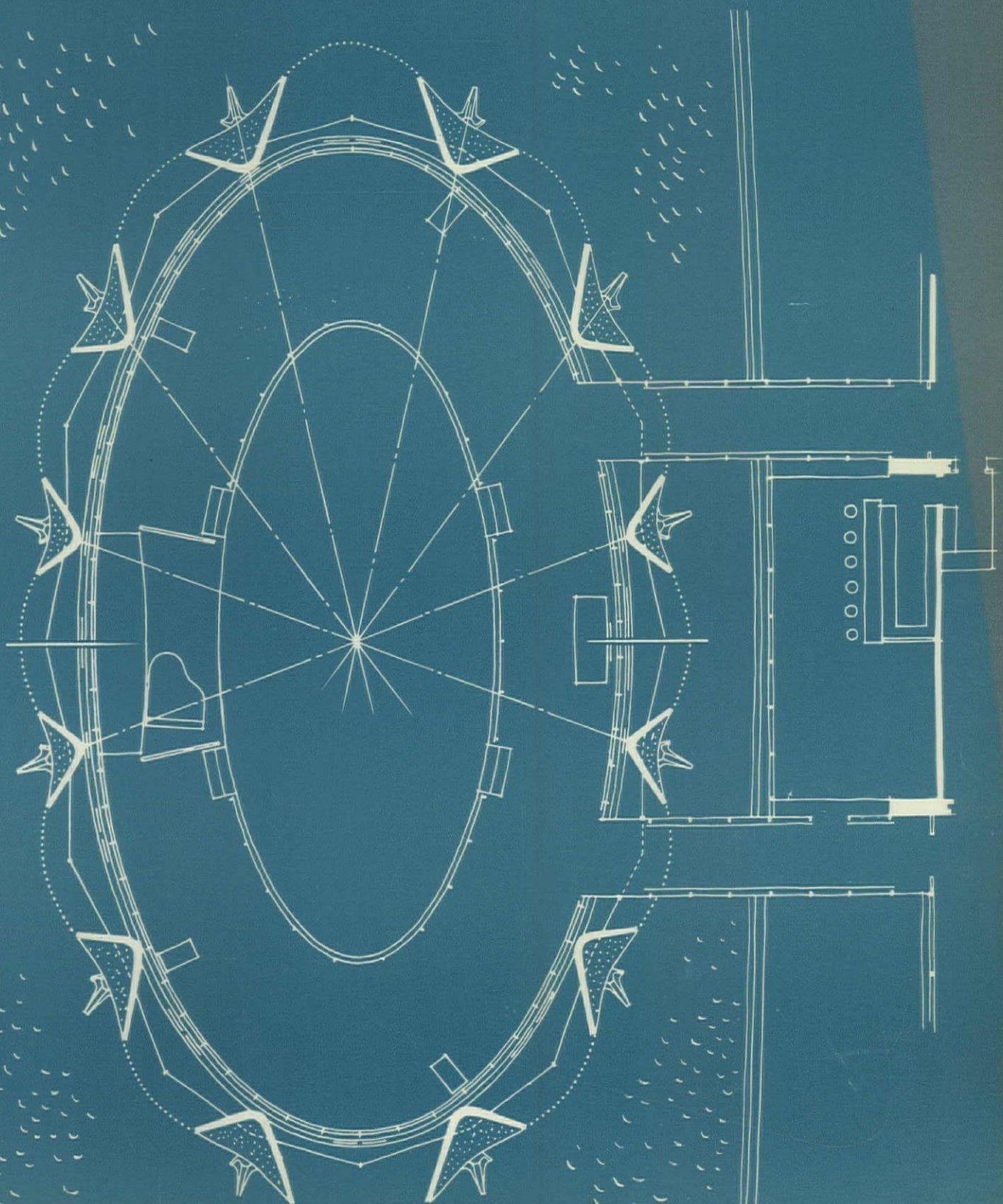

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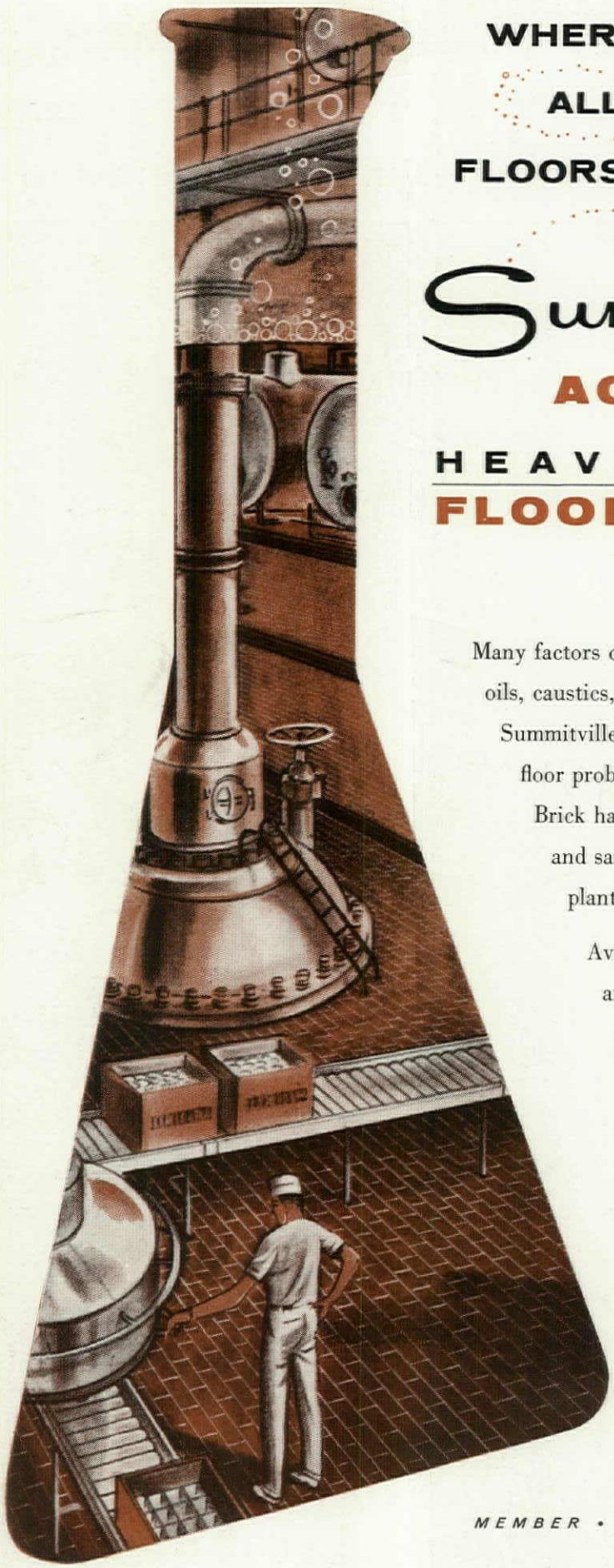

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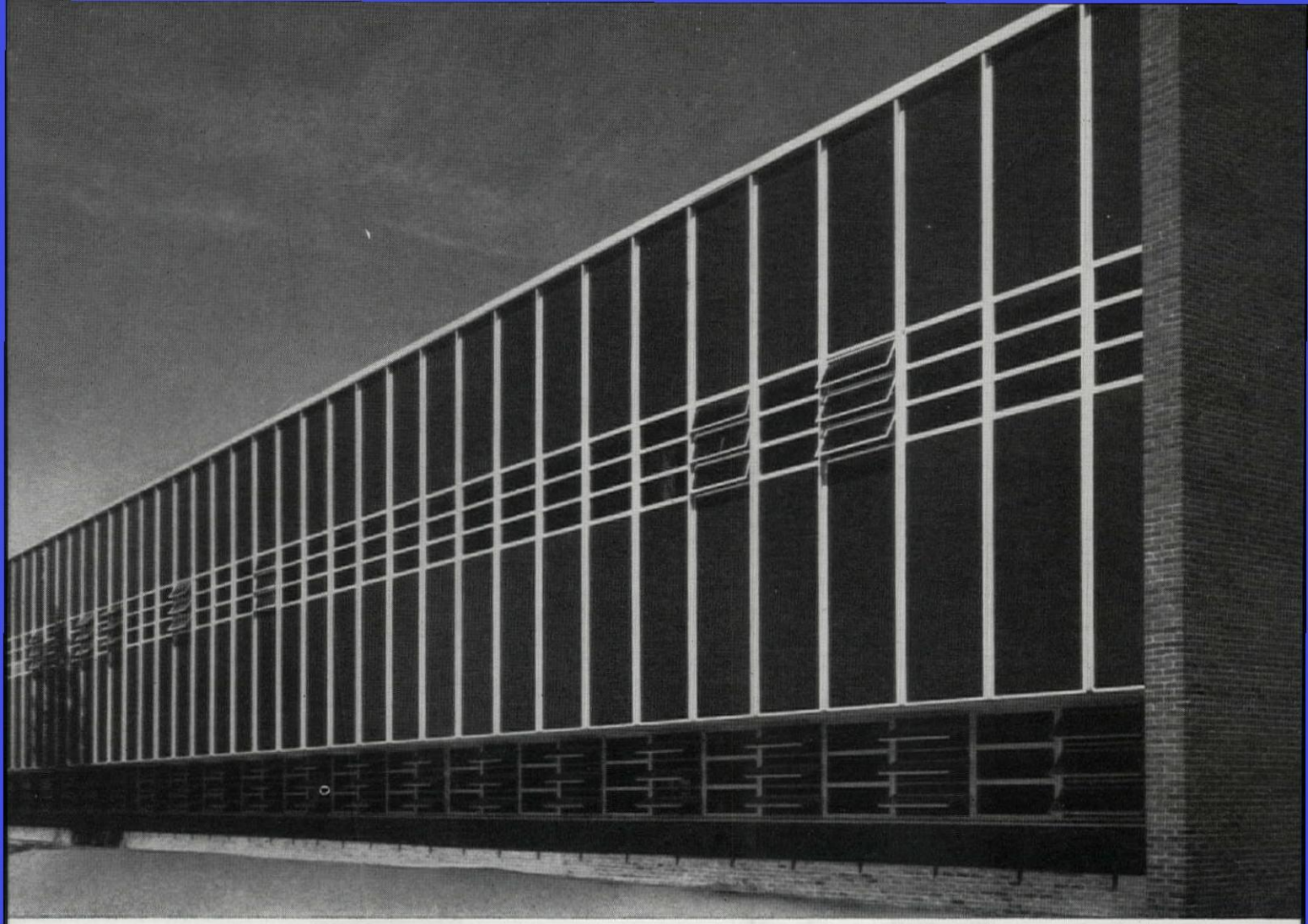

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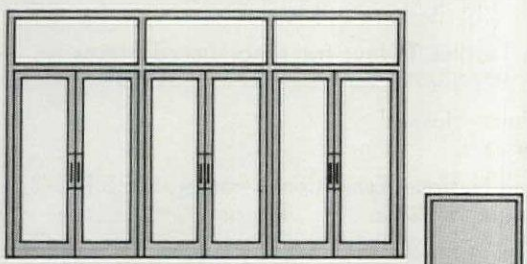

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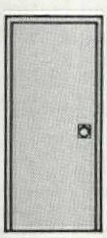

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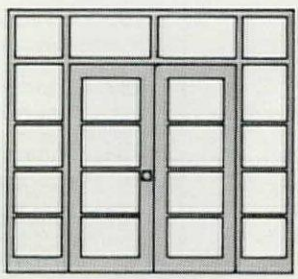

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Fair Comment on Architecture II

It's The Law Column by Bernard Tomson

P/A Practice of Architecture ***article concluding a two-part discussion of the libel laws as they affect criticism of architecture.***

We concluded last month's column by pointing out that criticism of public buildings is generally considered privileged under the "fair comment" doctrine, but that distinction between public and private buildings today is only one of degree.

The interest of the public in all types of structures is manifested in many different ways. The public's interest in the competency of the architect and his work is first indicated by the requirement in most states that the architect be duly licensed and registered. The plans of an architect must be filed and approval obtained before construction can be commenced. The municipality, through zoning laws and building ordinances, regulates the locality where the structure can be erected and regulates its height, set back, sanitary facilities, area, etc.

The power of the state or municipality to regulate the practice of architecture and to control, through its zoning and building laws, the architect's plans and specifications is based upon the police power of the government to safeguard the health, safety, and welfare of the community. This same health, safety, and welfare is involved whether the building in question is public or private. The public concern is with all structures, and there would be no justification for permitting a wider area of comment and criticism in respect to public buildings than to any other type.

The public interest in all buildings and architectural works is also manifested by the increasing importance of esthetic factors in zoning regulation and urban redevelopment. "Look alike" ordinances, minimum area restriction, and similar statutes evidence the public interest and concern with this subject. The United States Supreme Court in Berman vs. Parker (IT'S THE LAW, JULY and AUGUST 1955, MAY 1959 P/A) recognized esthetic considerations as an integral part of the "public welfare" concept. The Court stated:

"The concept of the public welfare is broad and inclusive . . . the values it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious, as well as clean, well balanced as well as carefully patroled."

The validity of government regulation of construction, based upon esthetic factors in the interest of the general welfare, must be based upon the premise that the public has a direct, continuing, and vital interest in the design, appearance, and type of building that is constructed. It follows from this premise that the public must be free to criticize the esthetics or any other feature of a particular structure, within the rules laid down for "fair comment."

However, in at least one early New York case (N.Y. L.J. 2/1/27, Pg. 977, aff'd. 221 AD 760) the Court took the view that a graphic and sarcastic criticism pertaining to the design of an architectrual work amounted to a personal censure of the architect and thus lay outside the protection afforded by the privilege of "fair comment." The critcism, which appeared in *The New Yorker* magazine, stated the following:

"Another disappointment on proud Fifth Avenue, at Forty-fourth Street, is the Delmonico Building, . . . which causes older members of the profession, wending their way luncheonward at the Century Club, to burst into tears. They do not look at the building itself. They can't. Every proportion appears to be unfortunate. The central tower, curiously set on no particular axis, has the grace of an overgrown grain elevator. Of the detail one of the profession said 'Isn't it curious how a simple element like a bandcourse or a molding can produce a feeling of nausea?'"

The ruling of the Court in the foregoing case to the effect that the criticism above quoted amounted to a personal censure of the architect has been much criticized, and there is doubt whether it would be followed today. Seelman, in his treatise on *Libel and Slander*, points out that it is difficult to understand how the comment described in this case, even though exaggerated, could be deemed an attack on the character and motive of the architect, and thus outside the scope of the "fair comment" privilege.

In another New York case (*Vosbury vs. Utica Daily Press Co.* 183 App. Div. 769) it was held that a newspaper story was libelous which stated that the roof of a high school was in danger of falling; that the architect had been notified but had ignored the notification; and that these facts did not speak very well for those who designed and built the school. The decision of the Court was based upon the premise that the criticism in question charged the architect with general unskillfulness and general carelessness, and that such comment was not protected by the "fair comment" doctrine. A charge that an architect has disregarded possible danger to life and property, is, of course, of entirely different quality than criticism concerning the esthetics of a structure. Architectural criticism to be privileged under the "fair comment" doctrine must not charge the architect with general unskillfulness or negligence.

The fact, however, that architectural criticism is made in a sarcastic vein or with ridicule, does not exclude the application of the "fair comment" doctrine. Illustrative of this long established principle

(Continued on page 9)

Bernard Tomson, whose IT'S THE LAW column has appeared in P/A for more than 10 years, has been appointed District Court Judge of County of Nassau, Long Island, N. Y. Although Judge Tomson has resigned from his law firm (Bernstein, Weiss, Tomson, Hammer & Parter, of New York), he will continue as a P/A columnist, in association with Norman Coplan, a member of the same firm who is a specialist in architectural, engineering, and building law.

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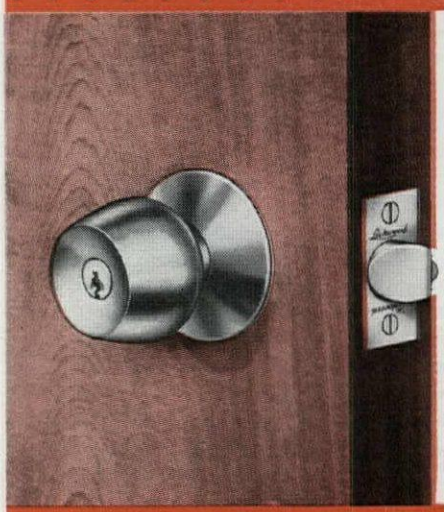

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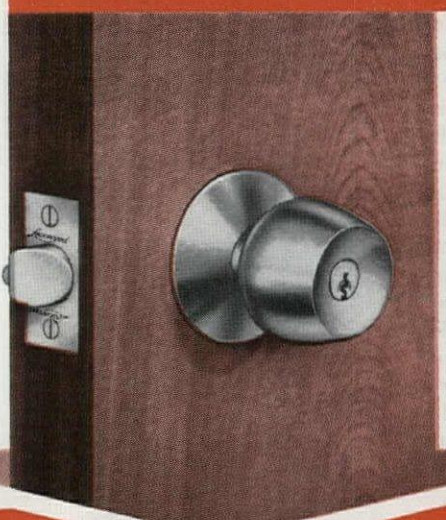

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Fair Comment on Architecture II (continued)

is an English case decided in 1827. (*Soane* vs. *Knight, Moody & Malkins,* 74) wherein the Court stated:

"This publication professes in substance to be a criticism on the architectural works of the plaintiff. On such works, as well as on literary productions, any man has a right to express his opinion, and however mistaken in point of taste that opinion may be, or however, unfavorable to the merits of the author or artist, the person entertaining it is not precluded by law from its fair, reasonable and temporate expression. It may be fairly and reasonably expressed, although through the medium of ridicule. . . ."

The area of public interest justifying critical comment under the "fair comment" concept is ever-broadening. In a recent case in New York (157 N.Y.S. 2d, 209) a doctor who operated upon a member of the then Brooklyn Dodger baseball team, claimed to have been slandered as a result of a statement which indicated that his fee was exorbitant, that the operation was probably unnecessary, and that he thought he was operating on the patient's bankroll rather than on his hand. In indicating the broad scope of public interest in respect to the privilege of "fair comment," the Court stated:

"It is beyond dispute that the subject matter of defendant O'Malley's statement . . . is in the area of the public interest and, hence, subject to fair comment. The Brooklyn Dodgers and its players receive persistent national publicity and, on occasion, world-wide attention. Medical treatment of such players, especially in reference to their capacity to play, is likewise of general comment and interest."

If actions taken in respect to a baseball team are considered of sufficient public interest to justify defamatory statements under the doctrine of "fair comment," the public interest in architecture certainly justifies the widest area of privileged comment in this field. Public concern with architecture is such that the requirements of a free society demand the privilege of unfettered comment always provided the comment is based upon truly stated facts. The "fair comment" concept is entitled to the broadest application when applied to the field of architecture.

"Office Standard" Specifications Document Brings Advantages

*by Harry Haas**

P/A Practice of Architecture ***article describing a method of specifications writing which distinguishes between general-office standards and specific-job requirements.***

In our office, specifications writing and reproducing is now costing less money and is being accomplished more easily, quickly, and accurately by issuing specifications in two documents: one called the *Office Standard* and the other the *Project Supplement.* The first contains the repetitious (but necessary) matter which comprises the bulk of all projects. The second, which is prepared individually for each project, and which combines the functions of outline specification and addendum, is short and concise. By reference to the *Office Standard,* however, it has the effect of including all of that document's pertinent, detailed provisions. A third document, also prepared separately for each project, is for office use only, and serves as a check list and guide for the drafting room, the specifications writer, and the typist, to co-ordinate and simplify the work of each in writing the *Project Supplement.*

The *Office Standard* documents are permanent, and the copies are reissued job after job, since they are returned to the architect after serving their purpose for bidding or building. *Project Supplement* documents are reproduced conventionally, and are "expendable". The one copy of the check list and guide for each job is kept in the office files as a permanent record, after being used to prepare the *Project Supplement.*

Our usual method of specifications writing, as in most architectural offices, had previously consisted of marking over an old set of specifications used in the past for a similar structure, the marked-up version then being retyped and duplicated in the required quantity, so that the "new" copies could be issued for the current project. By far the greatest portion of each specification continued to be thus copied over and over from older ones; its repetitive phrases, sentences, paragraphs (and sometimes entire sections) containing the basic instructions, admonitions, and precautions, changed but little year after year. For the most part it was but a confirmation of the way of doing things that were standard to the trade concerned, but the words had to be reiterated in case it was necessary to quote them in reply to the demand: "Show me where it says to do that."

Sometimes all the new information didn't get included, when the conventional method was used, despite elaborate check lists. Equally, some of the old information (which had no application to the present job) didn't always get pulled out, and the ghost of last year's project remained to haunt, causing embarrassing bulletin-issuing, before the mistake was finally corrected.

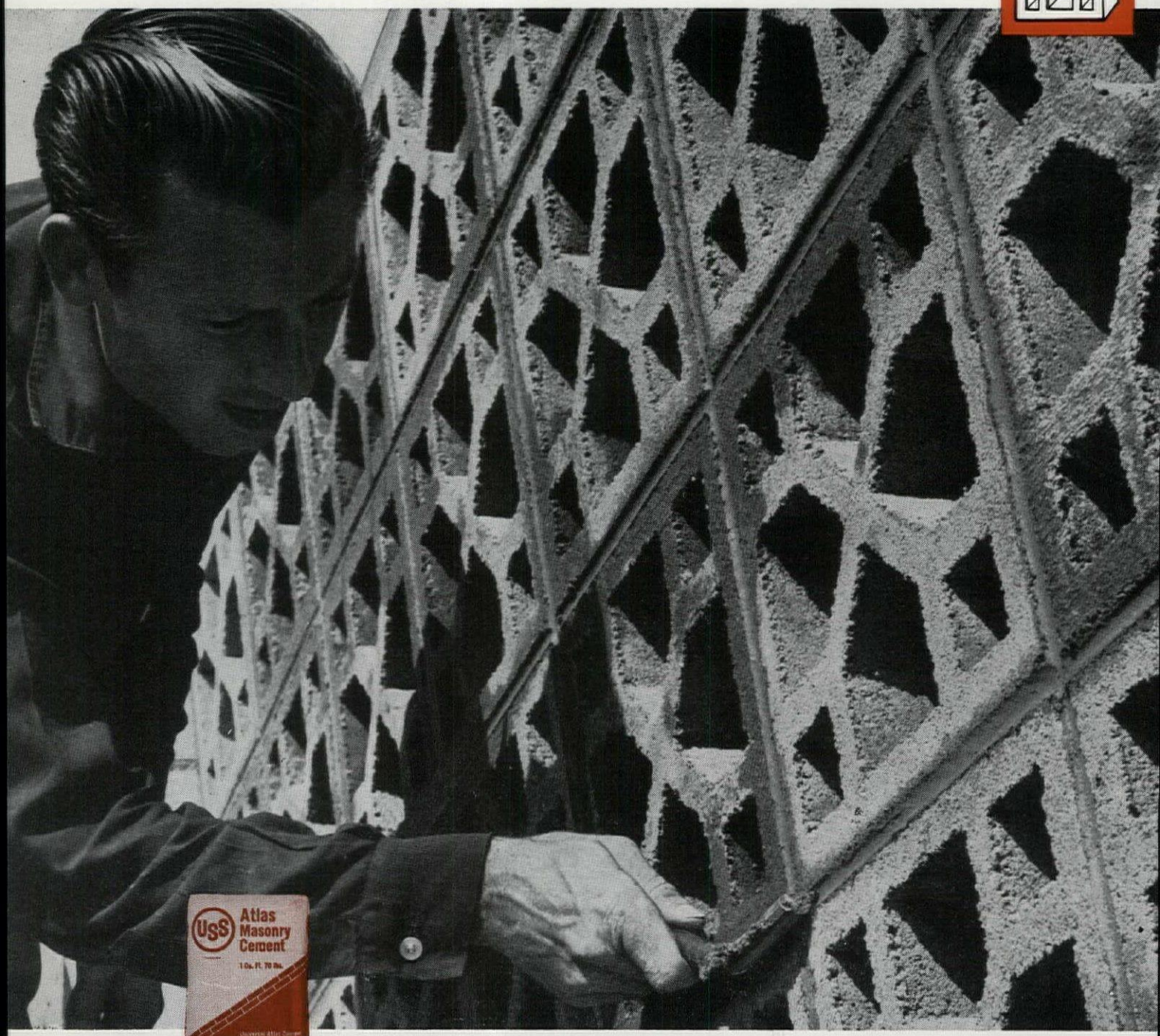
And so the typist spent time copying, the specifications writer spent time proofreading, the office boy spent time running the machine, until the reams of paper had been organized into bulky books of instructions, varying but little from those which had gone out with the last similar job. In the bidding stage, each contractor, subcontractor, and supplier had to read very carefully the words piled on words lest a hidden phrase be missed—one that would affect his pocketbook later on when the architect pointed out its hiding place and said, "See there!" During construction, the customary specifications seemed to be consulted infrequently by the builder on the job, perhaps because it was too much trouble for him to wade through the tangle of words to pull out the pertinent instructions; at any rate, the document usually gathered dust in a corner of the construction shack.

The separation into *Office Standard* and *Project Supplement* has made it possible to organize the specification document logically, with emphasis

(Continued on page 11)

* *AIA; Jones & Haas, Architects, Jackson, Miss.*

Great new things are shaping up in concrete block



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"Office Standard" Specifications Document Brings Advantages (continued)

placed where it belongs: on the precise requirements of the project at hand.

•

How has this worked out in practice? We have used this specification system for almost a year and a half now, in connection with 17 projects large and small, aggregating over $4.5 millions in construction costs, and the response and acceptance from bidders at all echelons has been excellent; many have requested that a copy of the *Office Standard* be signed out to them permanently, rather than being checked out and in each time.

Demonstrable savings in time and materials have resulted: 500 copies of the 127-page *Office Standard* were mimeographed by a commercial letter shop, with printed covers and plastic tape back, at a very reasonable cost (only 200 copies have been needed so far); the actual determination and writing of each new specification takes somewhat less time than when done conventionally, and the typing time is considerably reduced (a student typist cut the stencils for the *Project Supplement* general construction specifications for a $300,000 school in one afternoon); much less paper is required, for the *Project Supplement* is less than one-fifth as long as a conventional specification would be, leading to further savings by reducing the time needed for running off and collating the sheets.

In the *Office Standard* the following Specification Explanation is given:

"These specifications consist of two parts, each complementary to the other; both included in the Contract Documents; as follows:

Part One—OFFICE STANDARD

Part Two—PROJECT SUPPLEMENT

"*Part One,* bound into a booklet, sets forth standards of materials and workmanship of the office of JONES & HAAS, ARCHITECTS.
"Customarily these will apply to all projects of the architect; certain provisions (as noted) are applicable only when specifically referenced in *Part Two.*
"(Since *Part One* requirements will not vary from project to project, it is expected that bidders will become familiar with its provisions, with obvious advantages.)
"*Part Two,* reproduced individually for this project, sets forth its further requirements; amending or supplementing *Part One,* or introducing certain new provisions."

In the body of the *Office Standard* each trade Division contains the standard paragraphs which are usual to the trade and normally required, plus a number of paragraphs marked "optional" which are applicable only if called for in the *Project Supplement.* The optional paragraphs are for items which do not occur in all projects, but are needed often enough to merit inclusion, so as to avoid having to type them fully in the supplement.

•

It is the third document—the *Check List and Guide*—which constitutes the heart of the system and is its unique feature. By tying together in methodical manner the development of the entire specification—starting with the designers, detailers, and draftsmen; through the actual setting down of the basic facts and final decisions by the specifications writer; to the typist for transcribing into the *Project Supplement*—it organizes and disciplines the entire procedure.

In the *Check List and Guide* the typical pages are ruled in seven columns: the first and second (which are to be disregarded by the typist) contain the check-list items and special memos to guide drafting room and specifications writer, with space for check marks opposite appropriate references; in the next four columns are written the section and paragraph numbers and descriptive headings and a space for specification information filled in, written in, or referenced to attachments.

The *Check List and Guide,* in blank form, is given to the drafting room at the beginning of the working-drawings production period. The job captain and the draftsmen place notations and memos in the appropriate spaces of the guide as the drawings progress, these notes serving later to guide the specifications writer. When the latter takes over, his task is greatly simplified.

Standardized instructions are given to the typist as to how the check marks and notes are to be translated into final form.

•

Each *Project Supplement,* as issued, contains the note:

"The following specifications are to be read in conjunction with Part One: *"Office Standard"* (Copyright 1957, Jones & Haas), as explained therein, and as amendments and supplements thereto.
"If the paragraph number in this *Project Supplement* is:
(a) One of the 'standard' paragraph numbers, the information *adds to,* or *amends* that paragraph.
(b) One of the 'optional' paragraph numbers, that paragraph is included (and *added to* if so noted).
(c) Not listed in the *Office Standard,* the paragraph is 'new,' and *included.*"

As an illustration of the finished product, the entire Section "Concrete and Reinforcing Steel" of the *Project Supplement* might read:

SECTION 6 *CONCRETE & REINFORCING STEEL* Per Office Standard, par. 1-15: included. Par. 2(b), *Course Aggregate:* Gradation per Table II.
Par. 4, *Proportioning and Mixing*: Delete sub-par.(a). Change sub-par.(c) to: Water-cement ratio and consistency—pour all concrete reasonably dry; water to be controlled by laboratory.
Par. 10(b), *Cement Finish*: All floor slabs to finish level, to tolerance of ¼" in 10'.
Par. 10(f), *Two-course*: Delete.
Par. 10(i), *Special Hardener*: Add: "Dustproofing" where noted in Shop and Locker Rooms, "Jim Dandy" or equal, in 2 coats, per manufacturer's directions.
Par. 16, *Concrete Testing*: Per Office Standard.
Par. 17, *Special Forms*: Use tempered pressed-wood forms with screen side next to concrete, wherever "smooth rubbed finish" is noted; use "Little Gem" seamless fiber forms for circular columns; rub to smooth finish after removal of forms.
Par. 18, *Concrete Piles*: Per Office Standard.
Par. 22, *Splash Blocks*: Per Office Standard, under hose bibbs, 12 required.

•

Such a system of specifications writing as outlined, it is believed, could be published nationally, and a nationwide *Office Standard* made flexible enough to conform to various regional practices (more and more, national standards are being set up and subscribed to by voluntary trade associations or groups of manufacturers, such as the Portland Cement Assn.; AISC; Steel Joist Institute; NOFMA; Painting and Decorating Contractors of America; Metal Lath Mfrs. Assn., to name but a few from a vast list). To add further flexibility, it is thought that the *Check List and Guide* might be published as a specimen copy only, leaving to the individual office the adaptation to its own check list, with its own customary amendments.

another case history of

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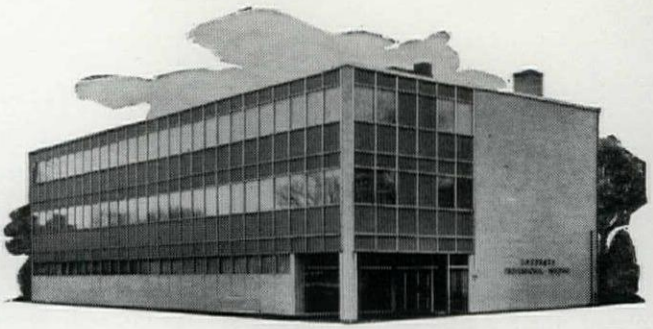

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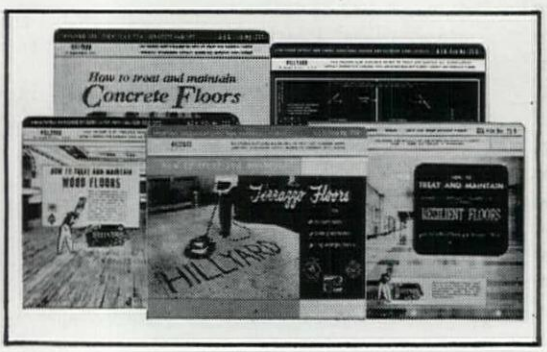

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Branches and Warehouses in Principal Cities

Standardizing Acoustical Materials and Suspension Systems

Specifications Clinic by Harold J. Rosen

P/A Practice of Architecture ***article describing the efforts of two committees which have been formed in attempts to standardize and to simplify acoustical specifications on an industrywide scale.***

How does the architectural specifications writer select a metal suspension system for suspended acoustical ceilings? He may decide on a concealed system, an exposed grid, or a semi-exposed system. However, within these categories there are many variations. At present, in the absence of a standard in this field, the specifications writer selects one of many manufacturers' standard systems on the market. In some localities where codes are based on old and antiquated requirements for former interior finish products a modern acoustical ceiling is penalized because the existing code requires the same methods of attachment and erection and the installation is more costly than necessary. Conversely, in areas without minimum code requirements, some of the metal suspension systems are so competitive that gages of the suspension system are lightened, and other short cuts taken that result in weak, flimsy, or marginal products or systems, so that the structural adequacy of the system is seriously questioned.

To bring a semblance of order out of the multitude of systems which now prevail and to simplify the problem for the various interests now concerned with acoustical suspension systems such as architects, enginers, building-code officials, consultants, and consumers, a special task force of the American Society for Testing Materials is presently working with the leading suspension system manufacturers as well as other interested groups in an attempt to write a performance specification for mechanical suspension systems for acoustical products. This group is designated as Committee C-20, Subcommittee IV "Acoustical Suspension Systems." The objectives of this task force are "To devise a series of test procedures for all component parts of suspended ceiling construction that affect the safety and appearance of installed acoustical ceilings, from attachment hangers through all the component parts incorporated in the ceiling."

The work of this Committee is still in progress and the following premises were agreed upon as a groundwork for future discussion by the Committee in arriving at a standard for metal suspension systems.

1 Suspension systems shall be divided into the following five categories:
   (*a*) H & T or Z or Tongue & Groove or Clip Spline, all concealed types.
   (*b*) Exposed grid.
   (*c*) Semi-Exposed systems such as Acoustiline, Exposed Main Runner or Exposed Z.
   (*d*) T Bars or snap bars for metal pan.
   (*e*) Nailing Bar including Nail Lock and Jackson Channel.
2 Performance tests on ceiling suspension members shall be made on the basis of a simple beam rather than a continuous beam, both for ease of testing, simplicity of quality control, and because it will be more easily understood by both architects and owners.
3 Maximum allowable deflection was suggested as 1/360th of the span but since this hinges so much on appearance, it must be ironed out with the AMA technical committee.
4 Factor of safety was suggested as four on simple beams and six on continuous beams.
5 Maximum weight of ceiling was discussed as generally being three pounds per square foot, but due to the complexities of integrated ceilings, it was decided to leave this matter to a committee.
6 It was agreed that all measurements of metal thickness shall be in thousands of an inch rather than in some arbitrary gauge.
7 It was suggested that present studies be confined to steel members although many of the principles will apply to aluminum or other possible materials of construction.
8 Standard method of testing and reporting was referred to a committee for study.
9 Corrosion: Information is to be obtained from American Institute of Iron and Steel, and American Zinc Institute, as a basis for further study.
10 It is suggested that the Committee's work conform to existing building codes wherever possible, and liaison will be set up to accomplish this.
11 Liaison is to be maintained with other organizations, such as National Acoustical Suppliers Association, American Standards Association, and Building Research Institute.

It is suggested that anyone desiring to forward the work of this Committee, send any comments or recommendations to: Robert Lindahl, 2261 Winthrop Road, Trenton, Mich., chairman of ASTM task force.

Another area wherein standardization is becoming an increasingly important subject is in the field of acoustical tile. Here, too, the architect and specifications writer must select acoustical tile from a host of products with seemingly no end as to types, sizes and thicknesses, and paint finishes. It is also very possible that in simplifying the list of products available it will be easier for the architect to specify what he wants and at the same time reduce the cost of the material by reducing inventories for both the manufacturer and the distributor.

A number of associations have organized a committee which is working with the United States Department of Commerce in an attempt to establish a simplified list of acoustical tile.

The Simplification Committee is made up of members from National Acoustical Contractors Association and Acoustical Materials Association. Its object is to simplify the present line of acoustical tiles by reducing the number of types, thicknesses, and paint finishes by means of a proposed Simplified Practice Recommendation which will eventually be issued by the Commodity Standards Division of U.S. Dept. of Commerce. The simplification program at present represents but a first step in a continuing program and is now limited in its scope since it takes considerable time to obtain agreement from so many manufacturers involved and also the government's procedures in adopting a standard. Anyone having any comments or recommendations on this program may send their observations to: Martin Brennan, Jacobson & Co., 227 E. 44th St., New York, N. Y.

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Architect

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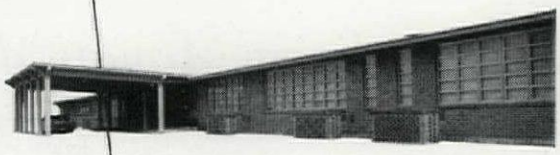

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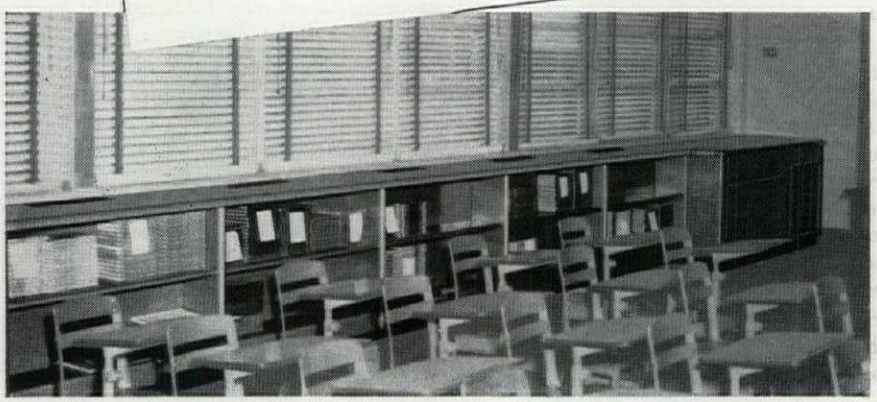

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Inspector's Guide: M/E Equipment of Schools

Mechanical Engineering Critique by William J. McGuinness

P/A Practice of Architecture *column on mechanical and electrical design and equipment devoted this month to field inspection of the mechanical and electrical equipment of schools.*

A manual—*Project Inspector's Guide, Mechanical and Electrical Equipment of Schools*—has recently been written and published by Harry Terry, Consulting Engineer of Trenton, New Jersey, and author of many articles on related subjects. It is an extension of an engineering office's knowledge and experience to the use of its job staff in the inspection, adjustment, and accommodation of mechanical and electrical systems in schools.

The manual, published privately, is not available for general purchase, because Terry's intention is to issue it only to project inspectors and architects with whom he is associated in his professional practice and who may find it of value. Nevertheless, a discussion of its purpose and contents may help to promote the communication, both public and private, of similar ideas and standards. This would provide not only a better understanding of results to be accomplished by the consulting engineer, but also a strengthening of inspection at the site. The fact that such improvements in technique are highly desirable, in this extremely active period in school design and construction, is hardly a subject for debate.

An inspiration for publications of this type might easily be this excerpt from the Code of Ethics of the Consulting Engineers Council. "[The Engineer] exchanges engineering information freely with other engineers, students, and the engineering press, and encourages the public knowledge of engineering." In presenting his manual of field inspection to project inspector and architect, Terry has also reviewed and clarified the broader relationship between owner (school board as agent), architect, engineers, contractor, and equipment manufacturer.

It is well to understand the intended use of the manual and the unique job-staff situation that make it such an important contribution to school construction. The project inspector is the owner's representative on a school building project. He is paid by the school board, but works under the direction of the architect. The inspector's responsibility extends to mechanical and electrical work in addition to general construction, yet the architect is seldom in a position to offer him detailed instructions about day-to-day inspection, adjustment, and correction of this intricate and special part of the work. It is true that the consulting engineer shares responsibility with the architect in this regard, yet the engineer's contract for design and supervision does not include the detailed supervision necessary to avert the difficulties that may arise between his periodic visits. Indeed, in the recommendations of professional engineering societies, one of the several items "not included in scheduled fees" is the services of a resident engineer, inspectors, or clerk-of-the-works for continuous, on-the-site inspection of construction. In any case, the architect holds the final responsibility. He may accept or reject the engineer's recommendations. Court decisions have held the architect responsible for the correctness of the installation of mechanical and electrical facilities, when the engineer did not receive specific extra remuneration to provide daily construction supervision. This kind of decision points up the importance of a well informed project inspector who will be the architect's right arm in all inspection, including that of the mechanical and electrical trades.

In most buildings, the structure and finishes can be built almost as planned and drawn. Experience shows, however, that the mechanical trades are subject to constant restudy and revision as the job progresses. Many of these alterations to the original scheme are merely dimensional, but some affect the functioning of the equipment. The manual recognizes this situation and therefore presents the usual principles of equipment and system-design. Thus, the inspector may also be informed about the spirit of the design and not merely the factual information to be found in the drawings and specifications.

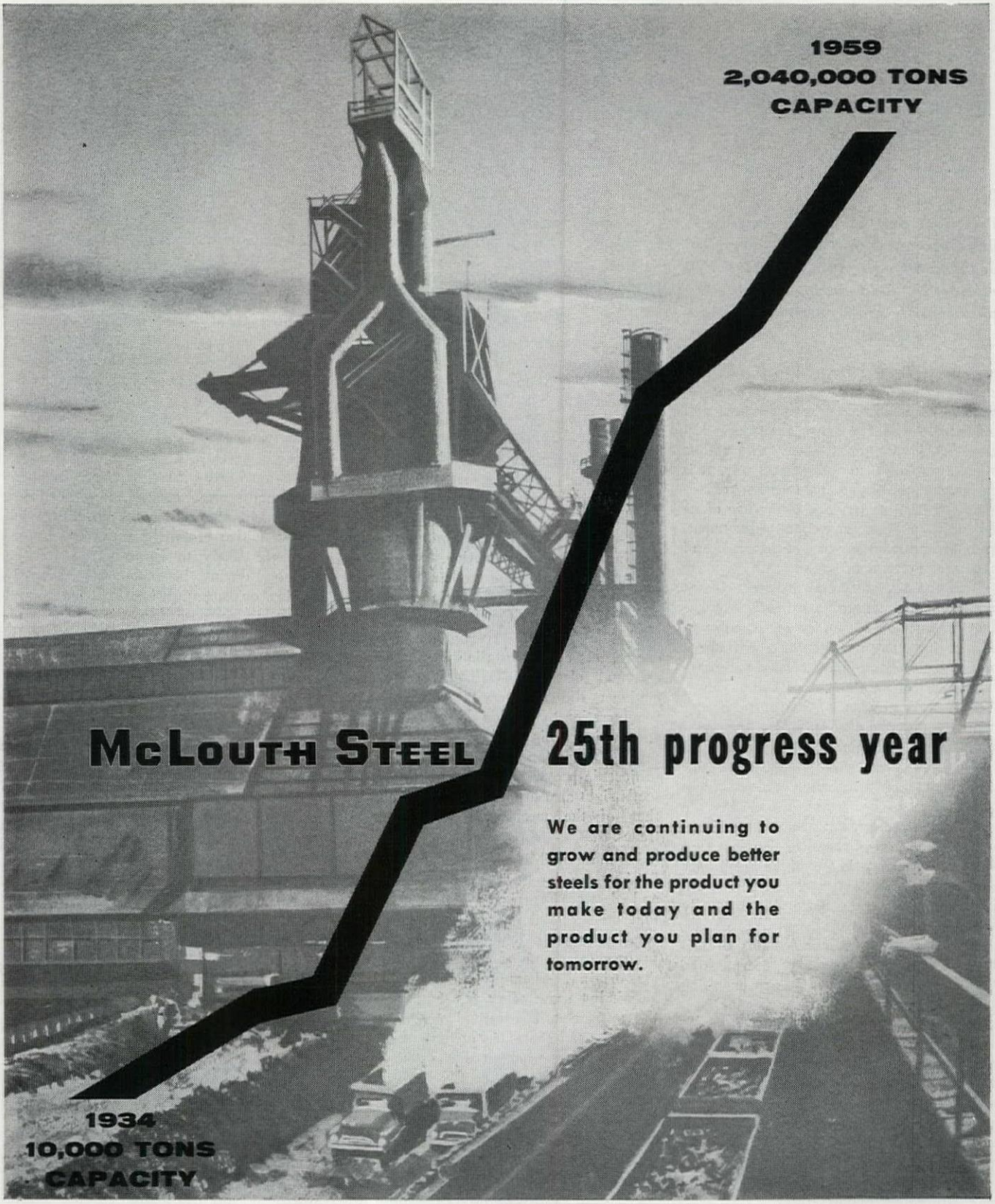
The inspector is instructed, for instance, in the method of selecting a location for a thermostat. Drawings invariably show the location of all thermostats, yet other changes may make a relocation necessary. An originally well planned thermostat location may come to be situated on the inside surface of an outside wall, or subject to sun from a new window or the draft from a new entrance. Quick and correct decisions about location-changes can be made by a well informed inspector. Breaking a custom that some professionals have of keeping design criteria concealed, this engineer passes it on to the field staff. It is stated that the gross volume of the expansion tanks in a hot-water heating system should be about 40 gal for each 3000 sq ft of water radition, and that one or several tanks meeting this required capacity may be used with each boiler. It is also explained that piping and control arrangements are for the purpose of maintaining or replenishing the air cushion. These are examples of the kind of instructions given in all of the manual's divisions including heating, ventilating, plumbing, sewage disposal, electric, and utilities. With such information, the intelligent job representative can make required changes that are likely to be approved by the engineer during his subsquent visit. By passing on some of his knowledge and delegating responsibility, the engineer relieves himself of many telephone calls from the job. He also inspires confidence in the field inspector who finds much of the mystery removed from decisions about mechanical and electrical systems. The good results of such job education should do much to encourage others to join this move for better supervision.

The use of the job meeting is urged as a method of clearing difficulties. This meeting, often held weekly on large projects, is attended by representatives of owner, architect, engineers, contractor, and other interested people. Suggested for inclusion in the first job meeting are the following typical items: surveys and measurements, tests, work schedules, materials lists, shop drawings, system charts, supports, piping construction, pumps, fans, duct system, plumbing fixtures, electrical equpiment, water service, and operational instructions.

Performance and operational tests of equipment are emphasized. There are, for instance, 10 items to check in the operation of an oil burner.

In addition to the usual approval by the National Board of Fire Underwriters, local health authorities, and simliar official bureaus, inspection is solicited from manufacturers. It is to their interest, of course, to see that their products are properly used.

A permanent glazed and framed record of all systems and controls as finally built is most important in later operation and maintenance. Instructions are given for the preparation of such charts and the identification of controls at their locations.



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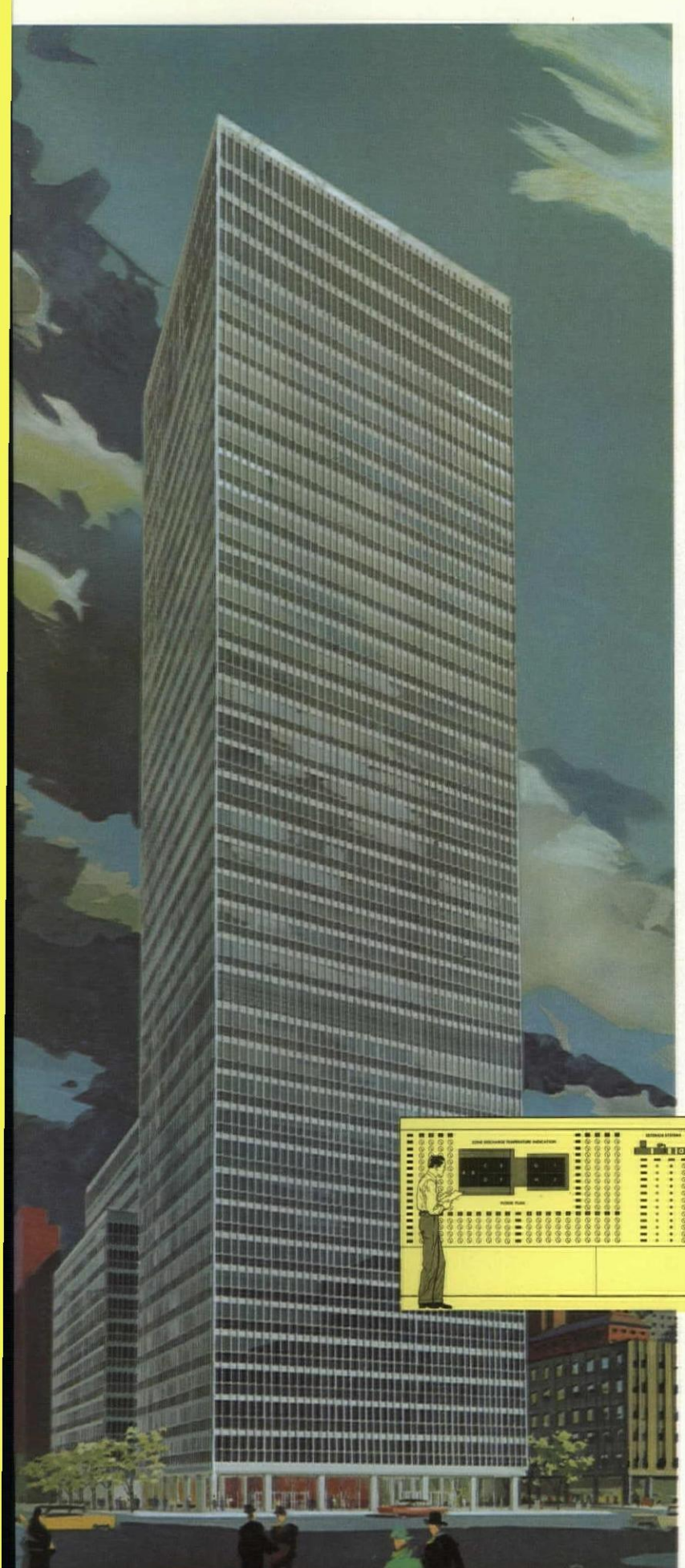

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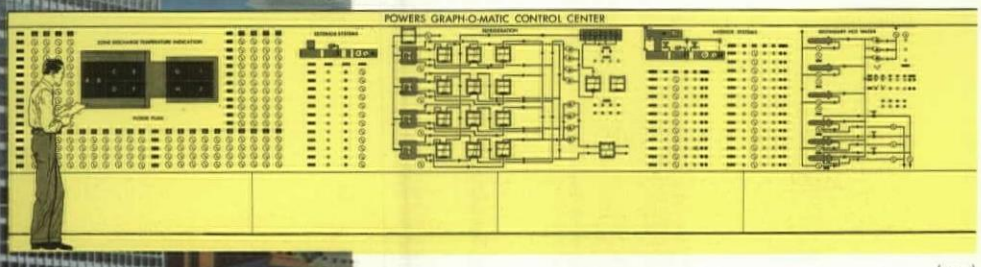

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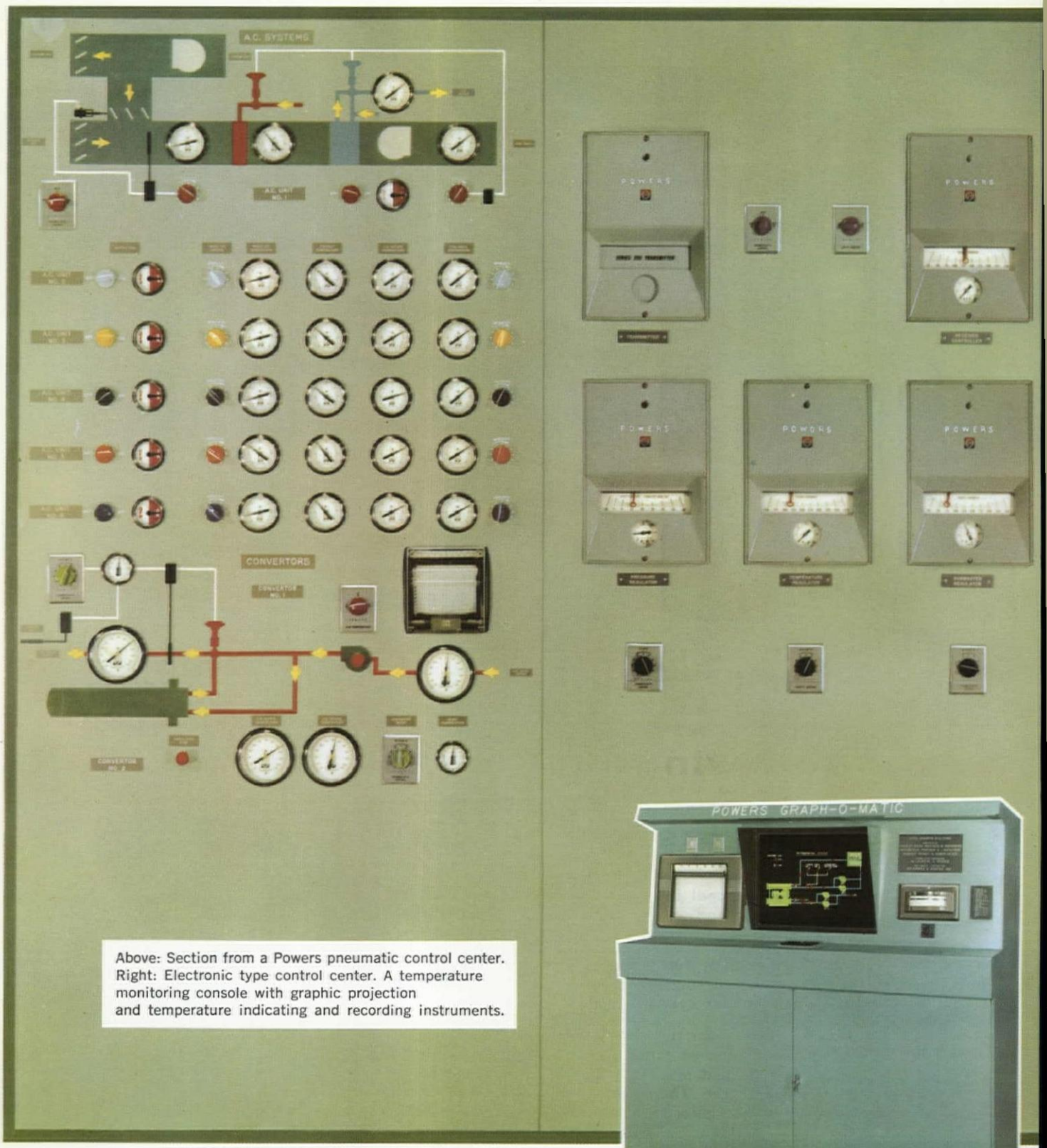

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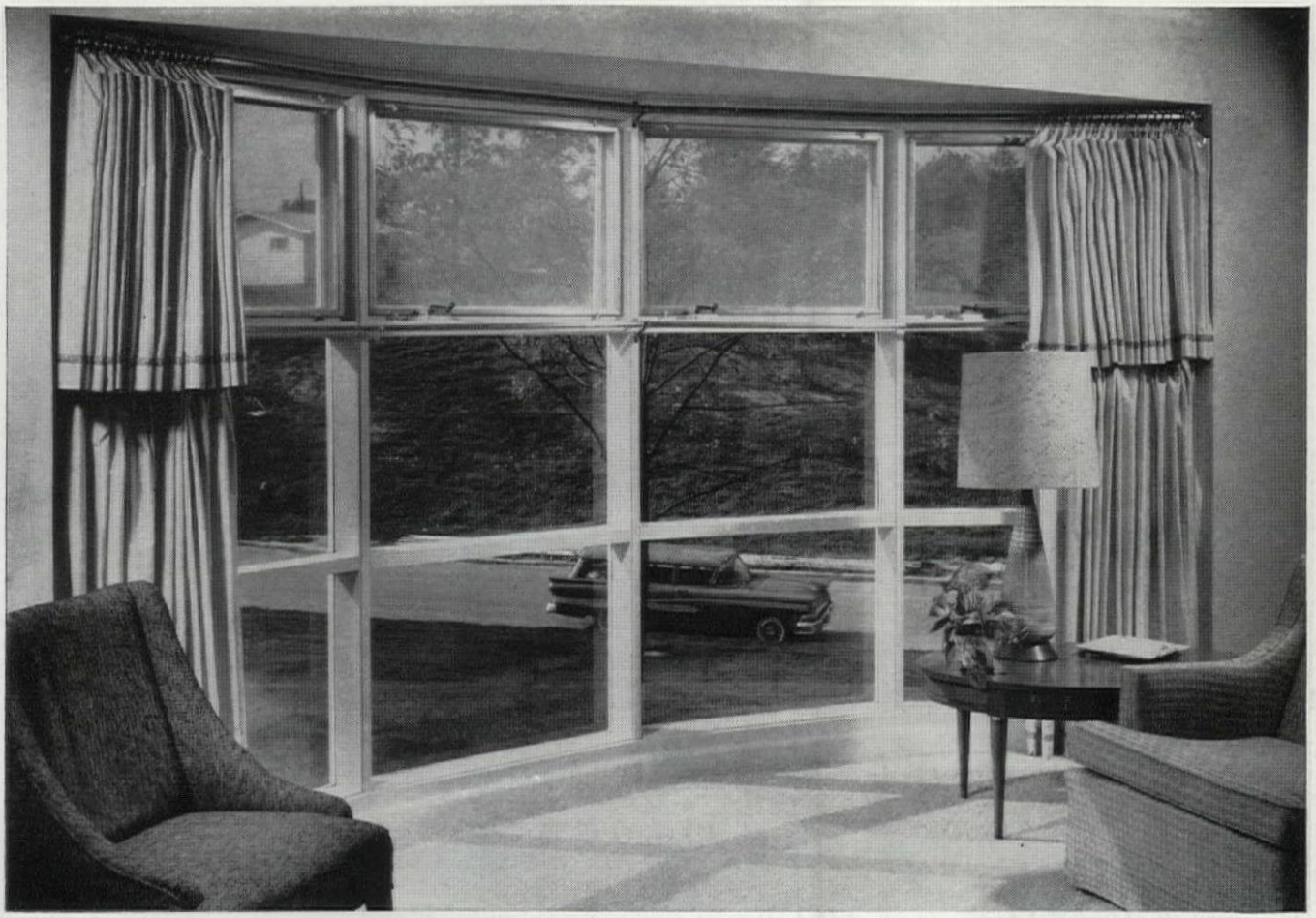

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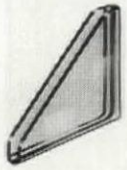

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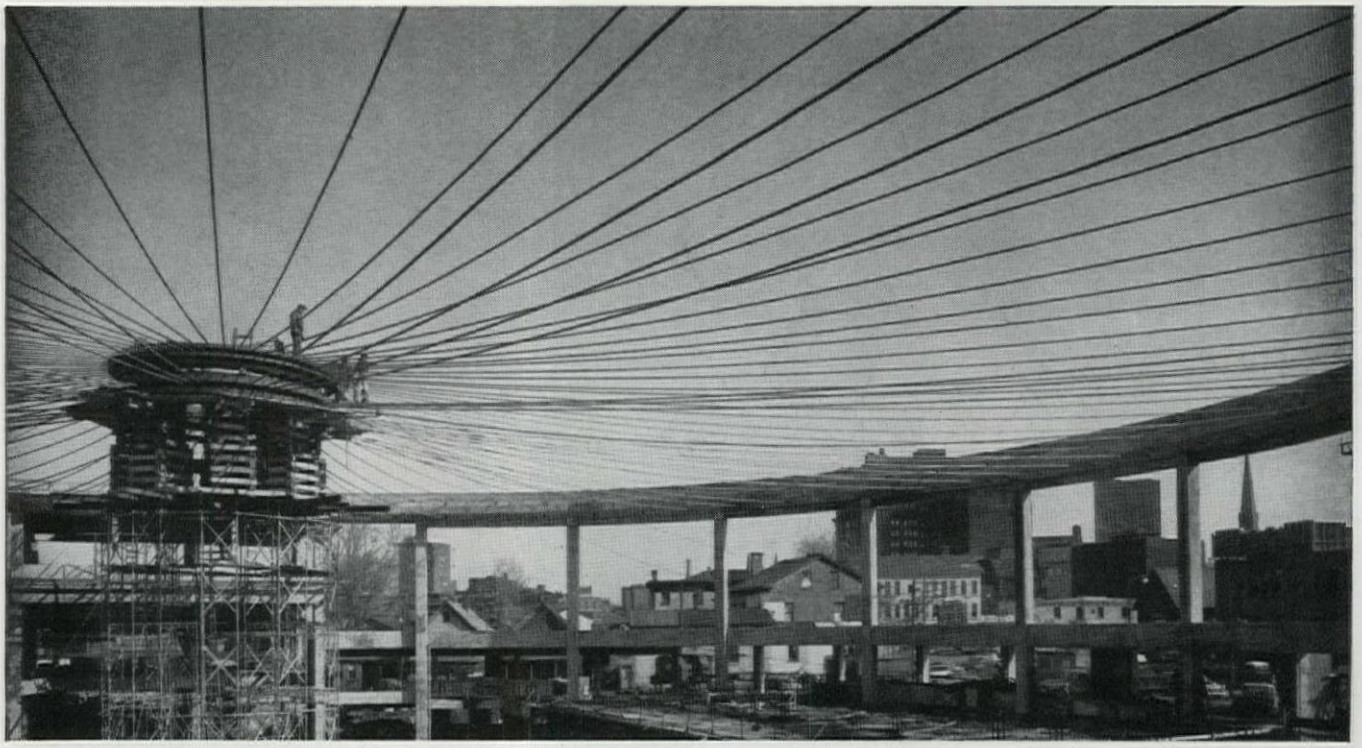

Unique Roebling-Designed Tensioning System used to Erect Suspended Roof Cables of Utica Civic Auditorium

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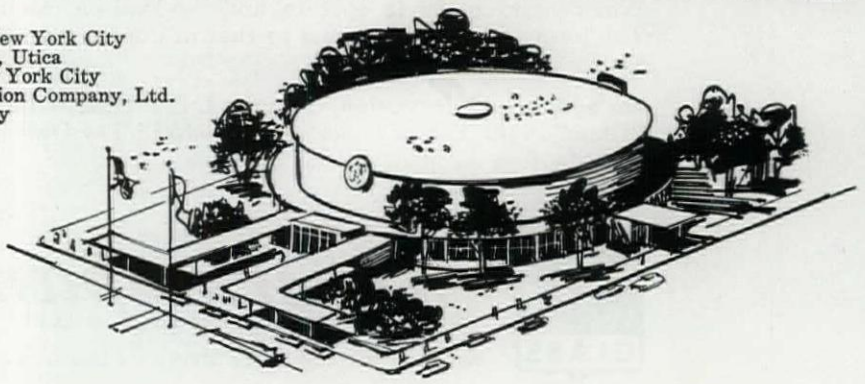

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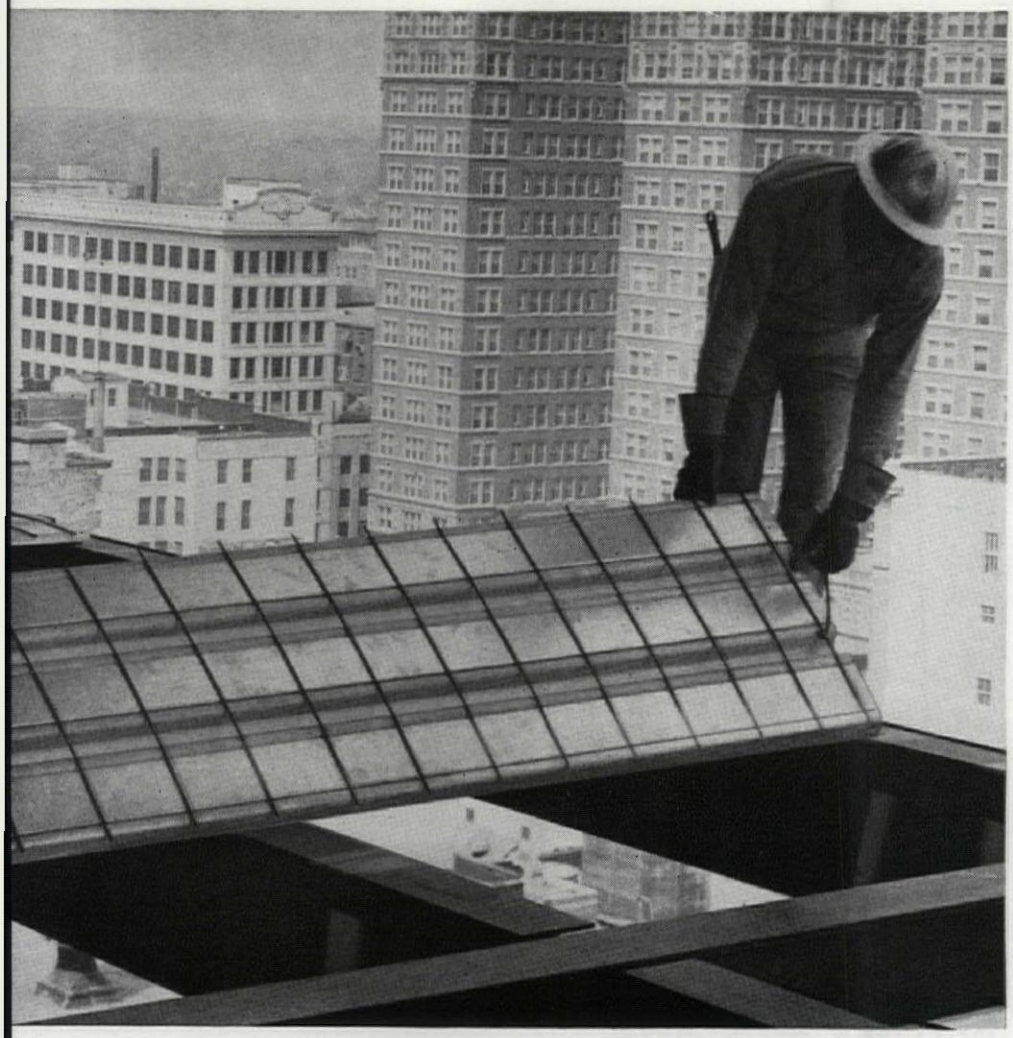

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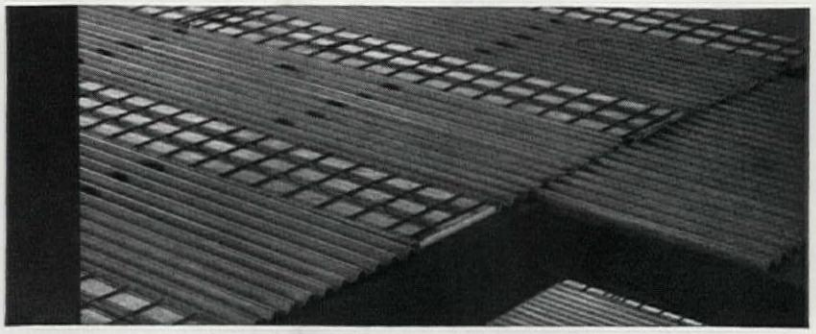

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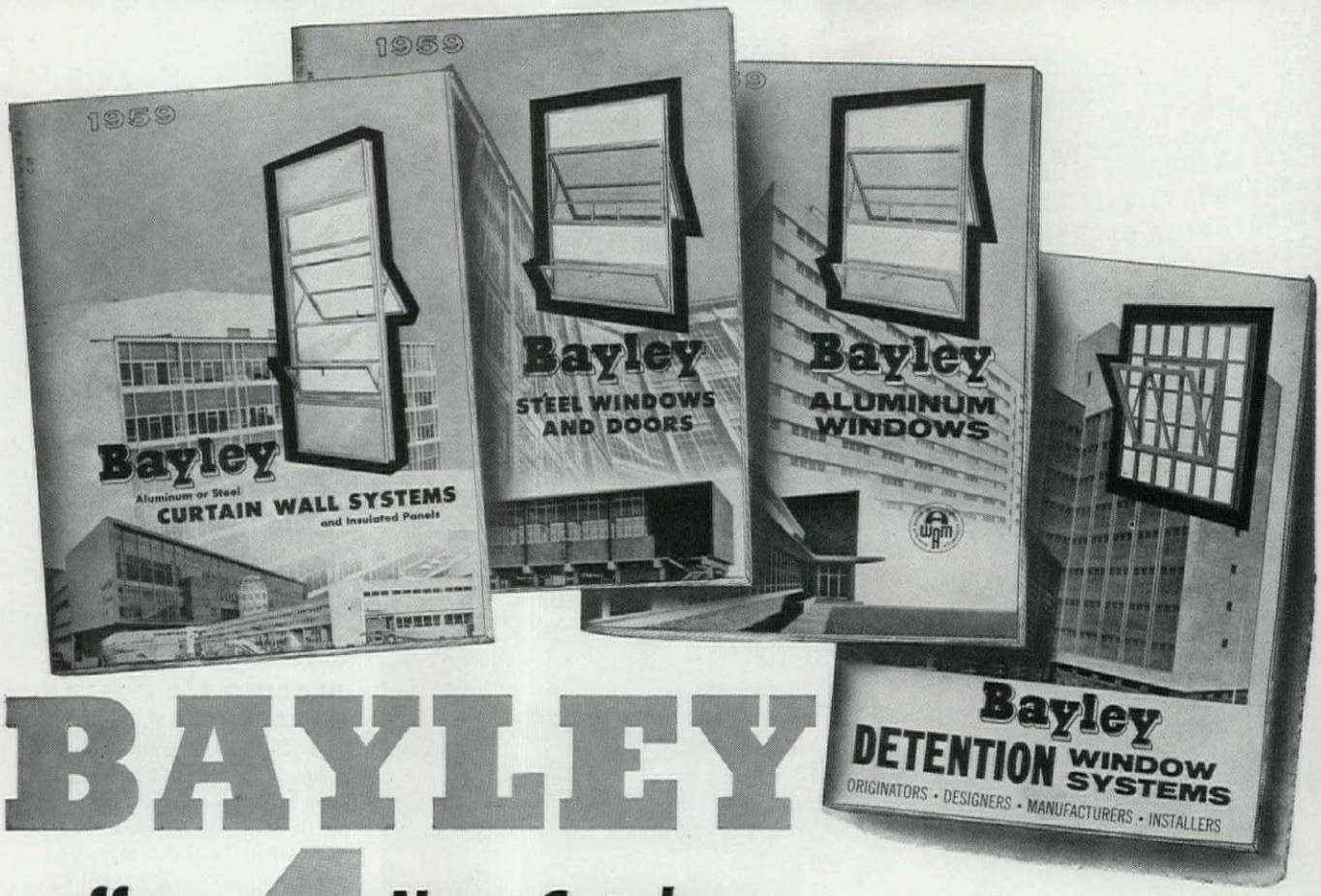

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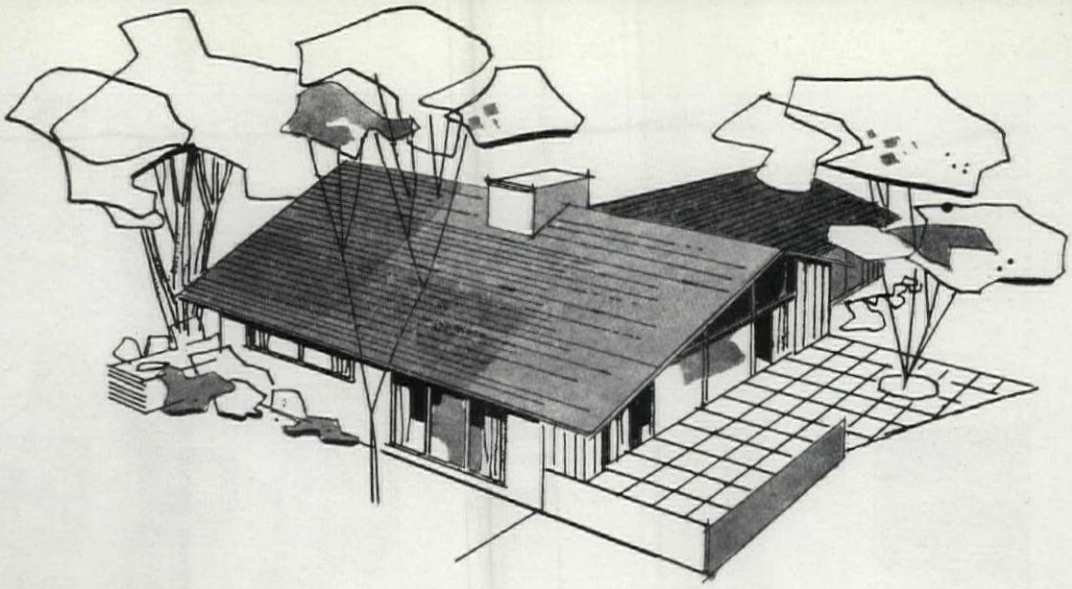


ASPHALT SHINGLES NOW APPROVED FOR INSULATION BOARD ROOF DECKS

Recent approvals for the use of asphalt shingles with insulating roof deck mean new design freedom in the use of this top-quality slab deck. For the first time, these strong, rigid decks may be used where the homeowner prefers a shingle covering.

This new development gives even greater versatility to these tough, fiberboard panels that offer: (1) outstanding structural strength, (2) effective insulation and (3) an attractive predecorated underside that forms a finished ceiling.

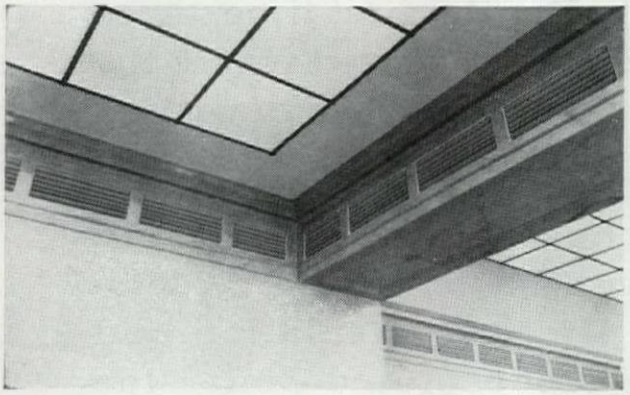
For further information on how these low-cost decks can best satisfy your specific requirements, write Charles M. Gray, Manager, Insulation Board Institute, 111 West Washington St., Chicago 2, Illinois; or contact any member of the I. B. I. listed below.

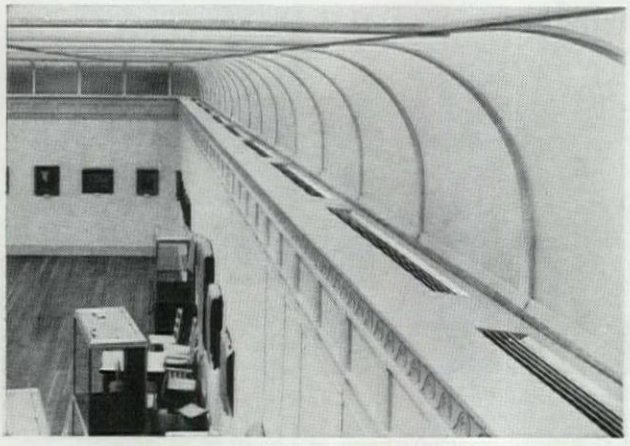
ibi

INSULATION BOARD INSTITUTE

ABITIBI CORP.; ARMSTRONG CORK CO.; BARRETT DIV., ALLIED CHEMICAL CORP.; THE CELOTEX CORP.; CERTAIN-TEED PRODUCTS CORP.; THE FLINTKOTE CO.; INSULITE DIV., M. & O. PAPER CO.; JOHNS-MANVILLE SALES CORP.; KAISER GYPSUM CO. INC.; NATIONAL GYPSUM CO.; PIONEER DIV., THE FLINTKOTE CO.; SIMPSON LOGGING CO.; UNITED STATES GYPSUM CO.; WOOD CONVERSION CO.

Draftless Anemostat Air Diffusers at Sterling and Francine Clark Art Institute





The photograph above illustrates an Anemostat Straightline Air Diffuser installation in the gallery design of the Sterling and Francine Clark Art Institute at Williamstown, Mass. The conditioned air is supplied through Straightline Diffusers located on all four sides of the gallery. The diffusers not only draftlessly introduce conditioned air into the gallery, but also blend into the architectural design.

Anemostat, Round, Square and Straightline Diffusers for conventional or high velocity systems are adaptable to a wide variety of architectural designs.

Write for Selection Manual No. 60, which gives data on Anemostat's wide range line of air diffusion equipment.

ANEMOSTAT®

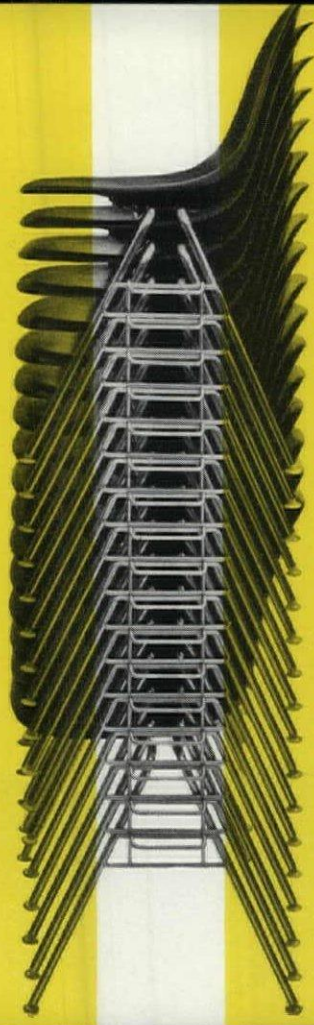
DRAFTLESS *Aspirating* **AIR DIFFUSERS**

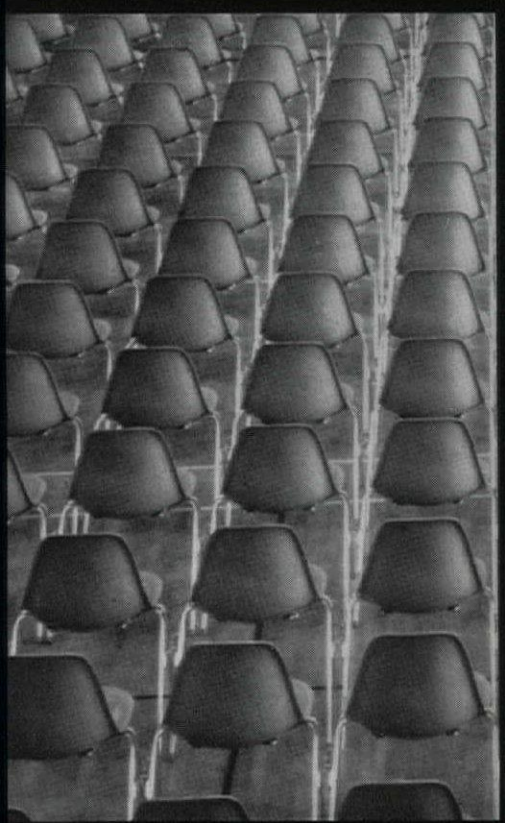
ANEMOSTAT CORPORATION OF AMERICA

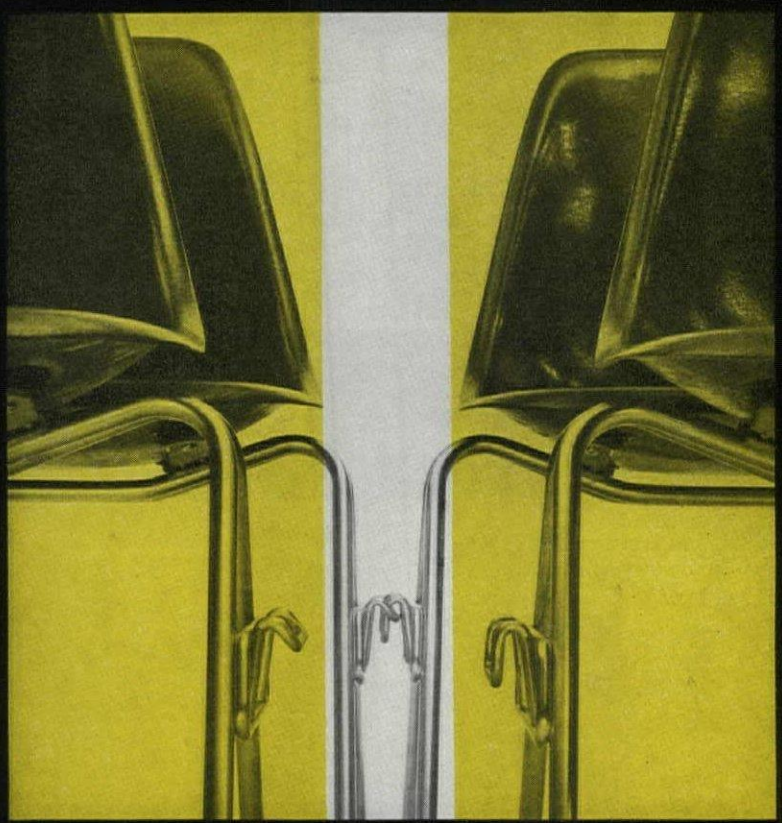
10 East 39th Street, New York 16, N. Y.

Representatives in Principal Cities

AC-1358

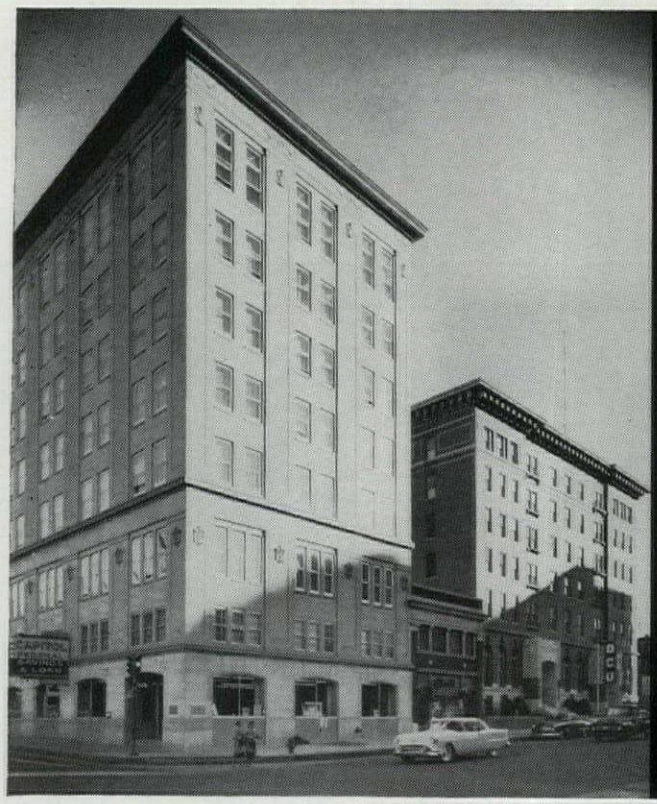






This is the Herman Miller Stacking Chair which Charles Eames designed for use in all public areas.

ALUMINUM FACE LIFTING TRANSFORMS ENTIRE BLOCK



Before aluminum resurfacing, these three buildings in downtown Oklahoma City "showed their age."

After resurfacing with Integrated Wall System of Alcoa Aluminum, they are combined into the modern Kerr-McGee Building.

To change three buildings that "showed their age" into one modern profitable office structure required imagination, subtlety, skillful design – and Alcoa® Aluminum.

The successful result is the strikingly handsome Kerr-McGee Building in Oklahoma City. The small center building has been replaced with an 11-story structure. Aluminum Integrated Wall System, windows and coping for the entire block-long building are pleasing shades of Alcoa Architectural Gray. The over-all effect is one of streamlined efficiency and functional beauty in the best of taste—all achieved at surprisingly low cost. Lightweight aluminum went up faster with less labor . . . will never need painting or expensive maintenance . . . remains corrosion resistant in all weather.

Aluminum building materials and components offer maximum design freedom combined with economy and practicality. Your nearest Alcoa sales office can show you other examples and help you with any project. Call them any time, or write: Aluminum Company of America, 1824-H Alcoa Building, Pittsburgh 19, Pennsylvania.

Your Guide to the Best in Aluminum Value

Building: Kerr-McGee Building, Oklahoma City, Okla.
Architects and Engineers: Sorey, Hill & Sorey, Oklahoma City, Okla.
General Contractor: Builders Construction Co., Oklahoma City, Okla.
Aluminum Fabricator: Texlite, Inc., Dallas, Tex.

ALCOA ALUMINUM
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. . . the architect's metal!

For exciting drama watch "Alcoa Presents" every Tuesday, ABC-TV and the Emmy Award winning "Alcoa Theatre" alternate Mondays, NBC-TV

How to say "integrity" with glass

THE TACOMA SAVINGS & LOAN ASSOCIATION has used glass effectively in its new office building to create an appealing corporate image in the minds of its customers and prospects. In keeping with its business, the design is dignified yet modern, and suggests responsibility and efficiency. It reflects a personality that is not secretive, but open and communicative. It invites inspection in an atmosphere of friendliness and good taste.

Pittsburgh's TWINDOW®—the windowpane with insulation built in—admits light and vision on three sides of the building. Above and below the TWINDOW and in the solid wall areas, Romany Blue SPANDRELITE® adds attractive color to the exterior. HERCULITE® Tempered Plate Glass Doors equipped with PITTCOMATIC® automatic door openers make an inviting and convenient entrance. Pittsburgh Polished Plate Glass is utilized for office partitions, and Pittsburgh High-Fidelity® Mirrors brighten the rest rooms.

Whether you seek the solution to a functional, decorative or interpretive problem in planning new buildings or revitalizing existing ones, consider the many advantages of Pittsburgh Glass. The architectural representative at your nearest Pittsburgh branch will be happy to discuss PPG glass products with you, without obligation.

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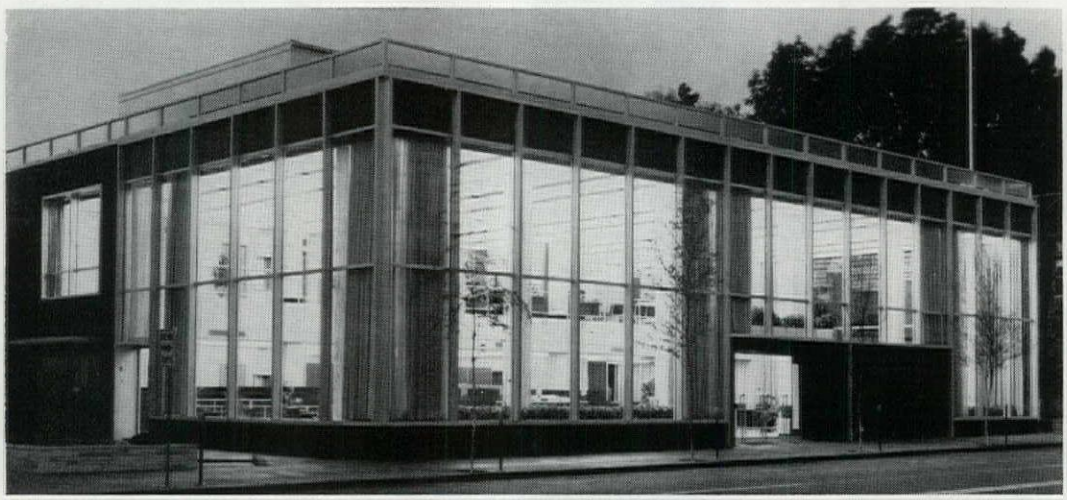
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

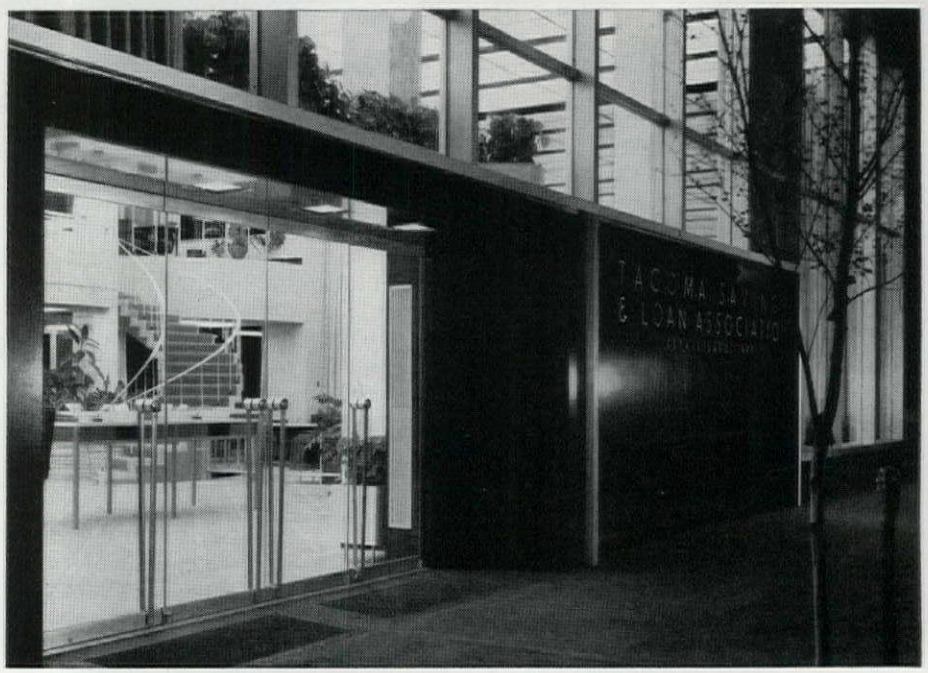


Architect:
Lea, Pearson & Richards, A.I.A.
Tacoma, Washington.

Contractor: Ketner Bros., Inc.,
Tacoma, Washington.

Glazed by W. P. Fuller & Co.,
Tacoma, Washington.

HERCULITE Tempered Plate Glass Doors are opened with the touch of a finger by PITTCOMATIC handle-operated automatic door openers. Hydraulic, motor-driven mechanism is completely concealed.



The unhindered view of the interior of this office dispels mystery, reassures strangers and invites friendly contact.

PITTSBURGH GLASS . . . the basic architectural material

Mahon ROLLING DOORS

PROTECTED BY Bonderite PARKER RUST PROOF CO. QUALITY CORROSION RESISTANT

THE STEEL CURTAINS OF ALL MAHON ROLLING STEEL DOORS ARE BONDERIZED

The Galvanized Steel in the Interlocking Slats of the Rolling Curtain in all Mahon Rolling Steel Doors is Chemically Cleaned, Bonderized, and Dip Coated with Rust-Inhibiting Synthetic Enamel which is baked on at 350° F. prior to roll-forming.

Illustrated here are Four Mahon Power Operated Rolling Steel Doors installed in Openings 48'-5" x 15'-6" in a new, enclosed loading dock in the plant of Mars, Inc., Chicago, Illinois, producers of the famous Mars Candy Bars and numerous other confections. The Roll-Up Curtains of these Doors are constructed with 6" Jumbo Slats which were Roll-Formed from Bonderized, Enamel Coated Galvanized Steel.

Walter J. Olson & Co., Gen. Contr.

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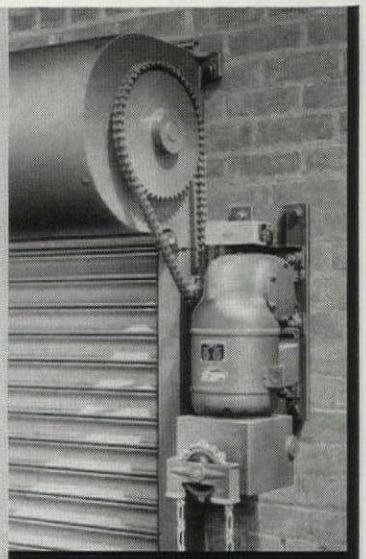
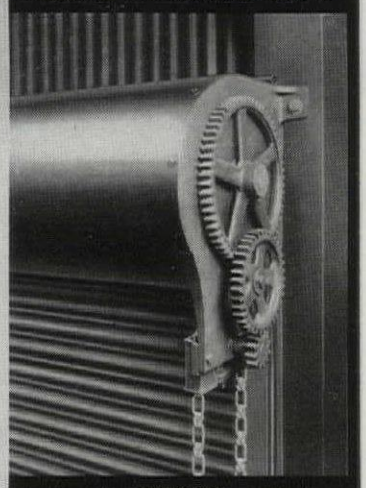
Meet Unusual Requirements in Wide, Loading-Dock Openings!

In Operation, the Fast, Vertical Roll-up Action Saves Valuable Time and Space — No Overhead Tracks to Restrict Headroom

MANUALLY, MECHANICALLY, or POWER OPERATED DOORS
STANDARD and UNDERWRITERS' LABELED TYPES



MAHON STANDARD
POWER OPERATOR 920-P



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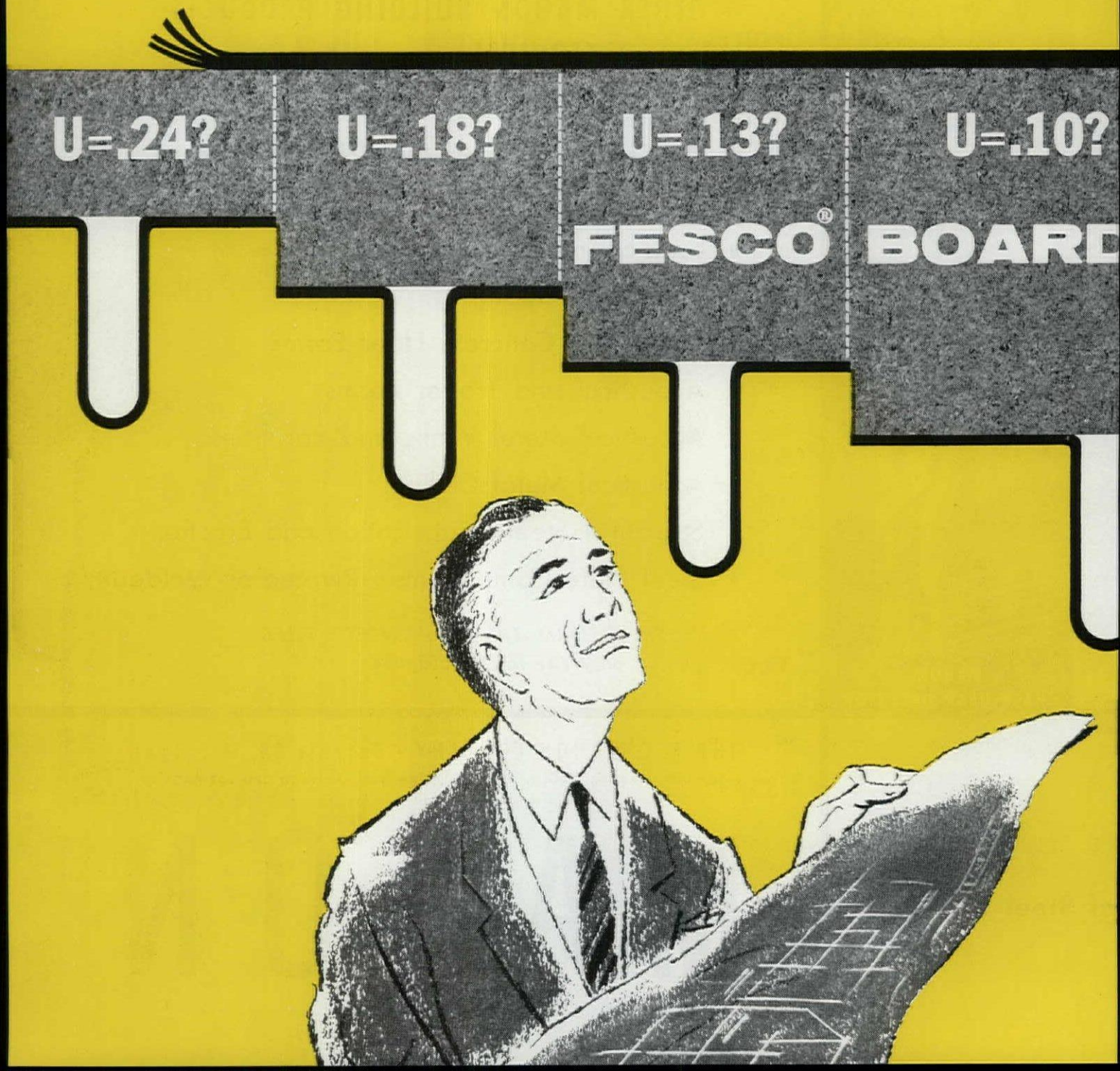
of Steel and Aluminum

MAHON

Which "U" Value should the architect select for a **ROOF DESIGN?**



This New Brochure Gives You the Answer

Write for your copy of "The Economics of Thermal Roof Design" — an authentic study prepared by a practicing consulting engineer for use by architects. The study shows, for various temperature zones, and for various building types, the effects of different conductance (U) values in terms of heating and cooling costs — equipment, maintenance, and fuel or energy.

HOW IMPORTANT IS GOOD THERMAL DESIGN?

If you commonly specify a one-inch (at a conductance of .34) thickness for roof insulation you are passing up an important design contribution. Studies show, for example, that reducing conductances from a common U of .24 to a U of .12 can provide a return on investment of 18% per year for 15 years. Example: Department store type construction in St. Louis climate. In industrial type construction the same reduction in conductance can have this result: A reduction in original cost of heating-cooling equipment equal to 66% of the cost of the increased insulation. Regardless of the type, size or location of your building, enlightened thermal design can save your client important money.

HOW IMPORTANT IS QUALITY IN INSULATION?

The more insulation you use the more important its quality becomes. If insulating efficiency drops because of moisture absorption, or deterioration, the effect is doubly bad. First, the extra investment in insulation is not recovered. And second, your heating-cooling system will be overloaded because of unplanned-for heat gains and losses. This is why architects who are designing for optimum conductances are specifying Fesco Board. It is the permanent insulation — formed of all-mineral perlite, extremely moisture resistant, fully incombustible, and immune to rot, mildew or fungus. Specify the right quantity of insulation always . . . and always be sure to specify the right quality — Fesco Board.

Specify Incombustible

FESCO® BOARD

Roof Insulation

E. SCHUNDLER & COMPANY, INC., 504 RAILROAD ST., JOLIET, ILL.

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RATED FIREPROOF MATERIALS-ACOUSTICAL & INSULATING

velopers and producers of incombustible mineral products including Fesco Insulation Board, Coralux Acoustical Plaster, Coralux Perlite gregates, Mica Pellet Vermiculite, High Temperature Insulating Blocks and Insulating Cement.

SEE OUR CATALOG IN SWEET'S ARCHITECTURAL FILE OR WRITE FOR COPY

SEE OUR CATALOG IN SWEET'S INDUSTRIAL CONSTRUCTION FILE OR WRITE FOR COPY

AFFILIATED WITH THE PRODUCERS COUNCIL

Kawneer has finally

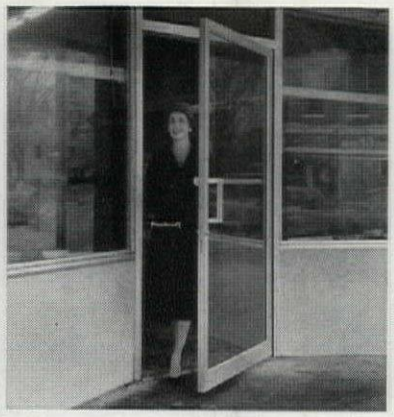
**YOU CAN'T SEE IT...YOU CAN'T FIND IT...
IT'S COMPLETELY HIDDEN...NOT ON THE DOOR
OR IN THE FLOOR, BUT INSIDE THE TRANSOM BAR!**

HERE IS SHEER ARCHITECTURAL BEAUTY. The dramatically new patented Kawneer ***Concealed Overhead Closer*** entrance unit. First overhead closer totally concealed in a 1¾" x 4½" transom and offered as a stock entrance package.

Nothing projects out or down to clash with its crisp, orderly design. There are no surface-mounted checking mechanisms to subtract from the sleek simplicity of classic Narrow Line construction. No jutting arms or butt hinges or exposed offset pivots.

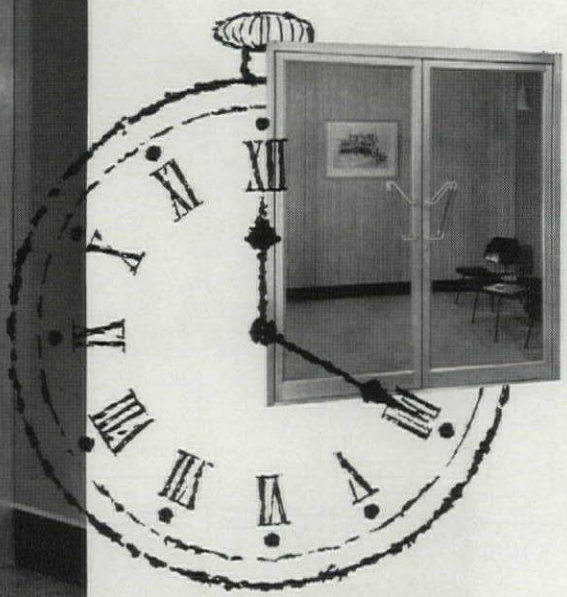
Never before has an overhead closer-controlled entrance been so good to look at—or had so many time and money-saving features.

IN BUSINESS OFFICES, tasteful simplicity of the Concealed Overhead Closer Entrance gives customers their first good impression of the company.

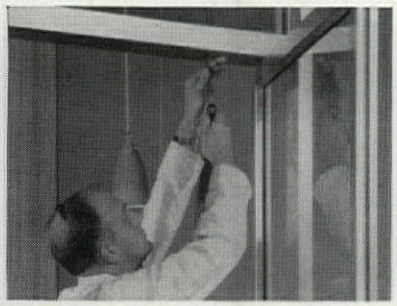


IN STORES, the distinctive, functional appearance of the Kawneer entrance expresses the personality of the owner to passersby, invites them in.

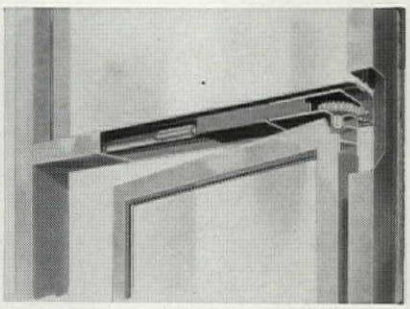
IN HOSPITALS, it imparts an exciting new beauty and utility to doorways. Installs in existing buildings in a minimum time, without noisy air hammers.



INSTALLS IN 20 MINUTES . . . No other closer-controlled door is so easy and inexpensive to install! Mechanic simply uncrates package . . . assembles frame . . . hangs door. No advanced preparation is necessary. No holes to dig. No pivots or conventional hinges to attach.



EASIER SPEED ADJUSTMENTS than with floor-check entrances. Kawneer Concealed Overhead Closer has two closing speeds, and has independent adjustments for both closing speed and latching speed. Also equipped with *spring tension adjustment* for severe wind conditions, independent of the hydraulic action of the other two speeds.



ABILITY TO TAKE IT . . . In addition to clean unblemished lines of the entrance, the new overhead concealed closer is ruggedly built. It is designed to handle several size doors and has proved its ability to take it.

COMES AS A COMPLETE ENTRANCE PACKAGE . . . Ready to put up! Includes Kawneer all-aluminum Narrow Line door, frame, and *first totally concealed overhead checking mechanism.*

put the closer in its place!

another example of the *Kawneer Touch*

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since 1906

Call your local Kawneer installing dealer or send in coupon for more information.

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Please send complete information about the revolutionary new Kawneer Concealed Overhead Closer Entrance Package.

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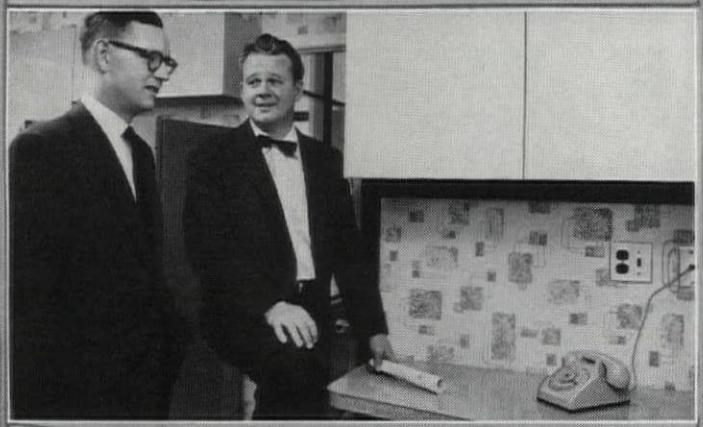
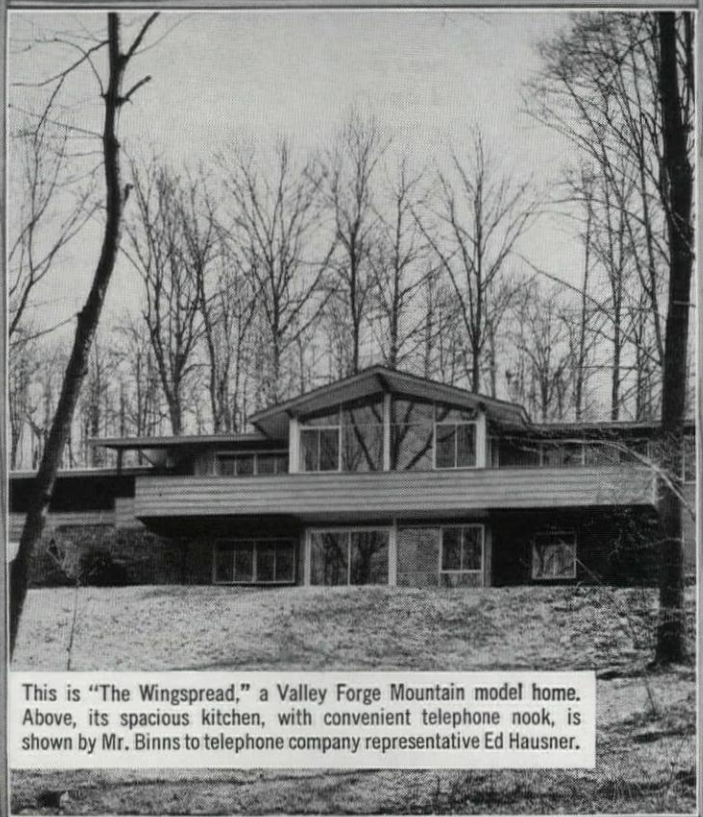
*Position*_____ *Company*_____

*Address*_____

"We telephone plan our homes as carefully as we plan for electrical wiring"

—SAYS DAVID S. BINNS,
EXECUTIVE VICE PRESIDENT,
BINNS VALLEY FORGE HOMES, INC.,
VALLEY FORGE, PA.





This is "The Wingspread," a Valley Forge Mountain model home. Above, its spacious kitchen, with convenient telephone nook, is shown by Mr. Binns to telephone company representative Ed Hausner.

Thirty minutes west of Philadelphia lies Valley Forge Mountain, a gracious community of custom-built residences priced $30,000 and up. These homes offer a complete line of modern conveniences.

Telephone planning is one of them. Each Valley Forge Mountain home has built-in, concealed wiring for 5 or more telephone outlets.

"People expect to find telephone planning in a quality home," says builder David Binns. "Our aim is to design and build completely *modern* homes—and planning for complete telephone flexibility is a necessary part of that concept. We telephone plan our homes as carefully as we plan for electrical wiring and other modern conveniences."

* * *

Your local Telephone Business Office will gladly help you with telephone planning for your homes. For details on home telephone installations, see Sweet's Light Construction File, 8i/Be. For commercial installations, Sweet's Architectural File, 32a/Be.

BELL TELEPHONE SYSTEM

PERMANENCE, CLEANLINESS AND LONG-RANGE ECONOMY

are assured when you specify colorful **CERAMIC VENEER**

The fire-hardened finish of Ceramic Veneer makes this versatile material completely impervious to dirt, grit and grime. Soap-and-water washings keep it looking like new indefinitely. When you specify Ceramic Veneer, you're assured not only of permanence and cleanliness, but long-range economy as well. Moderate initial cost, ease of installation, and minimum maintenance make Ceramic Veneer a most practical facing for either interiors or exteriors. What's more, Ceramic Veneer offers an unrestricted choice of form, color, and texture. Whether your plans call for plain surfaces, polychrome panels or decorative sculpture, they are faithfully executed in Ceramic Veneer. Without charge we will gladly furnish construction detail, data, color guide brochure, advice and estimates on preliminary sketches involving the use of Ceramic Veneer. Write today to

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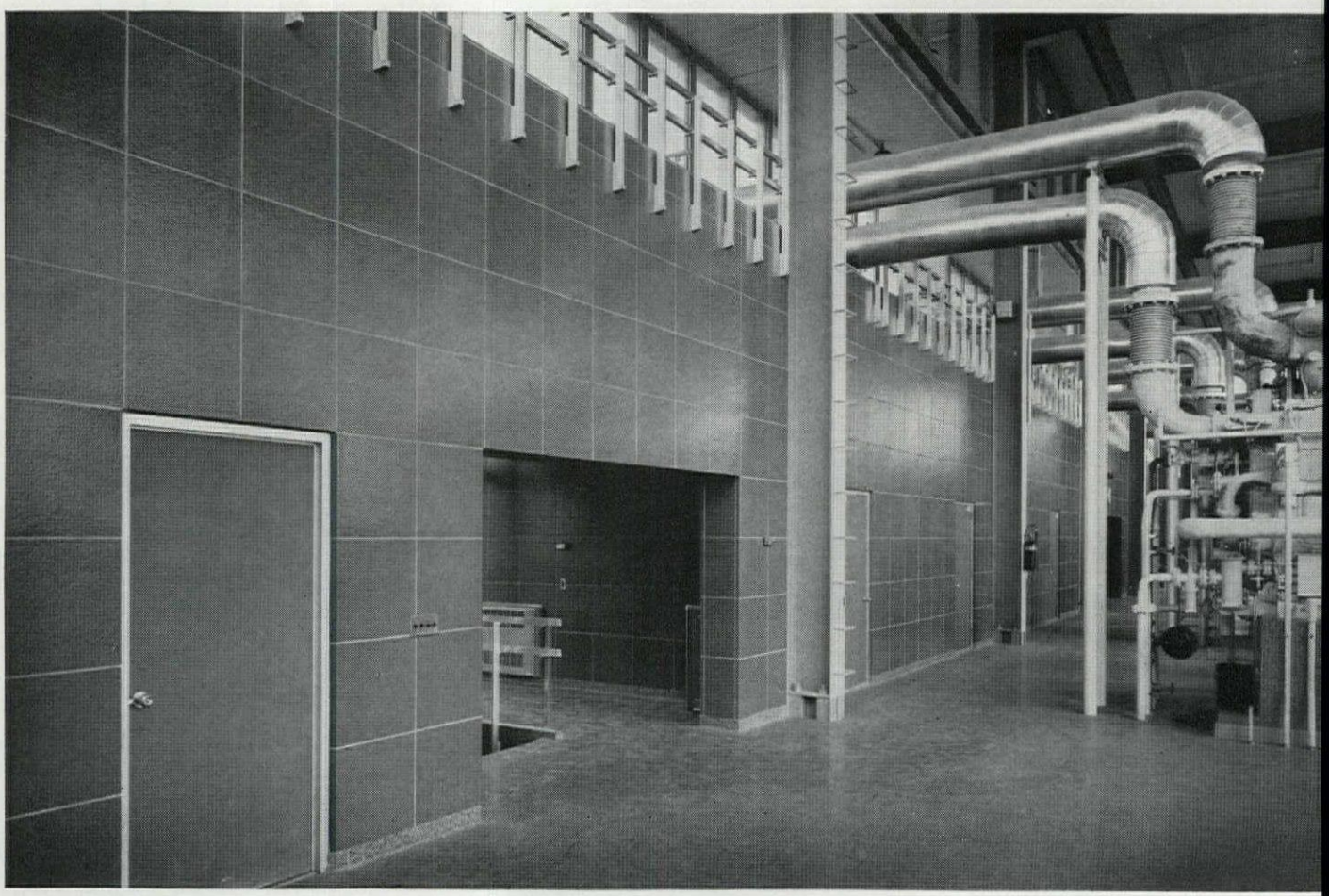
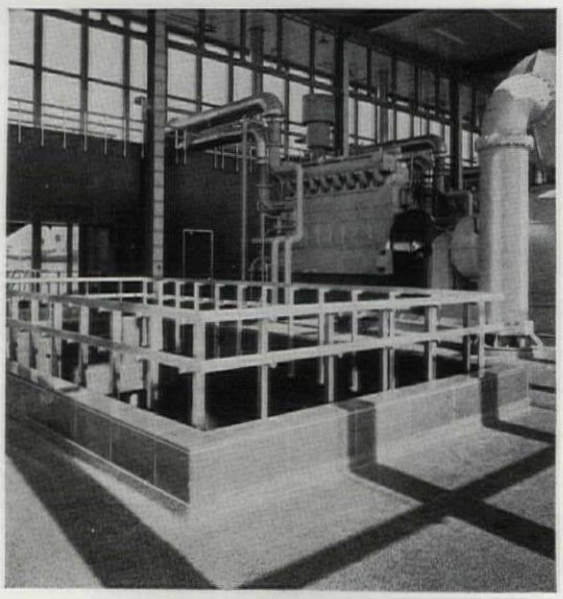


SEWAGE TREATMENT PLANT
TOLEDO, OHIO
Department of Public Works —*Owner*
Consoer-Townsend & Associates —*Engineers*
S. A. Storer and Sons Co. —*Builders*

Ceramic Veneer in mottled pine green was specified for the interior walls of this modern sewage treatment plant in Toledo, Ohio. Unit size is 20" x 20".



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National Bank of Detroit

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Architects-Engineers

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General Contractor

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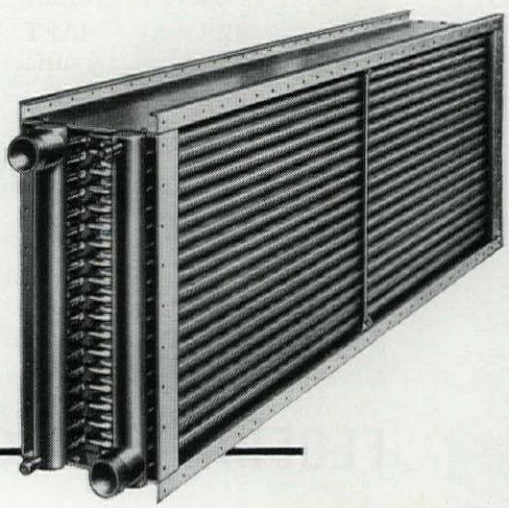
Aerofin's modern SMOOTH FIN design permits use of high air velocities without turbulence or excessive resistance – provides ample heat-exchange capacity in limited space.

You can safely specify Aerofin coils at full published ratings. Aerofin performance data are laboratory and field proved.



AEROFIN CORPORATION

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Aerofin is sold only by manufacturers of fan system apparatus. List on request.

ENGINEERING OFFICES IN PRINCIPAL CITIES

1 Challenger's exclusive "security pin" holds outer rose from loosening. "Ny-lock" snubber holds inner rose.

BETTER LOCK INSTALLATIONS

with the CHALLENGER®

ROSE "SECURITY PIN"

Other exclusive Challenger features in the 900 Series include:

HARD ANODIZED AIRCRAFT ALUMINUM HOUSING with larger, sapphire-hard bearing surfaces for the smoothest action of any lockset available.

COLD FORGED .080" one-piece, seamless, shock-resistant knobs and roses.

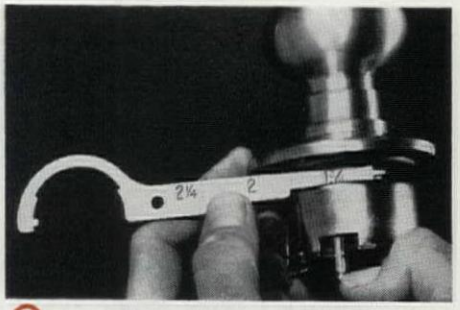
PRECISION CAST, HI-TENSILE, BRONZE RETRACTORS with larger bearings and stainless steel axles.

Challenger locksets are available in more than 30 different functions and in 3 full series of heavy duty, semi-heavy duty and standard duty with wide choice of designs and finishes.

- *Get complete information from your Challenger representative or write for color catalog P-8.*

CHALLENGER LOCK COMPANY

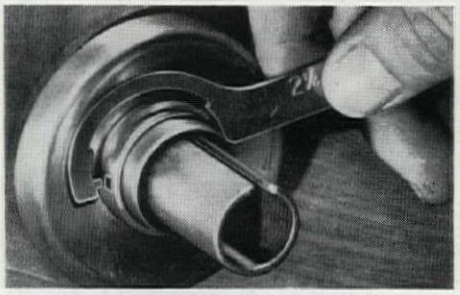
2349 West La Palma Avenue • Anaheim, California



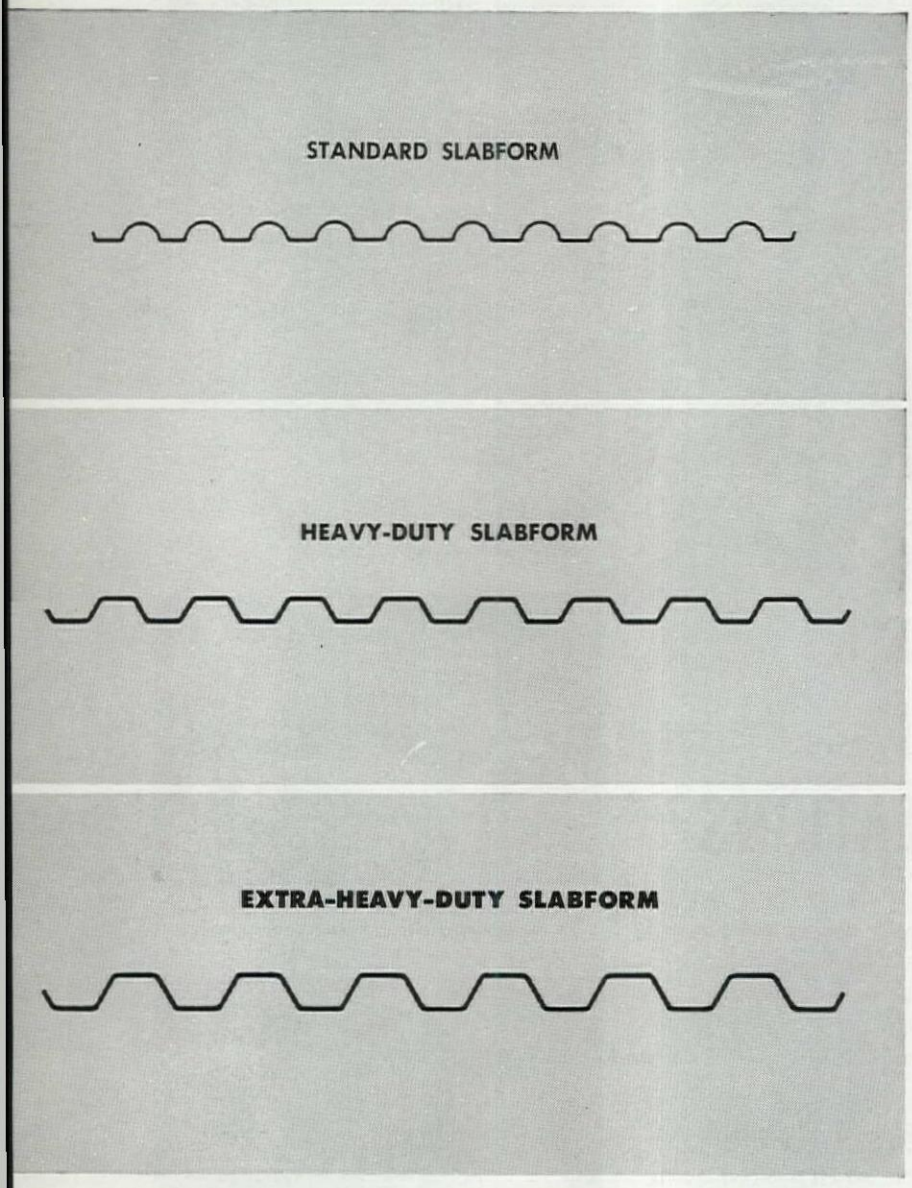
2 When spring-loaded pin is pulled back, rose rotates freely for easy adjustment. Combination spanner wrench and guage provide exact positioning of rose.

3 Security pin snaps back into locking hole. Vibration or tampering cannot loosen rose. Pencil points to deep drop center rose retainer which prevents wobble if door shrinks.

4 Greater area of rectangular tooth on spanner wrench allows tightening of rose without damage. "Ny-lock" snubber prevents loosening.



Faster, More Economical Concrete Slabs with Bethlehem Slabform



Bethlehem Slabform is a high-strength steel centering which speeds the pouring of concrete floor and roof slabs. It requires no blocking or bracing and, compared to flexible-type centerings, it saves concrete. The result: more economical concrete construction.

Three Weights Available

Slabform is furnished uncoated for structural cast-in-place slabs, or continuously galvanized for use as a permanent structural member for lightweight insulating concrete roof slabs or as an exposed form.

Made from steel having a yield point of about 90,000 psi, Slabform is made in three weights: Standard Slabform for spans normally up to 3 ft; Heavy-Duty Slabform for spans up to 5 ft; and Extra Heavy-Duty Slabform for spans up to 7 ft. The table below gives the physical properties.

Properties Per Foot of Width			
	Thickness In.	Moment of Inertia—In.^{4}	Section Modulus In.^{3}
Standard	0.0156	0.012	0.0333
Heavy-Duty	0.021	0.039	0.080
Extra Heavy-Duty	0.024	0.101	0.136

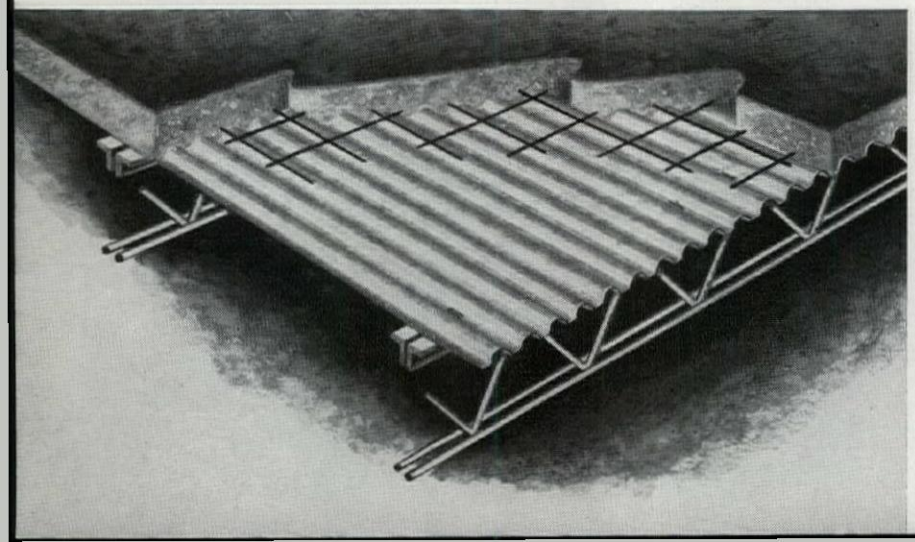
NOTE: Properties are computed in accordance with requirements of A.I.S.I. "Light Gage Cold-Formed Steel Design Manual."

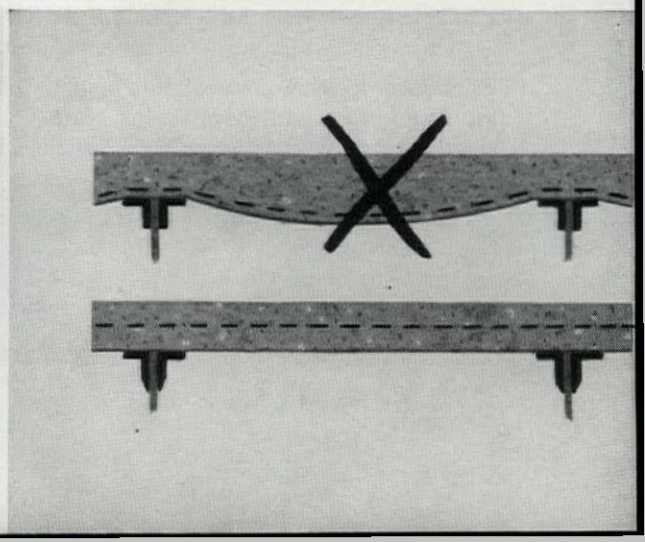
Shipping weights per square based on cover or laying widths:

Slabform Section	Black	Galvanized
Standard	79 lb	87 lb
Heavy-Duty	115 lb	126 lb
Extra Heavy-Duty	138 lb	150 lb

Slabform provides lateral restraint for supporting members and stiffens the complete assembly when it is in place and properly attached. No wooden blocking or bracing is required because there is no lateral pulling or straining of members during Slabform placing.

The solid form helps retain the moisture needed f continuing hydration of concrete during the cu ing period, resulting in greater concrete strengt Rigid Slabform holds deflections to a minimun saving up to 20 pct in concrete.





Slabform Saves Time and Money

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The nearest Bethlehem sales office will be glad to supply you with full details on Bethlehem Slabform. Design load capacities, suggested specifications and other data appear in our catalog in Sweet's Architectural File.

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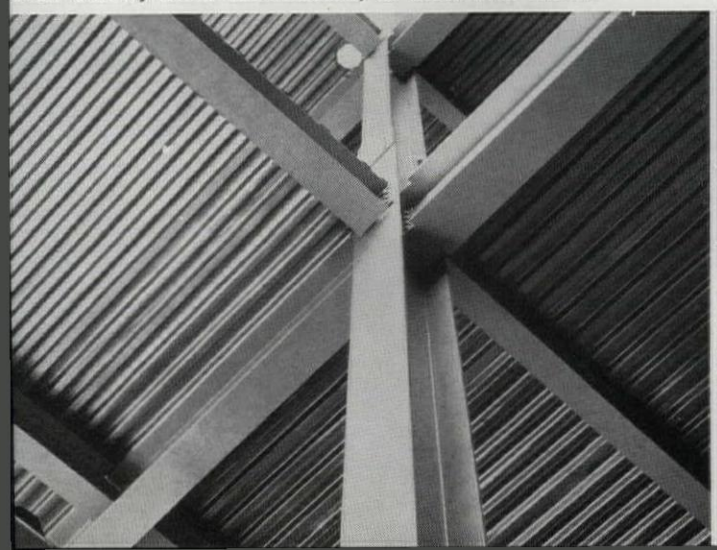
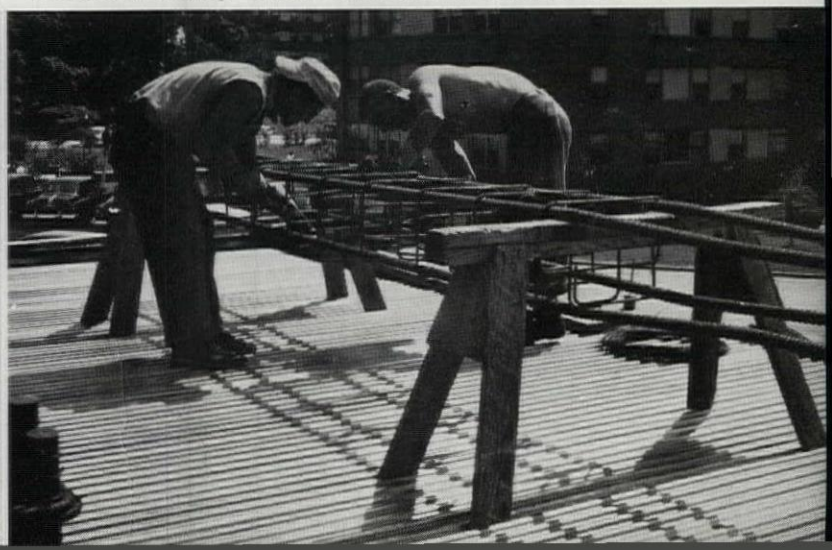
Because of the rigidity of Slabform sheets, the slab can be poured and finished in only one operation. Its appearance from below, after installation, is neat and clean.



Slabform is placed easily and quickly. When placed, it provides a solid, safe working platform for all trades. Slabform readily withstands normal construction abuse.



ARCHITECT: DONALD F. HAINES, AIA

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Indexed in Art Index, Architectural Index.

REINHOLD

in defense of Grand Central City Building design

Dear Editor: Do I detect a note of personal ill-will in Sibyl Moholy-Nagy's blast (MAY 1959 P/A) against Dr. Walter Gropius—otherwise Mrs. M.-N.'s sibylline outburst makes almost no sense.

What her roar of indignation adds up to is that sociologically screaming women escaping from the 9 A.M. subway nightmare supposedly find an esthetic moment of relief in glimpsing the profile of Grand Central Tower; but Dr. Gropius, in an alleged ideological switch, is out to worsen their nightmare and deny them their relief. This is pure catchpenny hysterics and as near the truth as wet liver is like Cleopatra's Needle. Instead of the penetrating analysis of our cultural imbalance that Dr. Gropius gave in his "Apollo in Democracy" speech, Mrs. M.-N. offers us the refrain of an old song which began with Rousseau.

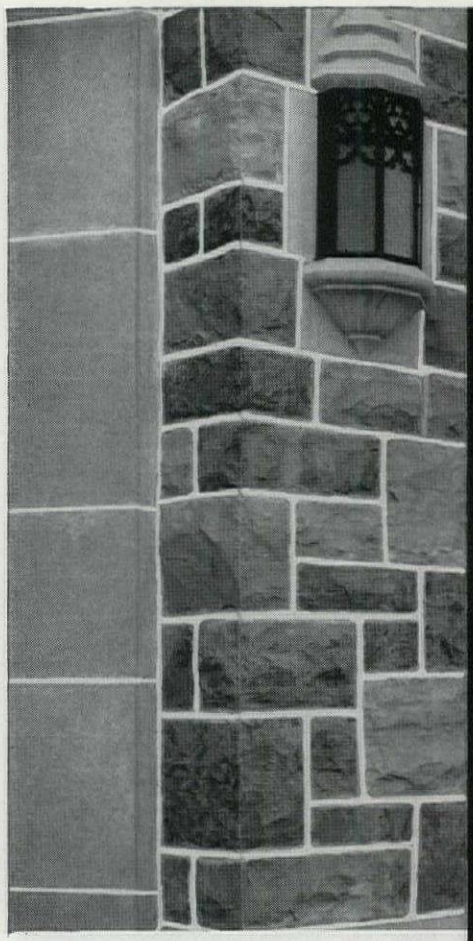
The facts regarding the Grand Central City Building are quite different from what Mrs. M.-N.'s campus-oriented and ivory-tower inspired animadversions would indicate. In the first place, it is not true that "Roth would have built 'the world's largest' anyhow—with or without the pedigrees of Gropius and Belluschi." None of the men referred to are *builders*, they are *architects*. In the second place, the services of these men have not been engaged by a *promoter*, but by a *builder*. Unless intelligible communication is to go down the drain, some elementary semantic standards must be respected. When the meanings of words are blurred, logical thought is compromised and, no matter how slick the paper on which it is printed, dreary confusion is the result.

It should be unnecessary to have to remind Mrs. M.-N. that a building cannot be judged in the manner of a painting. A painter paints a picture, a finished product except for the frame; but architects do not build buildings, they create designs for them. The designs are subject to hundreds of legal, financial, functional, material, and cultural limitations. Within these limitations lies the area of esthetic freedom which the architect may explore. The final selection of a design rests with the builder or with representatives of the investors without whose capital the building must remain a sketch on paper. The architect is, of course, absolutely indispensable. But, as with the playwright, the materializing of his creation rests with others.

In the case of Grand Central City, the starting point is one of the largest and most valuable real estate sites in the world. With declining revenues from railway-passenger travel, the commercial exploitation of this site became inevitable. The late Robert K. Young envisioned the complete liquidation of the present Grand Central Terminal building and its replacement by a hundred-story office beehive. Then others toyed with promoting similar spectaculars for developing the site. Finally, it has devolved upon Erwin Wolfson, a builder solidly esteemed in the field, to guide the inevitable changes in the physiognomy of the Terminal property.

It is perfectly obvious that neither

(Continued on page 54)



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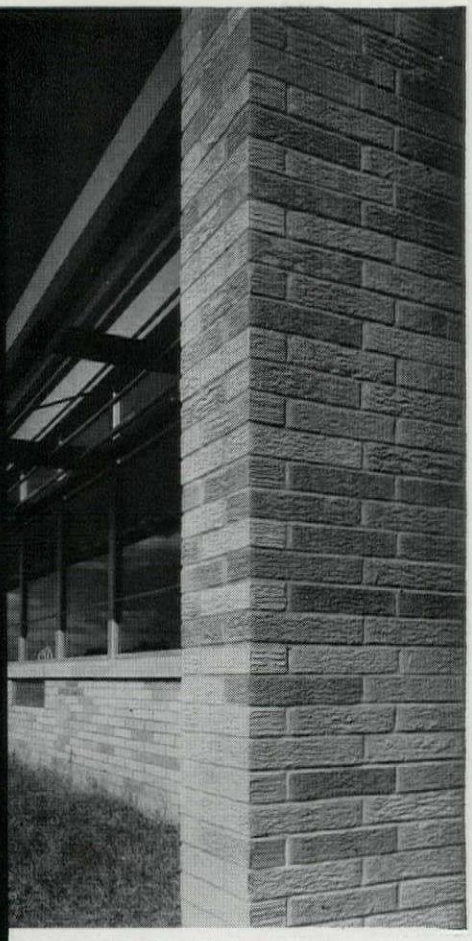
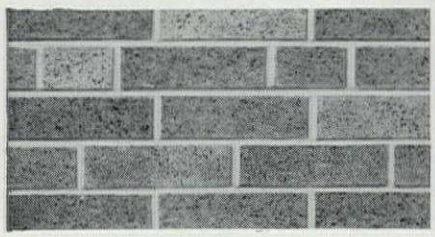
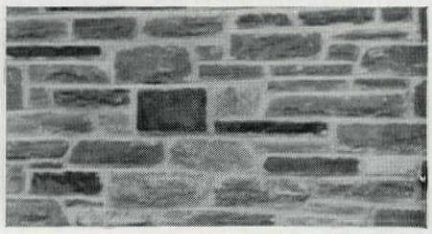


Above, Medusa StoneseT as a beautiful white mortar joint for natural stone. Below, StoneseT enhances the beauty of face brick.



Above, Medusa BrikseT gives a uniformly, soft, gray mortar joint throughout the wall. Below, section showing BrikseT with natural stone.



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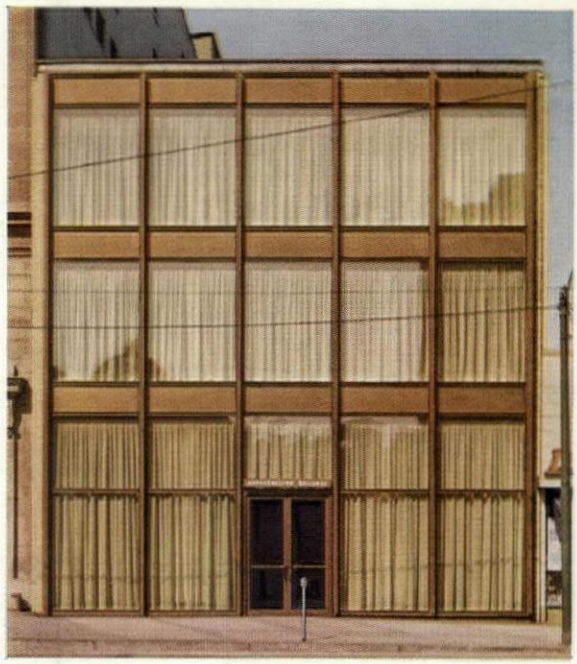

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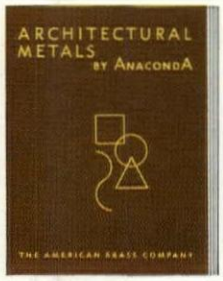

Write today on your firm's letterhead requesting your copy of Architectural Metals by Anaconda, Publication B-15.

5923

Pedigo Useful Arts School, Pratt, Kansas; Thomas-Harris-Calvin, Wichita, Kansas, architects.

(Below, L) Main woodworking shop; (Below, R) Junior High shop; both areas floored with conventional strip Northern Hard Maple flooring.

favorite floor of folks with feet!

for school shop areas
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Versatile NORTHERN HARD MAPLE

Woodworking shop, Barrington School, Barrington, Ill. Architects, Perkins & Will, Chicago. Patterned floor of Northern Hard Maple, laid in mastic. Photograph, courtesy Hedrich-Blessing, Chicago.

Nearly all educators and architects have feet. So do most school pupils. Indeed, feet are so usual there's an aphorism which goes: "to forget all but one of your troubles, wear shoes that are too tight." Because it is so very *foot-friendly* Northern Hard Maple is the favorite modern school flooring. It's warm and firm—a comfort to stand on all day. It's bright, tight, tough-fibered, almost incredibly enduring, and is swiftly renovated. ("Always a new floor underneath!") *Important in shops*—edged tools, dropped on Maple, aren't dulled or ruined, and power-tool anchorage is simpler. Mr. Robert B. Harris of Thomas-Harris-Calvin, architects for the Pedigo Useful Arts School, expressed it succinctly: "*... we feel that Maple Flooring for shop areas is the best suitable material.*"

Mr. Harris' words express no whim. *In a recent nation-wide survey three out of four Industrial Education directors stated they preferred hardwood over all other commonly used shop floor materials, except in Auto Mechanics areas. And the nation's great textile mills and bakeries use hundreds of acres of Northern Hard Maple.*

Multi-Purpose Room, St. Mary's School, Hammond, Ind. Architects, Bachman & Bertram, Hammond. Conventional strip flooring of Northern Hard Maple.

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(Continued from page 49)

Wolfson nor his architects are responsible for the mere fact that another huge office building is going to arise in the Grand Central area. Wolfson's responsibility, one might say, is obstetrician to a pregnant site. Relevant criticism of the Grand Central City Building must therefore restrict itself to how well it is brought to fruition; its real paternity, so to speak, lies deep in the heart of what Sorokin has defined as our sensate culture.

There is a number of praiseworthy features which cannot be ignored in any discussion of the new 'world's largest.' Subway riders in particular may not be aware of the debt of gratitude they owe Wolfson. Though Mrs. M.-N. speaks eloquently of her screaming women finding relief in glimpsing the golden spire of the Bldg. with the Gldg. (to quote a famous rhymster), the subway rider's relief is his escape from the catacombs into the spacious, star-studded Concourse of the Grand Central Terminal. In stormy weather it is also a welcome refuge for thousands of pedestrians, in hot weather it is a cool retreat, and in any weather it is an uplifting experience. This otherwise wasteful monument to our past was originally destined for destruction, but in Wolfson's plans it has been preserved, together with the precious air space above it, as foreground to the faceted curtain wall of the Grand Central City Building which will rise behind it.

An early design for the Grand Central City Building pictured a blockbuster type with the stark lack of elegance customarily associated with commercial structures, as contrasted with institutional buildings such as Lever House or Seagram's. Erwin Wolfson who takes pride in his buildings as well as his budgets, could not see it that way. It was then that he sought the specialized services of Dr. Gropius and Dean Belluschi, and together with Richard Roth, whose competence in practical design is unquestioned, they worked out the striking octagonal plan which required the sacrifice of a not inconsiderable amount of rentable space.

All of us who deplore the architectural wastelands of our city, including Mrs. M.-N., must certainly appreciate this sensitivity to civic and esthetic values on the part of Erwin Wolfson who, as a commercial builder, was in no way obligated to offer either his investment group, his prospective tenants or the city anything more than a well-paying, well-equipped conventional blockbuster design. The address and the convenience of the Grand Central City Building together with the repute of the builder are sufficient inducements to prospective tenants, and already, in fact, much of the building is rented even though it will not be completed until 1962. In this context it is patently absurd to suggest that famed architects are selling out to a promoter. Rather, we rejoice that Walter Gropius and Pietro Belluschi have generously made available their services. Considering the more likely alternatives that might have erupted, we shall conclude in the exuberant language which Mrs. M.-N. will understand—and your readers forgive—that a miracle has happened.

NATALIE PARRY
New York, N. Y.

(Continued on page 58)

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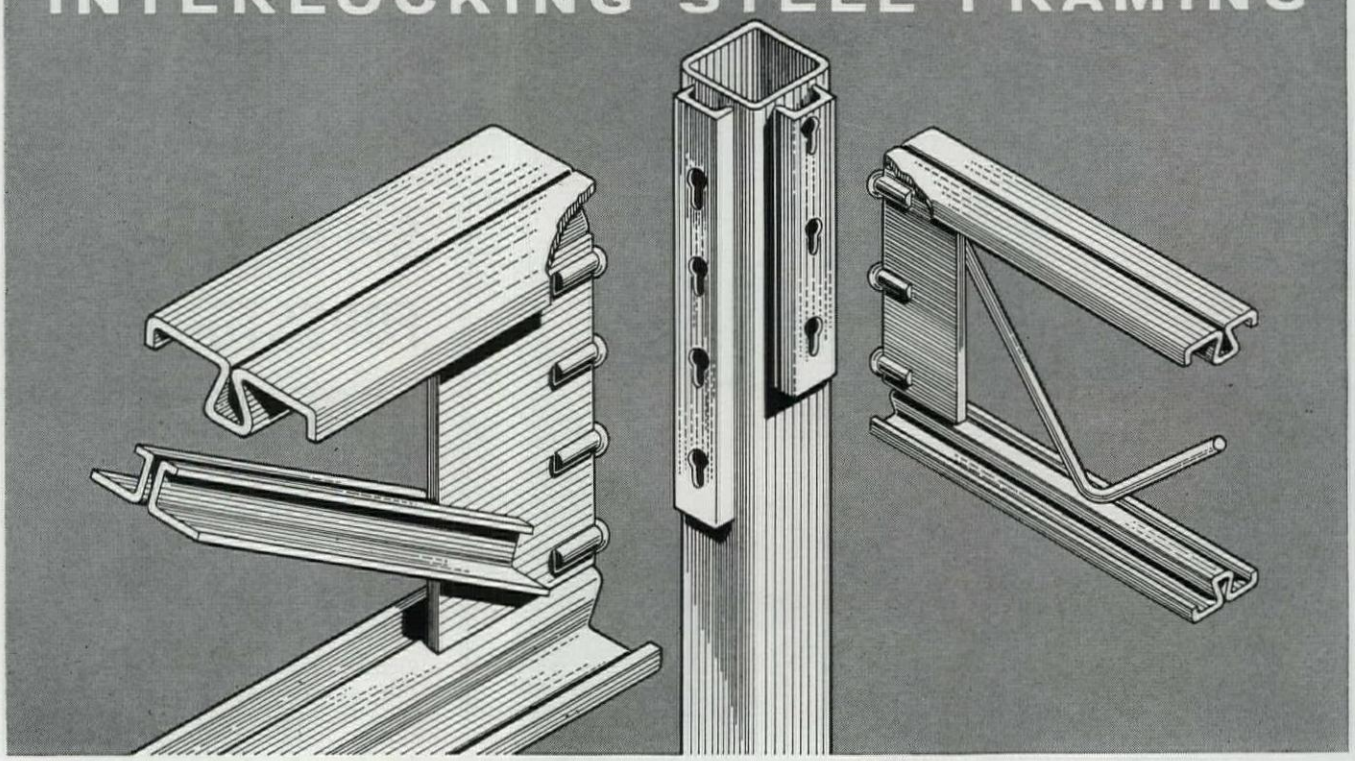

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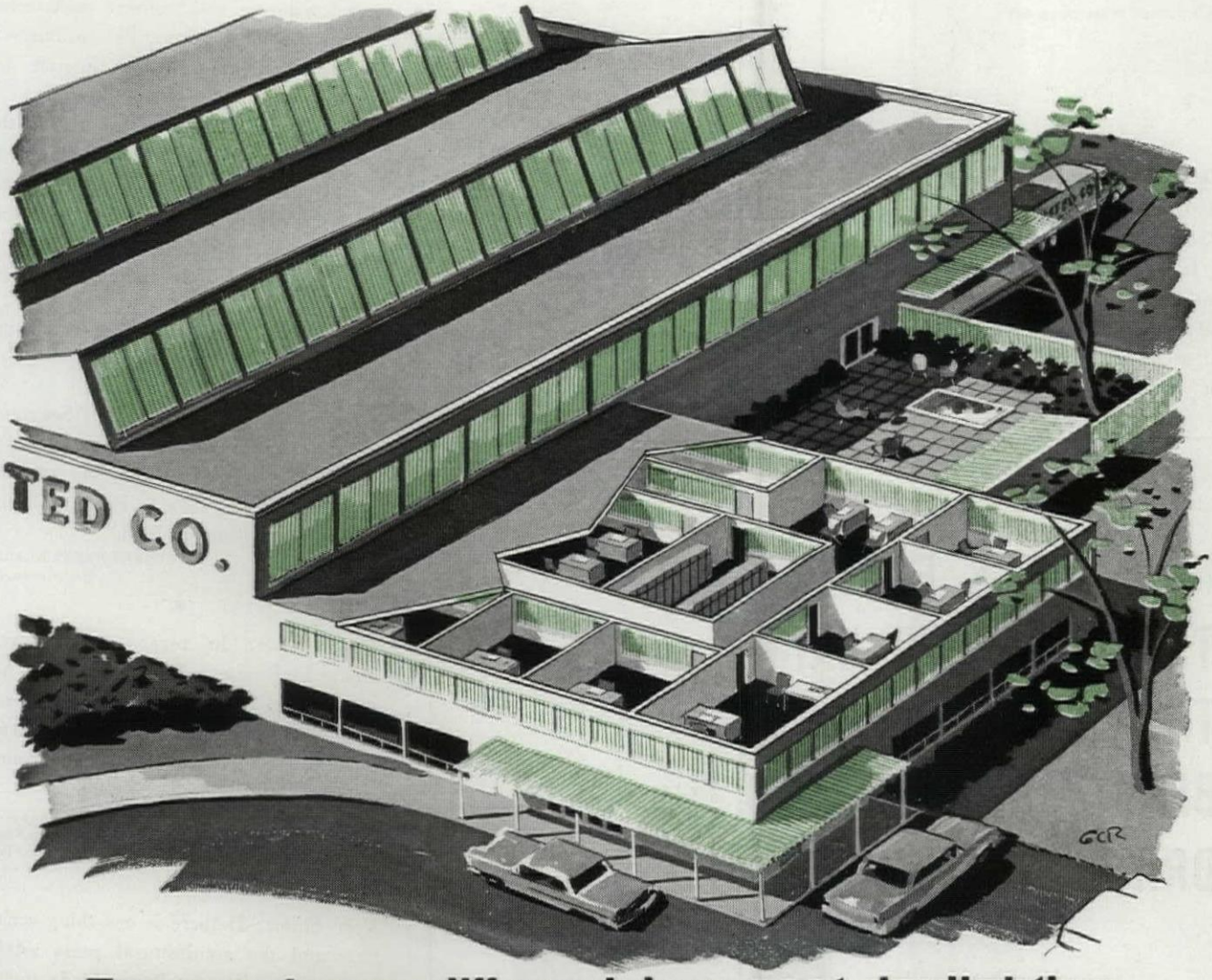

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(Continued from page 54)

"understandable criticism"

Dear Editor: I read with great pleasure and satisfaction your critique of critiques, "Seagram House Re-Reassessed."

It was high time that somebody found the courage to debunk the type of architectural criticism which considers works of architecture as if they were paintings or works of sculpture. These critiques, together with those people who judge architecture solely on the grounds of whether it is noble and fashionable in its outward expressions are causing tremendous damage to the development of architecture of all kinds.

Your article is a courageous attack on those who judge buildings solely on their own subjective, esthetical feelings and on the fact of whether they make good newsworthy copy. If we do not stop considering architecture in this manner, we will create a whole generation of taste-masters, form-givers, and publicity seekers, and we will convert architecture into a fashion industry, like millinery or couture and, unfortunately, interior decorating.

Thank you very much for writing this article, which I hope will be followed by a series of others in which the entire problem of the true meaning of "functionalism" and the deeper meaning of architecture would be thoroughly investigated.

VICTOR GRUEN
New York, N. Y.

•

Dear Editor: Your piece on "Seagram" is a wow! Right down the alley!

May I suggest you do one entitled, "Guggenheim, or How to Hang an 8'x10' Picture on a Curved Wall."

EUGENE HENRY KLABER
Quakertown, Pa.

•

Dear Editor: In regard to "Seagram House Re-Reassessed" (JUNE 1959 P/A), your "novel" point of view was appreciated. Whether or not a building performs some of its assumed functions is bound to prove interesting to *someone!*

HARRIS A. KEMP
Harper & Kemp
Dallas, Tex.

•

Dear Editor: If there is one thing architects and the architectural press sorely need, it's fearless, intelligent, understandable criticism of current work. Let's have more writing like your "Seagram House Re-Reassessed" and less gobbly-gook *(sp?)* on formism and expressionism.

WILLIAM LYMAN
Birmingham, Mich.

•

Dear Editor: At the risk of suffocating in suffixes, may I re-"re-reassess" Thomas Creighton's challenging critique of my critique of the Seagram Building for *The Architectural Review?* (Mumford should speak for himself.) With some of Creighton's arguments I agree; with others definitely not.

Leaving his fundamental complaint of the narrowness of my critique to the end, I shall briefly respond to his specific arguments roughly as they appear in his article. He begins by taking me to task for not considering the Seagram Building with respect to downtown planning. Given a small plot in mid-Manhattan, the architects' first question, according to Creighton, should have been what is best for

(Continued on page 64)

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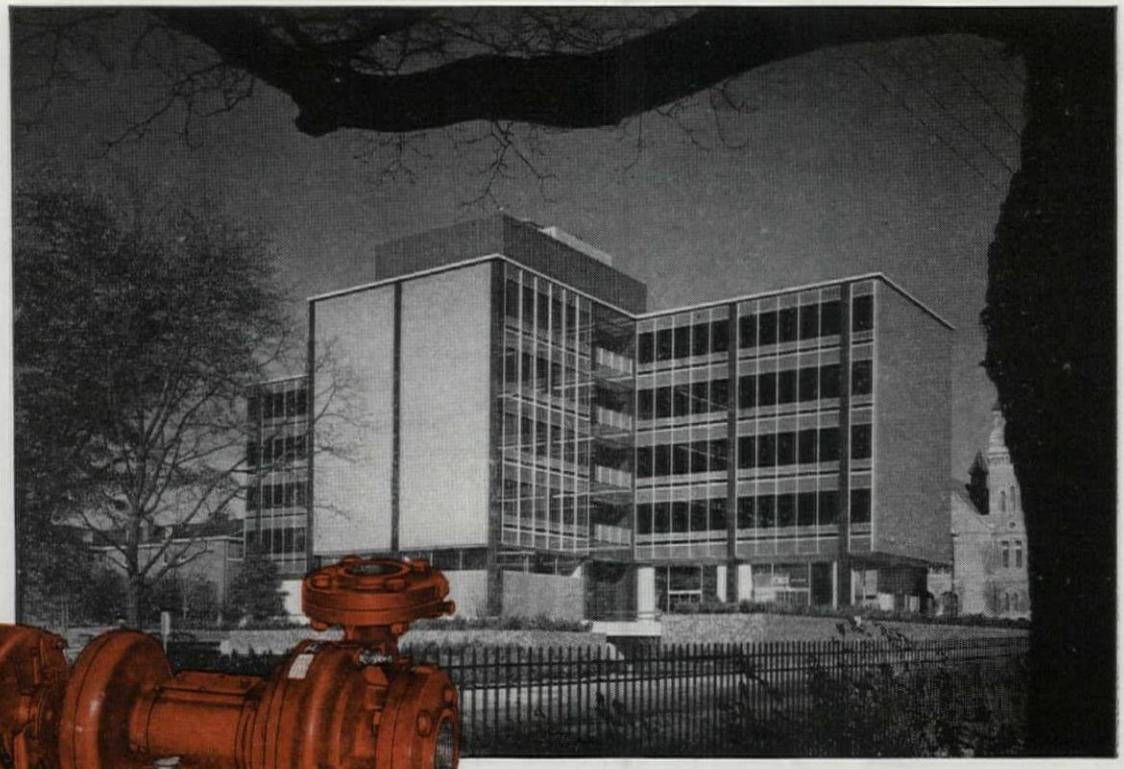
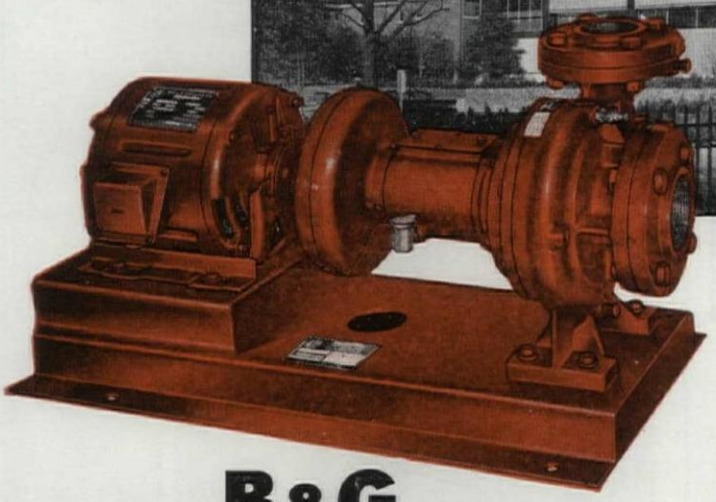


Home Security Life Insurance Company Building, Durham, North Carolina



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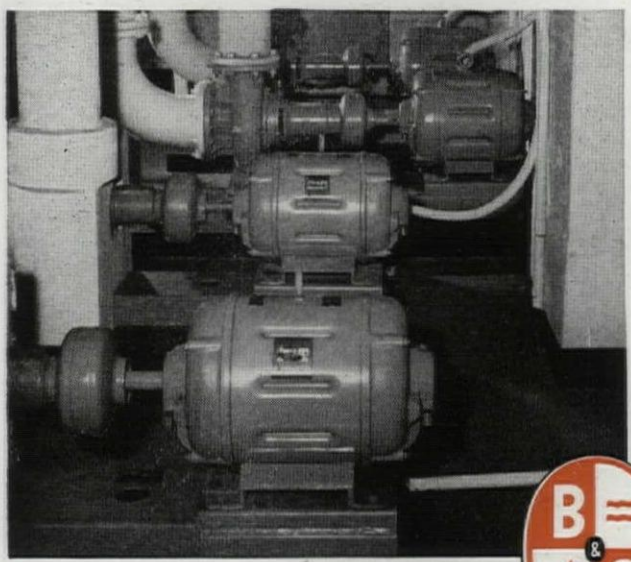

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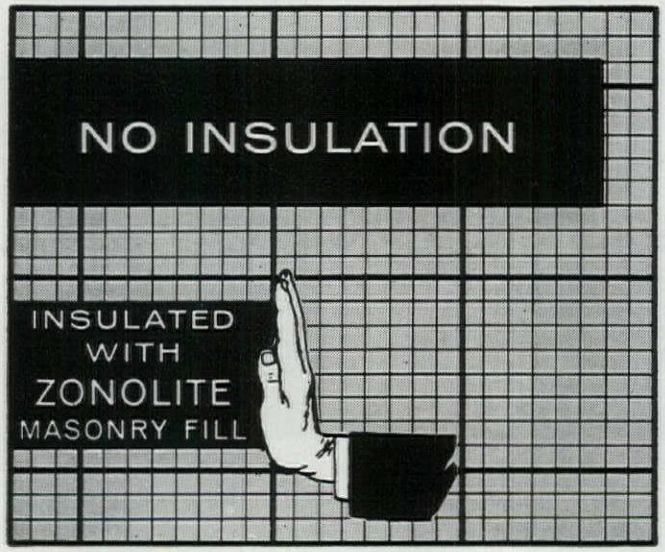

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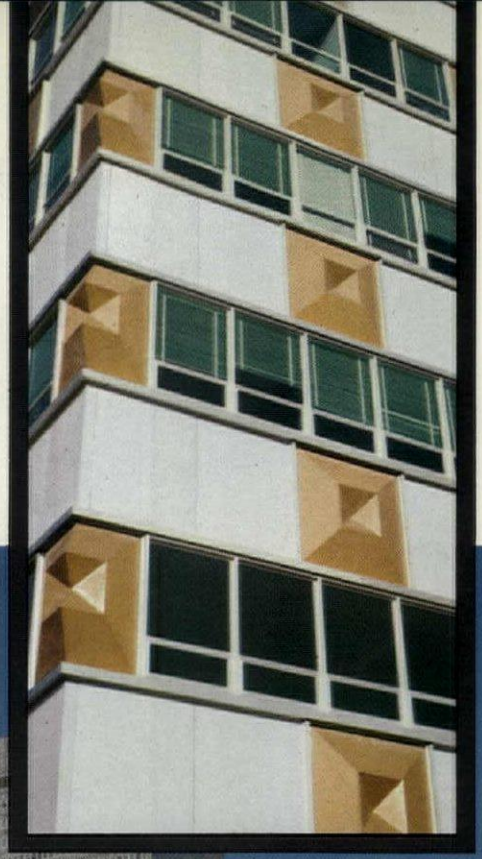
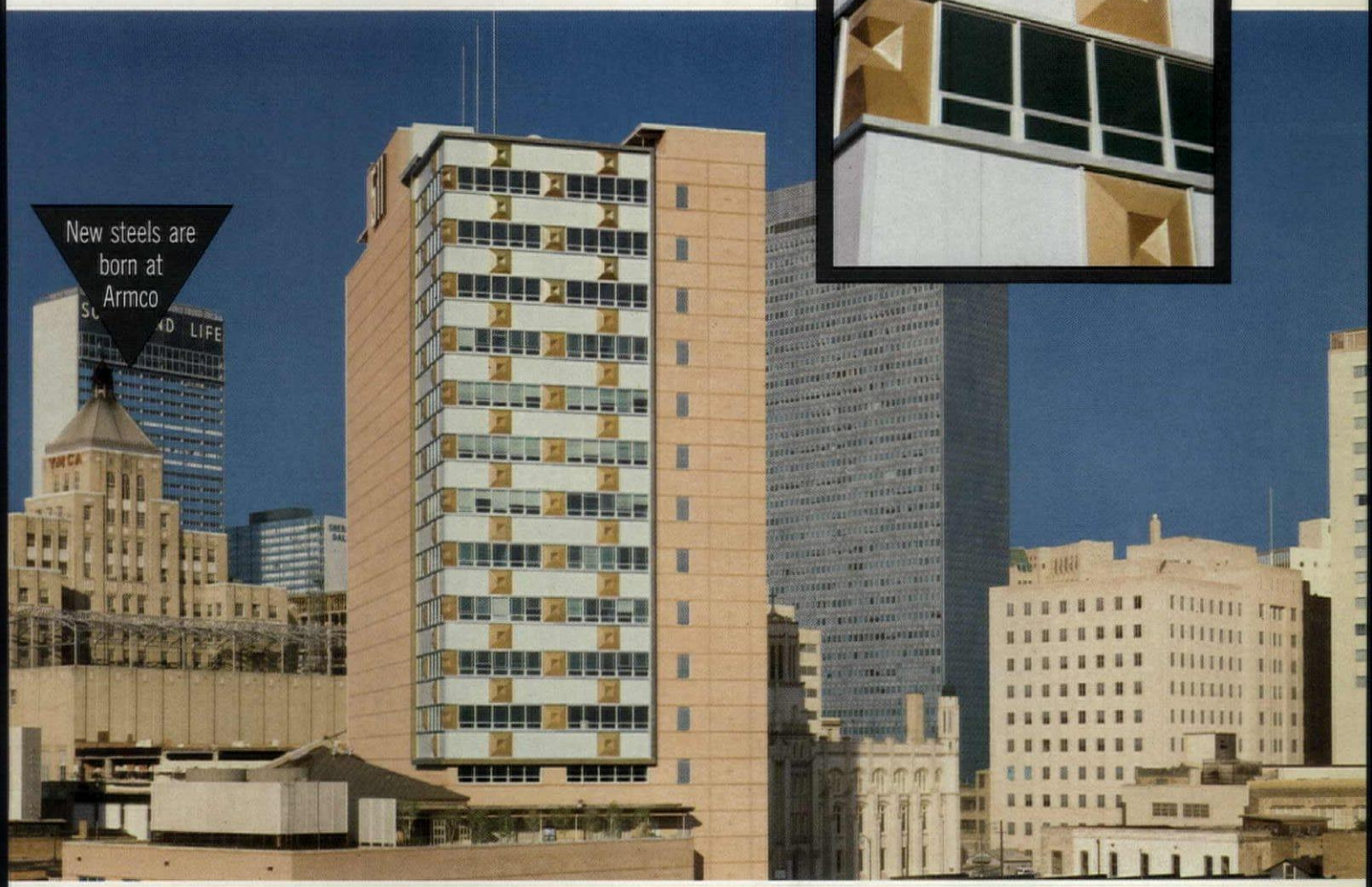
with Porcelain Enamel Curtain Walls





Home Office, Relief and Annuity Board of Southern Baptist Convention, Dallas, Texas
Architects: **Thomas, Jameson & Merrill, Dallas**
General Contractor: **Inge & Hayman, Dallas**
Porcelain Enamel Panels: **Texlite, Inc., Dallas**

The new home office for the Relief and Annuity Board of the Southern Baptist Convention clearly illustrates the freedom to design with color and form offered by porcelain enamel. This 16-story curtain wall structure in downtown Dallas is unusually distinctive. Its attractive porcelain enamel facades not only incorporate rich, warm colors but also a pleasing interruption of planar surfaces with custom-designed, deeply-formed panels.

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Expand *your* design horizons by using the color, form, and other advantages of porcelain enamel on Armco Enameling Iron for curtain wall construction. This special architectural metal has been proved by more than a quarter-century of use, yet it fulfills the requirements of contemporary design.

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See following page for details of curtain wall.

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ARMCO DATA SHEET

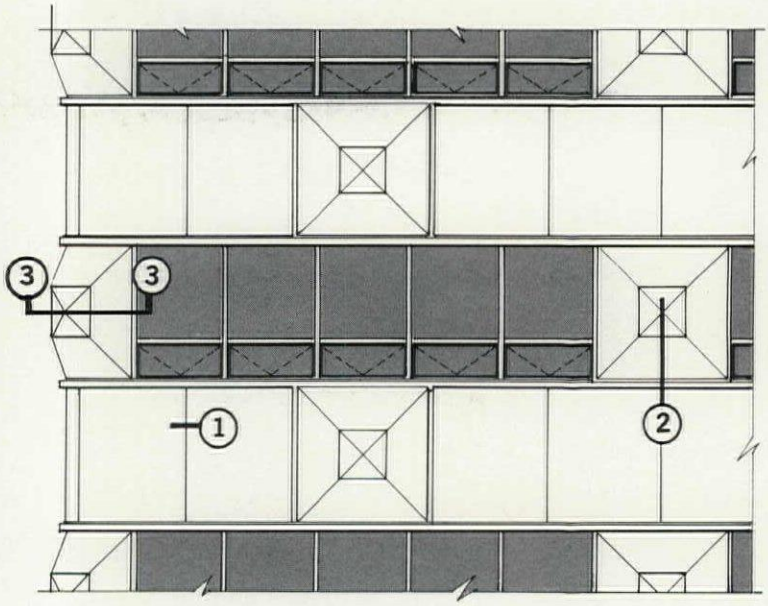
1-8

Porcelain Enamel Curtain Walls / Office Building

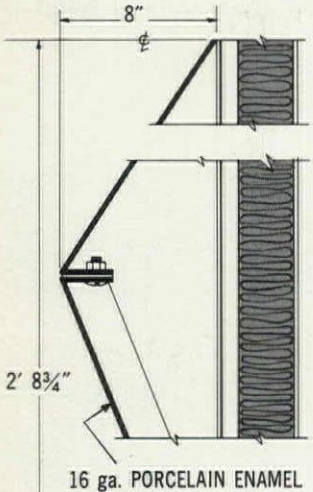
511 North Akard Building

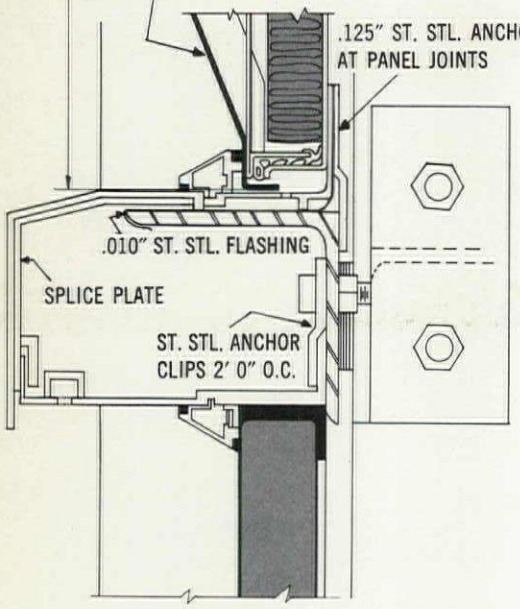
Home Office, Relief and Annuity Board of the Southern Baptist Convention Dallas, Texas Typical Details of Porcelain Enamel Curtain Walls

Turn page for additional information on this distinctive structure.

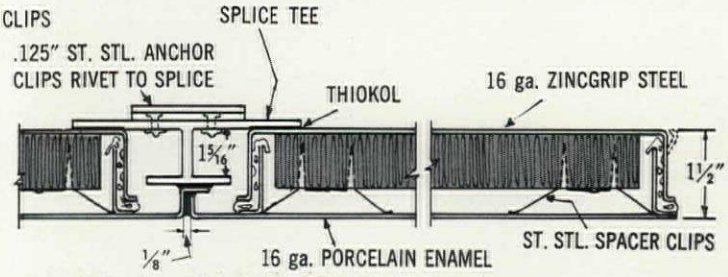


Section of Elevat of West Wall

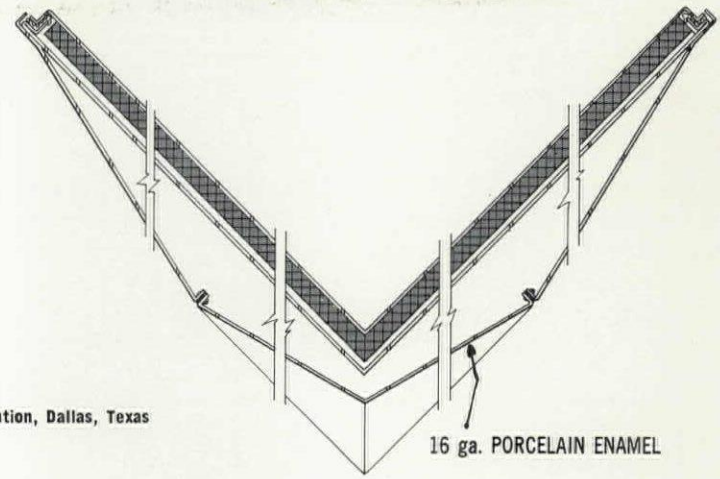




2. Vertical Section of Sill—Raised Porcelain Enamel Panel to Spandrel Panel.



1. Detail of Junct of Flat Porcela Enamel Panels.

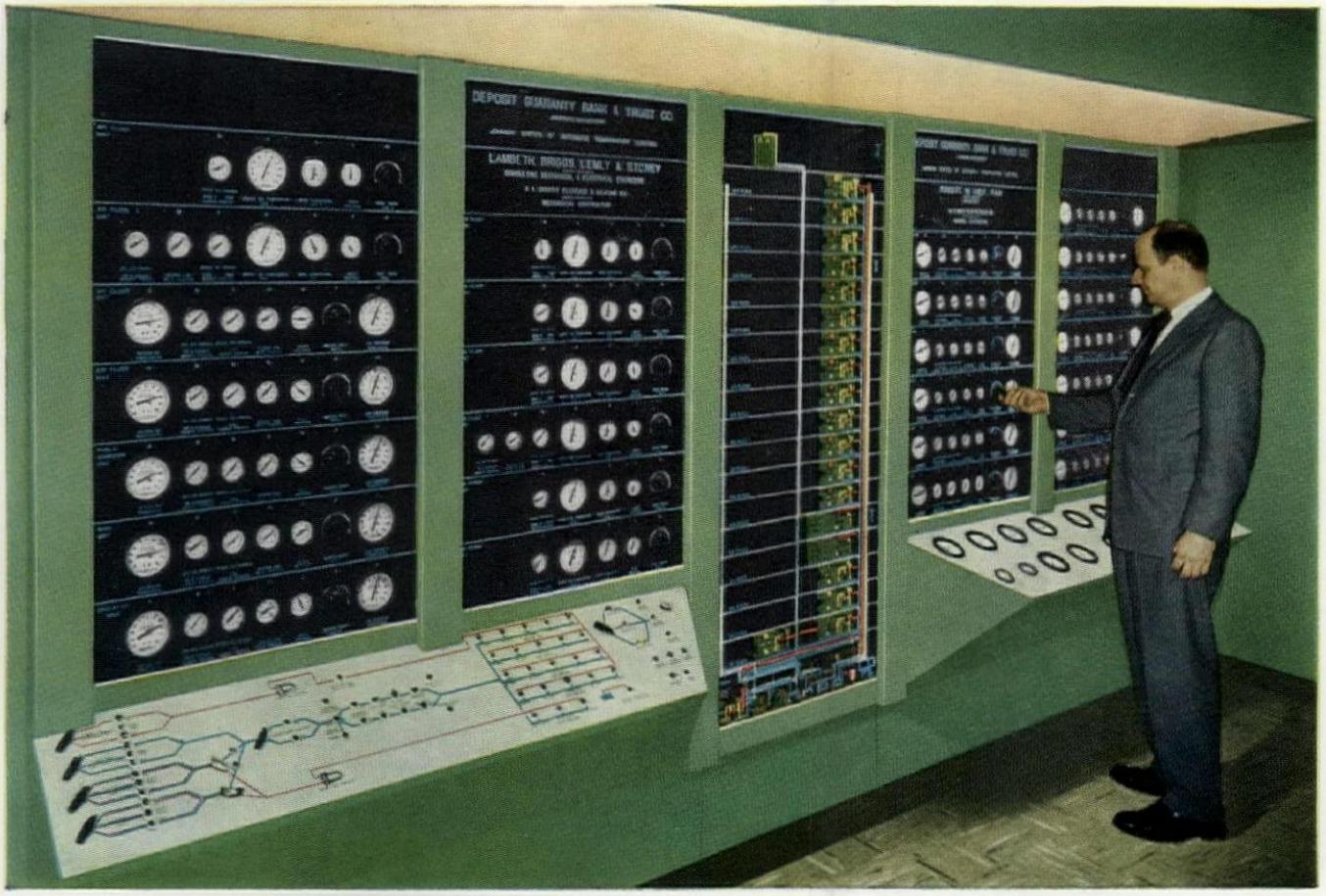


3. Horizontal Sect of Raised Porcel Enamel Corner Pan

Home Office, Relief and Annuity Board of Southern Baptist Convention, Dallas, Texas
Architects: **Thomas, Jameson & Merrill, Dallas**
General Contractor: **Inge & Hayman, Dallas**
Porcelain Enamel Panels: **Texlite, Inc., Dallas**

ARMCO STEEL

Deposit Guaranty Bank & Trust Co., Jackson, Mississippi. R. W. Naef, architect; Lambeth, Briggs, Lemly & Storey, consulting engineers; M. T. Reed Construction Co., general contractor; F. L. Cooper Plumbing & Heating Co., mechanical contractor; all of Jackson.



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JOHNSON CONTROL

PNEUMATIC SYSTEMS

DESIGN • MANUFACTURE • INSTALLATION • SINCE 1885

(Continued from page 58)

Manhattan? He believes that Mies and Johnson should instantly have reached the conclusion that a tall, congestion-producing skyscraper was evil. Since this is the evil of almost every downtown skyscraper erected, why pick on the Seagram to raise this issue? Suppose we agree that the best use of the Seagram site is a park; or at most a two-story building with a garden on top and parking beneath? Where does the critic go from here? Having ventured so far toward utopia in a surprising manner for so tough-minded a critic, Creighton makes no suggestion himself, and abandons the problem in wistful query.

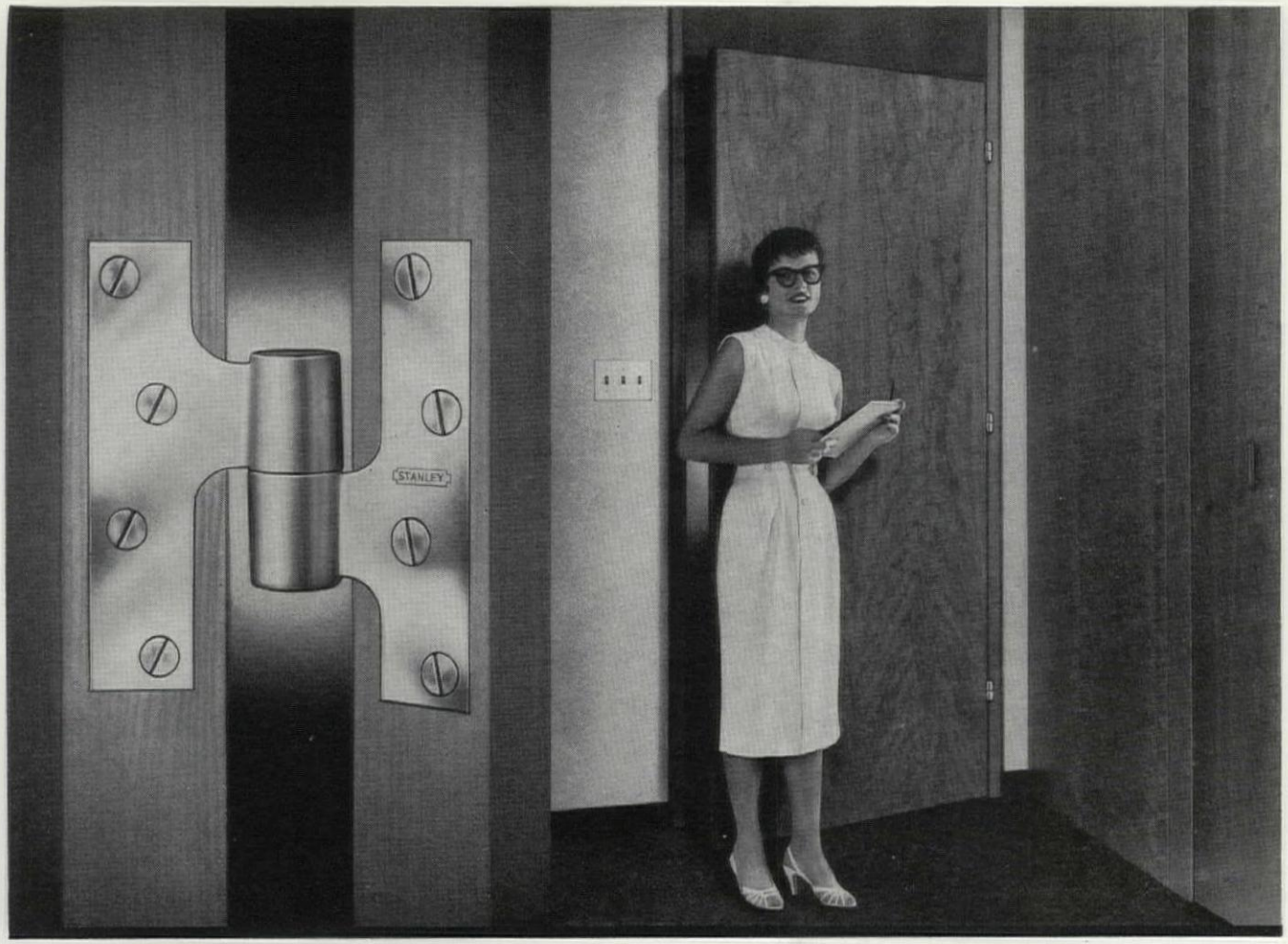
There is the plaza, of course. Most would think this sufficiently civic-minded for one corporation, when equally wealthy neighbors have been so greedy. (When, for example, shall we see Seagram's neighbor to the north, Reinhold Publishing Corporation, step forward with a civic gesture commensurate with its more modest means?) But Creighton is grudging in praise of the plaza. He would have liked it enlarged by the addition of a plaza with a completely different visual character on the block immediately to the north, which was once to have fronted the ill-fated Astor project. I expressed relief that this particular open space is now to be closed by a "money-maker" so as to wall the north flank of Seagram plaza. Creighton accuses me of not wanting "open space, but a setting for Seagram House." I thought that everyone realized that successful urban spaces must be visually contained. Of course I want a taut setting for Seagram House; I also want urban space. I would like a dozen other such plazas along Park Avenue, large and small, now and again linked meaningfully to one another and especially extended in depth toward parallel avenues, but always visually contained as outdoor rooms. These plazas should possess differing qualities capable of providing different kinds of urban experience ranging the gamut from austere formality to bustling gaiety. Seagram provides one kind of experience superbly; Rockefeller Center, another. The greatest plazas—San Marco, for example—provide something of both experiences. Plazas of this scope, however, must perhaps always be community, rather than corporate, enterprises.

As for the abstract visual quality of Seagram Plaza, which Creighton protests, I confess that the flanking benches should be more accessible, without the necessity of treading the edge of the fountain. I should have made this point more decisively (as, indeed, Mumford did). But as for disturbing the purity of the central slab, I would not plant pansies in a Japanese sand garden. If the experience *is* abstractly visual when sitting on the balustrades, and admittedly without the popular appeal of ice skaters, is the experience any the less humanly valuable because of its relatively meditative nature? To some, it may even be more so.

Creighton agrees that the entrance to the building is impressive. He dislikes the office space upstairs. Here, where both Mumford and I were silent, he scores his best points. (I should add that I did comment in my original manuscript on certain aspects of the periphery of the interior space insofar as it related to the exterior wall; but this section of my article had to be deleted for editorial reasons.) Thus, in the manuscript version of my article, I did comment on the vertiginous potential of windows extended from floor to ceiling, which is Creighton's first objection to the office space. Being somewhat susceptible to vertigo myself. I was surprised that I received no such sensation in the Seagram House since the air-conditioning units compell one to stand back from the glass. The spectacular visual effect of the panorama, the warmth of color in this view, and the columnar impact of the window mullions (all ignored by Creighton) seem to me compensations for the vertiginous effects on some clients. These last could easily remedy the situation by a railing at the inside edge of the air-conditioning equipment.

Although silent on the subject in my criticism, I agree absolutely with Creighton as to the large amount of unsatisfactory interior space in this building which might not be as bad in a building completely given over to its proprietary corporation as in a rental building which Seagram substantially is. I agree, too, that the ceilings in lounges and conference

(Continued on page 192)



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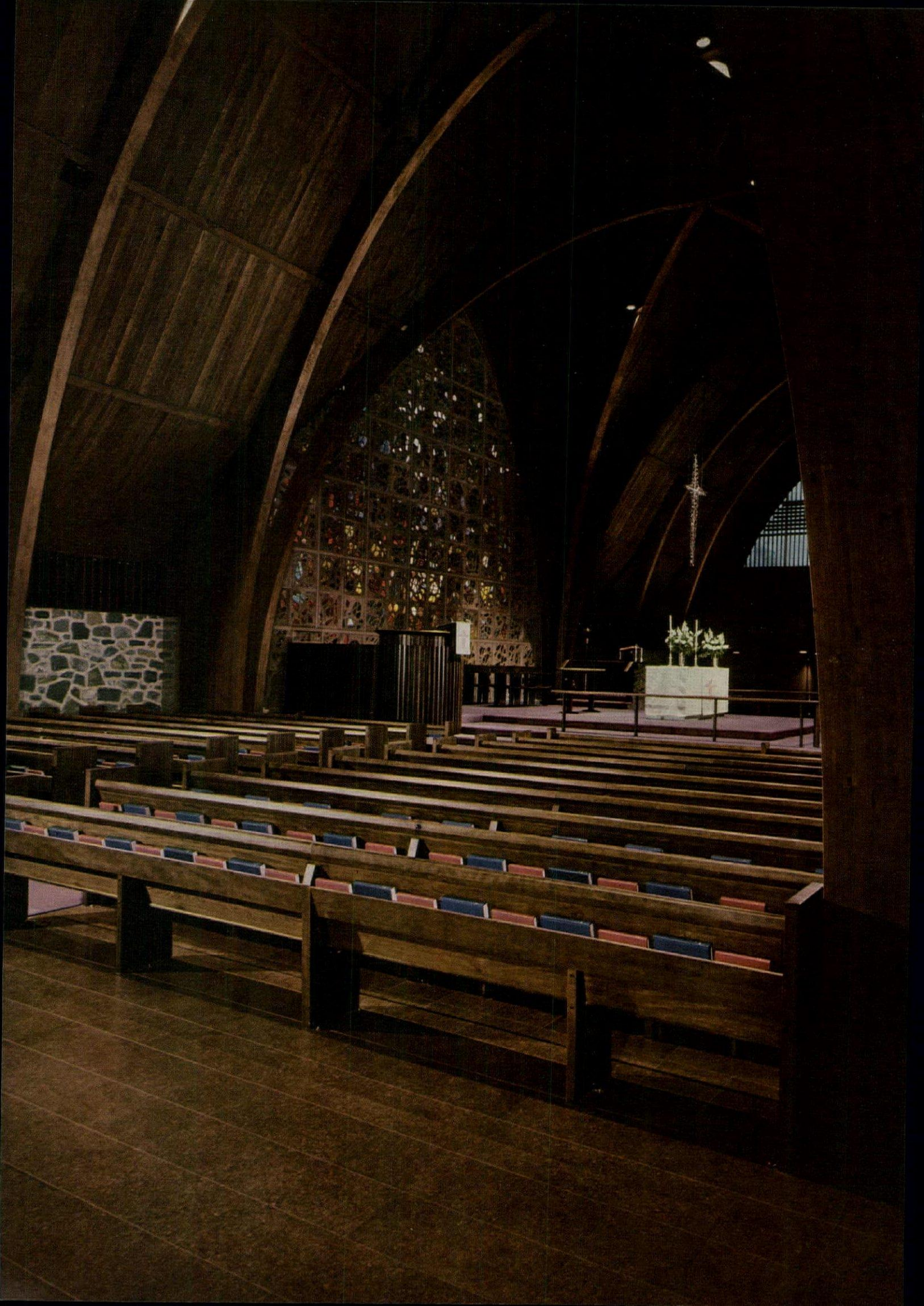

The Church of The Redeemer, Baltimore, Maryland
architects: Pietro Belluschi, Cambridge, Massachusetts; Rogers, Taliaferro and Lamb, Baltimore
floor: Armstrong Cork Tile, No. 411

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80¢ - 95¢	**$1.00 and over**	**$1.00 and over**
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1" x 1/8" bronze flats 3/4" x 3/8" keyholed bronze channel

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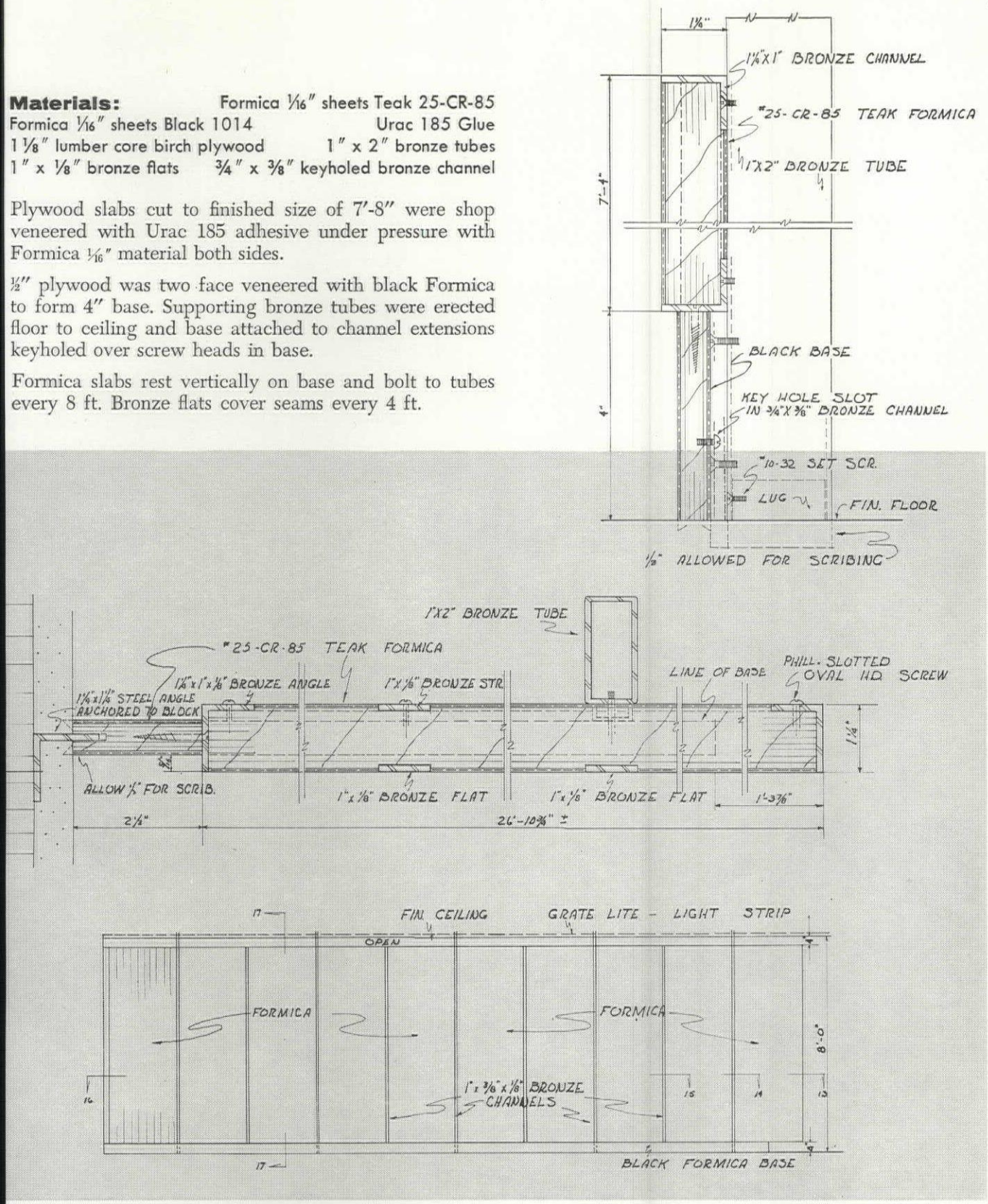
Formica slabs rest vertically on base and bolt to tubes every 8 ft. Bronze flats cover seams every 4 ft.



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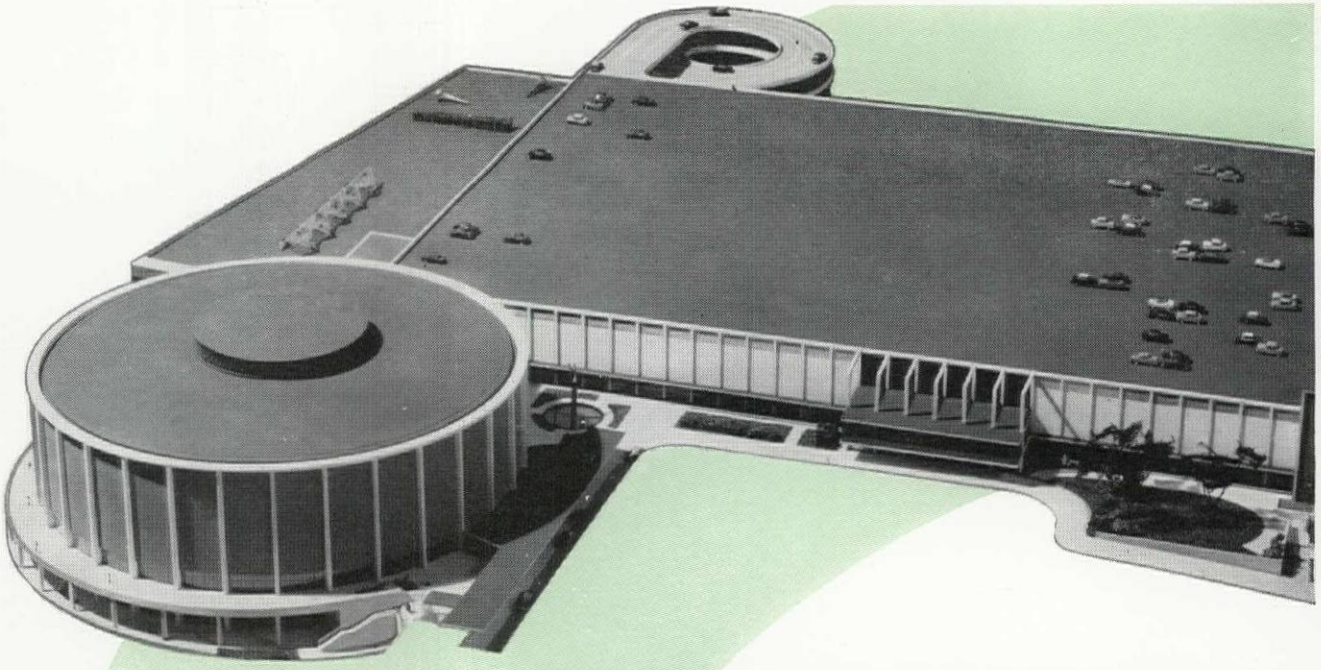

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General Contractor	O. W. Burke Co.
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PROGRESSIVE ARCHITECTURE
news report

- Sweeping Structure Set for St. Louis Stargazers (above)
- Walter Gropius Accepts AIA Gold Medal
- Highlighted Curtain-Wall Panels Used on New Research Building

NEWS BULLETINS WASHINGTON NEW PRODUCTS MANUFACTURERS' DATA

Reinhold Publishing Corporation's

ANNUAL P/A DESIGN

PROGRESSIVE ARCHITECTURE announces its seventh annual Design Awards Program. Awards will be made to architects and their clients for PROJECTS NOW IN THE DESIGN STAGE to be built in 1960 in the United States.

PURPOSE of the Design Awards Program is to give recognition to good design in the period of design development, rather than after completion, in order to encourage the designers and owners of the projects so honored.

AWARDS will be given by a distinguished Jury to best projects chosen from ten categories — COMMERCE, EDUCATION, DEFENSE, HEALTH, INDUSTRY, PUBLIC USE, RECREATION, RELIGION, RESIDENTIAL DESIGN, URBAN DESIGN. Awards will be on the basis of site use, choice of structural system and materials, solution of client's program, and overall design excellence. The Jury will assign projects to the various categories, and reserves the right to withhold an Award in any category, as well as to honor additional projects by CITATIONS.

FIRST DESIGN AWARD will be given for the one best project submitted.

JURY will be composed of William W. Caudill, Architect, of the firm of Caudill, Rowlett, Scott & Associates; Louis I. Kahn, Architect, Philadelphia; Ralph Rapson, Head, Department of Architecture, University of Minnesota; José Luis Sert, Dean, Graduate School of Design, Harvard University; and Lyndon Welch, Engineer, of Eberle M. Smith Associates, Detroit.

AWARDS PROGRAM

for projects not yet built

JUDGMENT will take place in New York during September, 1959. Winners of AWARDS and CITATIONS will be notified (confidentially) immediately after the Judgment.

ANNOUNCEMENT of the winning projects will be made at a presentation in the home town (if practicable) of the recipient of the FIRST DESIGN AWARD. Winning projects will be presented in January 1960 P/A. As in the past, PROGRESSIVE ARCHITECTURE will arrange for general publication of winning projects in other media, particularly those in the localities of all the AWARD and CITATION winners.

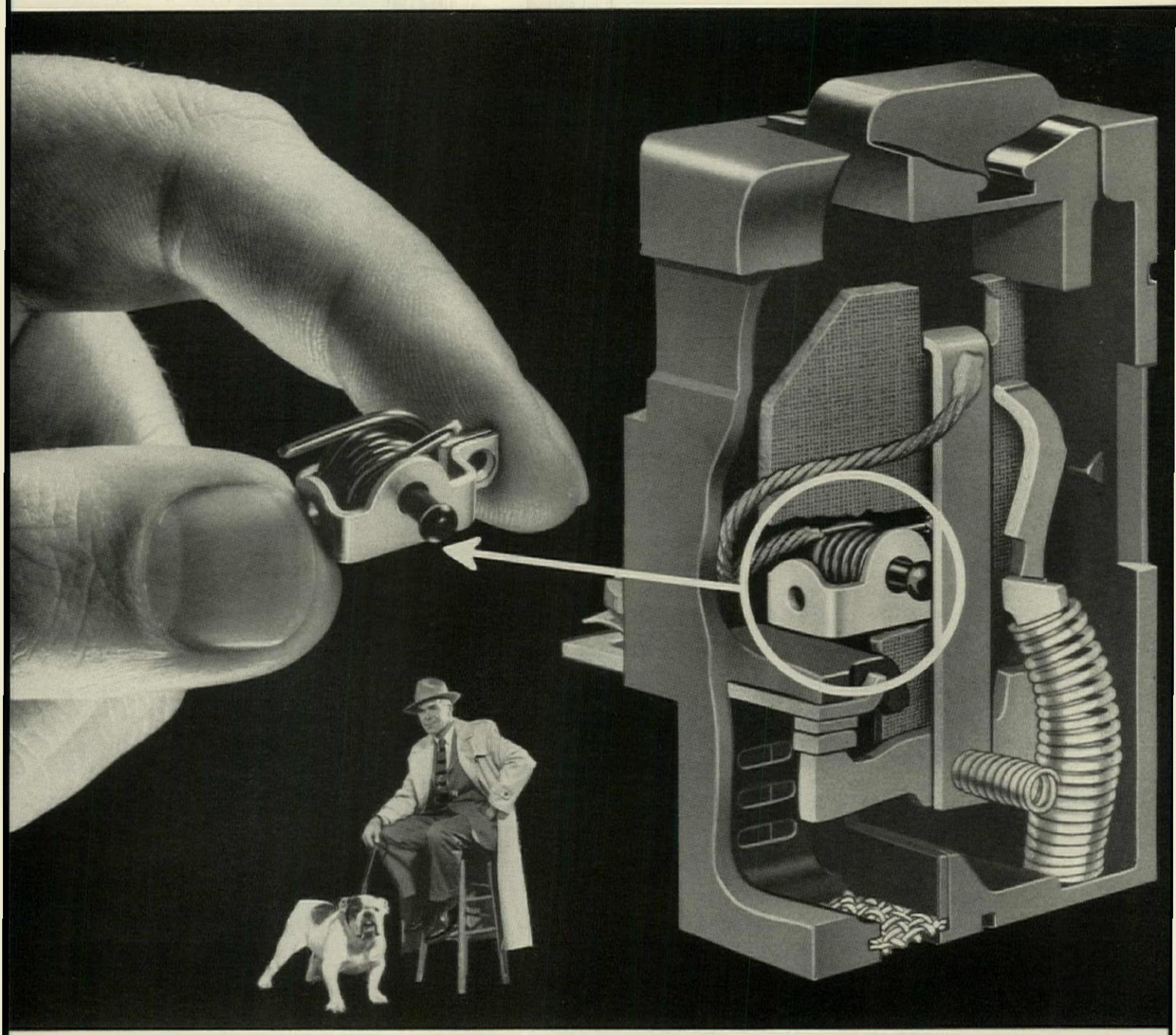
DEADLINE FOR MAILING is August 31, 1959. No application blanks are necessary. Simply send, for each project you submit:

1. Client's name; location and proper name for project.
2. Brief explanation of the program and your solution.
3. Site plan.
4. Basic plans and pertinent sections and details.
5. Perspective drawing or view of model, *unmounted photographs or photostats*—renderings, exhibit panels, or models will *not be accepted.*
6. Interior plans and sketches, if available.

ADDRESS on or before August 31, 1959, to:

Awards Editor, PROGRESSIVE ARCHITECTURE
430 Park Avenue, New York 22, N. Y.

P/A will carefully guard and return all material that is submitted.



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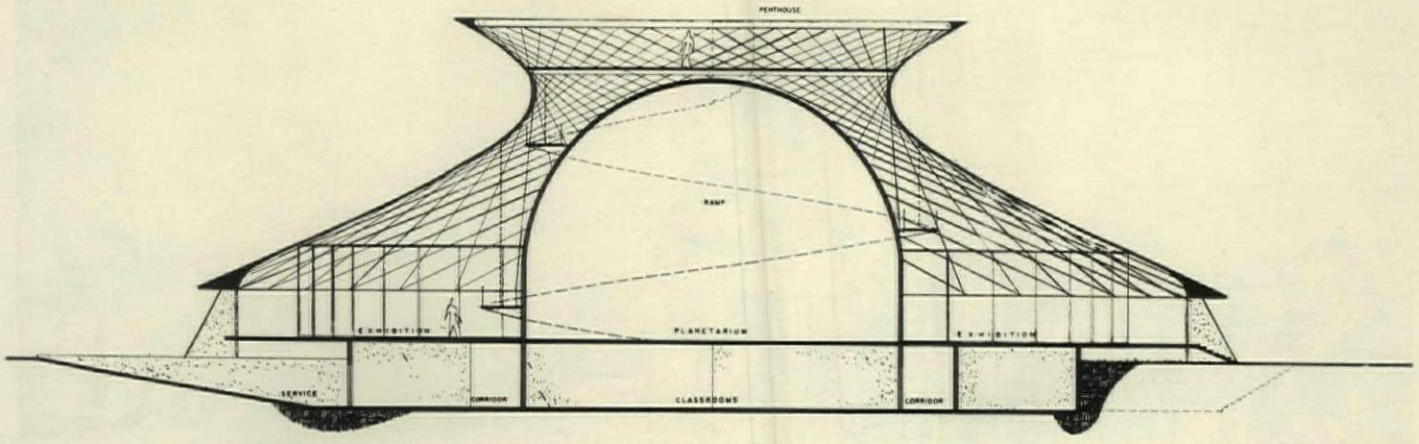
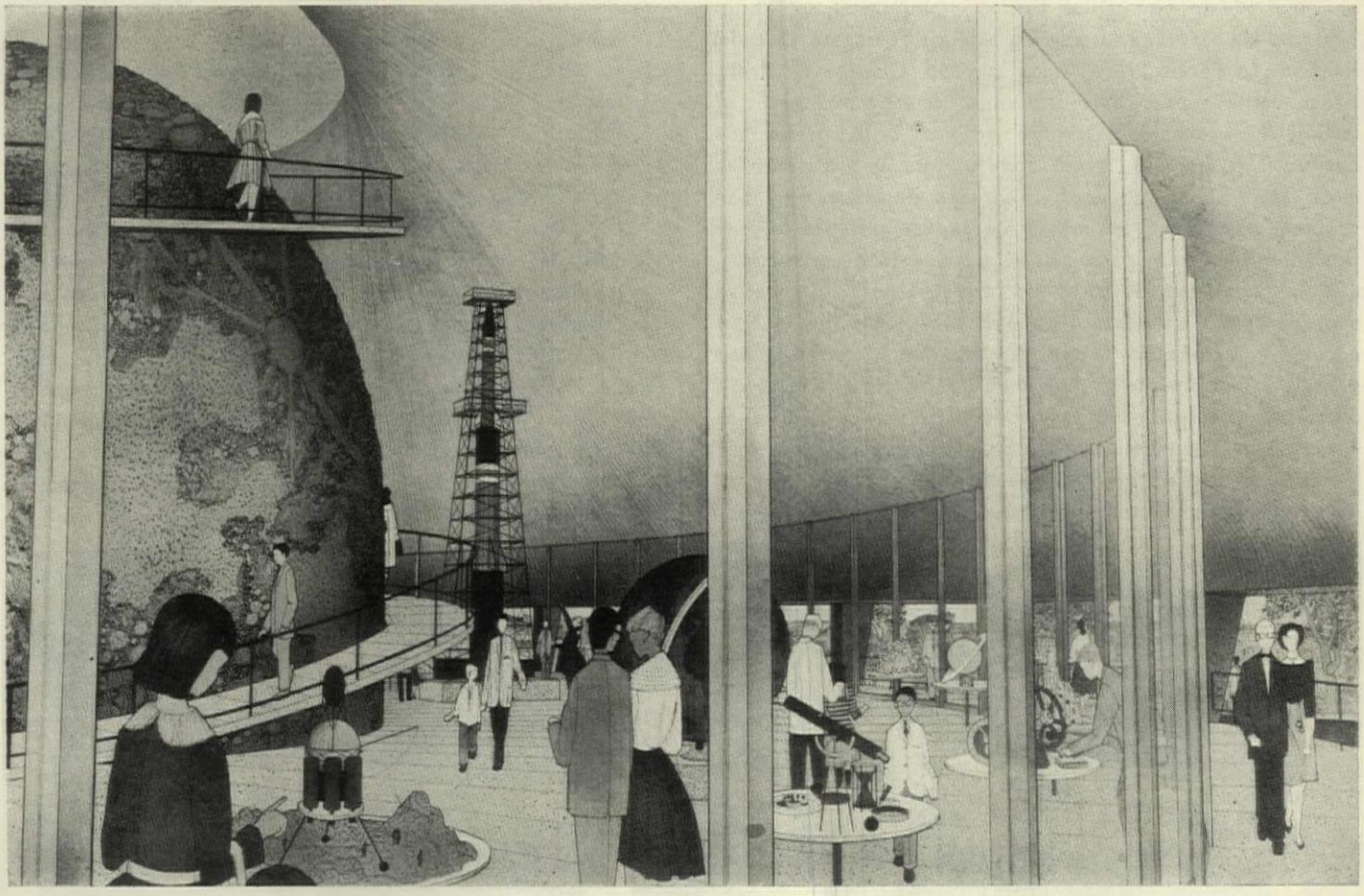


SECTION

SWEEPING STRUCTURE SET FOR ST. LOUIS STARGAZERS

Dome will Sit Beneath Hyperbolic Paraboloid Roof

ST. LOUIS, MO.—A dramatic swirl of thin-shell concrete will soon rise here to enclose a planetarium which is expected to rank among the top in the nation. Located on a hillock in St. Louis' spacious Forest Park, the planetarium will sit on a stone platform. Museum directors specifically asked for a building which would not repeat the dome profile so common in this type of structure—one which would become an exciting focal point in the park. To answer these requirements, Architects Hellmuth, Obata & Kassabaum placed the aluminum dome within a deeply overhanging thin-shell-concrete hyperbolic-paraboloid roof. In addition to providing a unique form, the roof shelters the generous space for permanent and temporary exhibits relating to astronomy, space travel, and astrophysics, which rings the planetarium dome. The roof will rest on concrete piers around the perimeter of the building, shading the circular glass skin walls of the exhibition area. On the lower level, beneath the planetarium auditorium, are three pie-shaped classrooms circled by administrative offices, storerooms, and conference rooms. The great roof flares out from a narrow "waist" at the top of the structure to furnish space for observation of the stars through telescopes, a platform sheltered from the lights of the city by the inclined wall formed by the soaring roof.



AIA CONVENTION STRESSES DESIGN

NEW ORLEANS, LA.—A well-attended AIA convention heard a series of well-known architects give their individual philosophies of design. Keynote address was given by Edward Durell Stone, New York (*below left*, between AIA President John Noble Richards and New Orleans Mayor deLesseps Morrison). Stone said that in devoting most of its strength to building a democracy for the past 185 years, the United States has not had time to learn to appreciate beauty. He is of the opinion that today we are on the eve of a great interest in cultural matters in this country, and adjured architects to come to the fore to lead this renaissance.

A high point of the Convention was the panel (*above*) on "Individual Theories of Design" moderated by Philip Johnson, New York, and starring Minoru Yamasaki, Detroit; William L. Pereira, Los Angeles; and Charles E. Pratt, Vancouver, Canada. Pereira warned about the dangers of letting the mechanical requirements of a job determine design. This, he said, is not architecture; as architects we must return to the concept of "image design rather than problem design." Pratt noted that, given suitable instruction, the creative mind can be stimulated to greater effort, and the ordinary mind force-fed into creativity. A creative man, he said, "creates not what is acceptable but what is accepted." Yamasaki, reiterating his plea for serenity and delight in architecture, said that he tests everything his office designs according to whether it could have been designed in a previous generation, in order to be sure it is not "just a product of our technology." Johnson, summarizing the panel's remarks, stated again that mere "problem solving" is no substitute for the "lonely, agonizing process of creation." He said we must look continually forward, but at the same time know what has gone before—"We must stand on the shoulders of the last generation to see what the next thing is."

An informative look at architecture of the past was provided by Architect Samuel Wilson, Jr., (*below right*), who gave a beautifully-documented address on "The Architecture of Historic New Orleans." Oregon's Paul Thiry spoke his views on "Total Design"; Robert S. Anshen of San Francisco led a panel on "Design Factors and Resources" consisting of Julian E. Garnsey, Lovic Pierce Herrington, and Stanley McCandless; and Morris Ketchum, New York, moderated a discussion of "The Economic Value of Design" featuring G.J. Morgan of United States Gypsum Co., J.E. Drew of Lever Brothers Co., Real Estate Consultant Larry Smith, and Albert D. Hutzler, Jr., Baltimore. Following investiture of new Fellows at Delgado Museum, Dr. Walter Gropius accepted the AIA Gold Medal (*excerpts of his remarks acrosspage*).

At Convention's close, a critique was offered by Dean Samuel T. Hurst of the School of Architecture and the Arts, Alabama Polytechnic Institute, in which he deplored the architect's "retreat from greatness" to someone who is, in the public's eye, the "man who makes blueprints." Stating that this results in part from a "retreat from responsibility" on the architect's part, Hurst concluded: "Let us then *be* Architects of the 20th Century; let us *be* a profession in the fullest sense of that noble word," so that we may justify our architectural world.

Photos: Leon Trice

WALTER GROPIUS ACCEPTS AIA GOLD MEDAL

Excerpts from Acceptance Speech

In the recent past we have concerned ourselves more with defining ever newer *means* than with defining *ends*, and we have now amassed such a tremendous arsenal of techniques that their bristling display has nearly robbed us of our sense of balance. . . .

[Today] everything *can* be done and, most certainly, *is* being done. Our cities have taken on the look of a free-for-all, wild competition to engage the mind, heart, and body of its populace and all sense of propriety and discrimination seems to have been swept away by this unlimited technical dam-burst. . . .

What ingredient is missing in our way of life without which we cannot hope to emerge from visual chaos? The answer [is] . . . that a society such as ours, which has conferred equal privileges on everybody, must acknowledge its duty to raise the general level of responsiveness to spiritual and esthetic values by education. As it is, the individual is insufficiently trained to see and to observe the visual phenomena around himself; and his environment, in its present, chaotic state, does little to provide him with the experience that beauty is a basic requirement of life and the precondition for organic building and planning.

The realization [of these facts] had caused me to establish right after the First World War the Bauhaus in Germany and, when Germany reverted to the dictatorial methods I had hoped we had outgrown, to transfer my educational work to the Graduate School of Design in Harvard University.

In the meantime the Bauhaus idea has spread far and wide, but it also has been abused and distorted in such manner that there is now a popular version of a fixed "Bauhaus Style" which is tossed around in debate as if it had really existed as a rigidly defined formula. On the contrary! Our strength was that there was no dogma, no prescription—things that invariably go stale after a while—but only a guiding hand and immensely stimulating setting for those who were willing to work concertedly, but without losing their identities. What made our group function was a common method of approach, a kindred way of responding to challenges of our day. . . . We knew that only a personal interpretation of a common phenomenon can become art, that only as an individual searching mind can fined a conceptual attitude and pose questions of principle, but we also knew that it was imperative simultaneously to find the bond of a common expression to achieve a balance between individual initiative and voluntary subordination to a common principle. Under these same principles [we] are working in "The Architects Collaborative". . . .

One of the fallacies of our present conception of life results, I believe, from the fact that a majority of people believe that modern organization-man has found today's version of that indispensable ingredient of all cultures: the intellectual common denominator of a period. He has not. For with his new tool, automation, he performs only one aim: to compel each individual to abide by a narrowly circumscribed intellectual code, the focus of which is mere expediency. Adaptability is rated higher by him than independent thought, and consequently the individual becomes lost within the group. Against this robotization of our society, we must set our conviction that keeping one's identity is *superior* to social usefulness at any price and that a *leveling* process can never produce a cultural common denominator.

But didn't we only yesterday run down the rugged individualist? We did, but the pendulum has swung back sharply to the other extreme now and we have to discover the hard way that neither conformity within the group—which leads to tyranny by the majority—nor willful extravagance of the individual can create a climate which favors the development of initiative and imagination, but that it is the moral responsibility carried by each individual independently within the group which provides the basis for the goal of a democratic culture: i.e. unity in diversity.

We stand at a moment in history that calls for a bold, imaginative interpretation of the democratic idea. Our generation is presented with a similar challenge as were the founders of our Western culture, the Greeks, when they deliberately buried the treasures and temples of their former existence under the triumphant symbol of their newly-found freedom: the Acropolis. Or, as Thornton Wilder has put it beautifully: "Culture under a democracy has its dangers, but also its hopes and promises. Here a new and tremendous theme opens up which will have to be penetrated by thought, investigated, and expressed, the theme: Man with head unbowed. Democracy has the new task to create new myths, new metaphors, new images to show forth the state of new dignity which man has entered upon." Only when a social or spiritual goal has become thus clearly identified in the mind of a society does it become the inner substance of its works of art and architecture.

NEW YORK ARCHITECTS MASTER-PLAN PUERTO RICO HOSPITAL

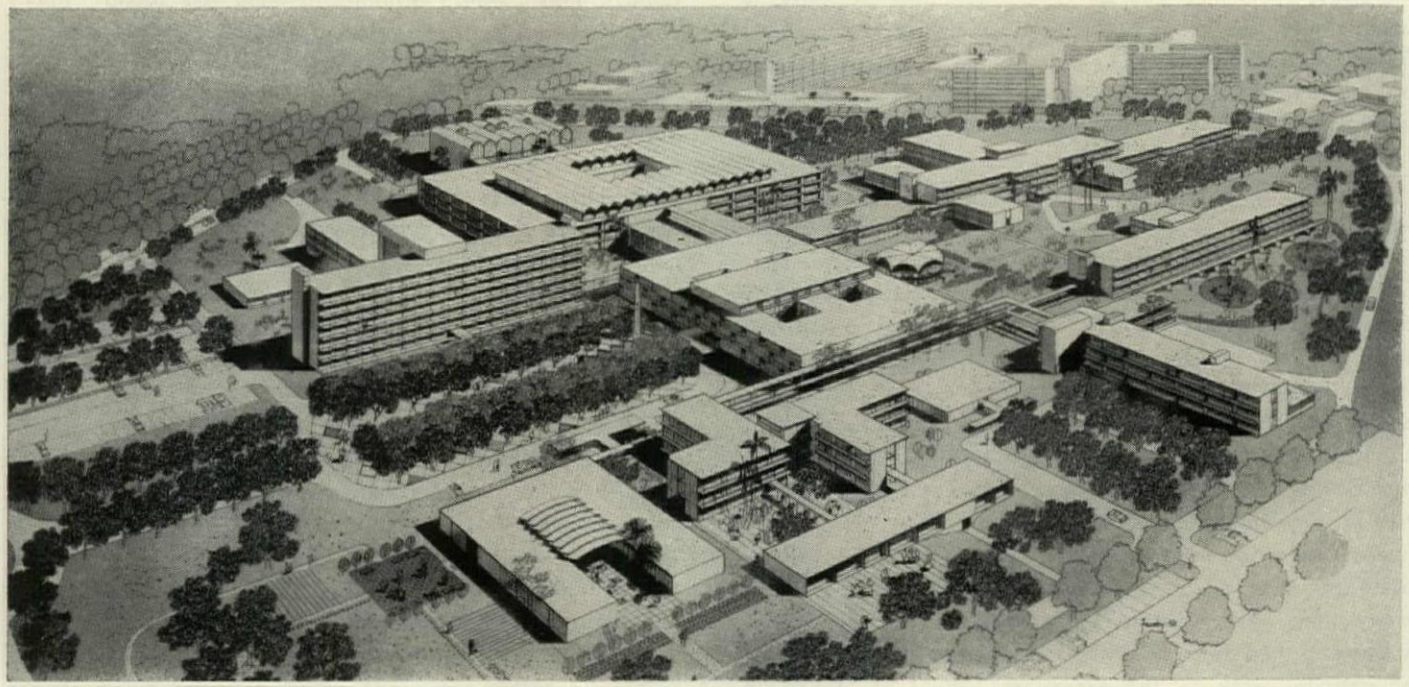
Institutions Built Co-operatively for Economy

SAN JUAN, PUERTO RICO—A vast Medical Center to serve the entire island of Puerto Rico, under consideration since the end of World War II, is at last on the verge of realization. New York Architects & Hospital Consultants Isadore & Zachary Rosenfield report that the master plan they prepared for the island's government was well received and that the project will go ahead.

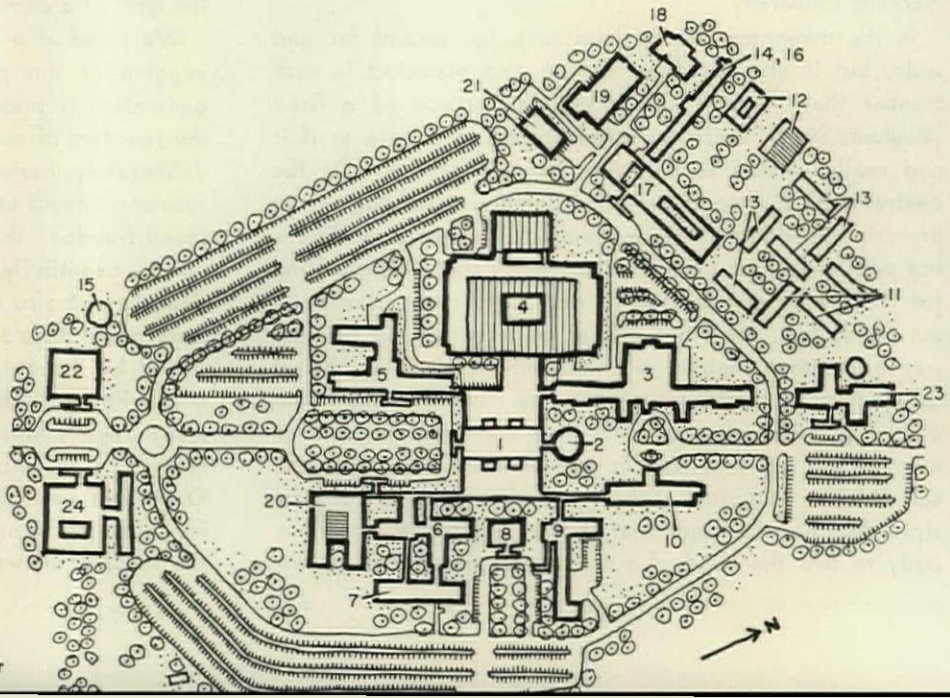
Medical Center will consist of four hospitals; a medical sciences building containing schools of medicine, dentistry, public health, various paramedical disciplines, and research facilities; a central building housing administration and medical-service facilities to be used in common by the four hospitals (outpatient clinics, operating rooms, x-ray equipment, laboratories, patient records, pharmacy, central sterilizing, etc.); and other common services, institutions, and housing for students and personnel. This integration of common elements is expected to make cost of the project about one-third less than if each institution were built independently.

On the site are two buildings—the adult and children's TB hospitals—which will be converted into district hospital and pediatric building, respectively (*see legend below*).

Architects responsible for the various buildings are Isadore & Zachary Rosenfield; York & Sawyer, New York; and Joaquin Rodriguez and O'Kelly & Mendez of Puerto Rico.



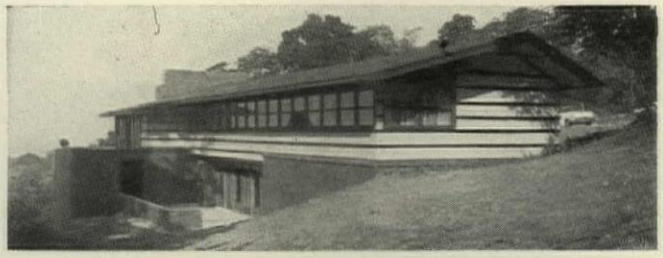
1 central building
2 central cafeteria
3 district hospital
4 medical sciences building
5 municipal hospital
6 industrial hospital
7 nursing home facility
8 bio-medical research & training building AEC
9 Dr. I. G. Martinez oncologic hospital
10 pediatric building
11 medical student dormitories
12 gymnasium, pool & recreation
13 medical student apartment buildings
14 student nurses' dormitory
15 water tower
16 graduate nurses' dormitory
17 school of nursing
18 power plant
19 central laundry
20 rehabilitation center & school for training rehabilitation technicians
21 garage & warehouse
22 health center (for local population)
23 long term diseases hospital
24 comprehensive community rehabilitation center



ARCHITECTURAL BULLETINS

● Officers elected at AIA Convention in New Orleans were President John Noble Richards, 1st Vice-President Philip Will, Jr., 2nd Vice-President Henry L. Wright, Treasurer Raymond S. Kastendeick, Secretary J. Roy Carroll, Jr. Regional Directors for coming year are Clinton Gamble, Florida Region; Clinton E. Brush, III, Gulf States Region; Linn Smith, Great Lakes Region; Harry C. Weller, Northwest Region; Arthur G. Odell, Jr., South Atlantic Region; Daniel A. Hopper, Jr., Middle Atlantic Region. Charles E. Jones, Jr., of University of Arizona, was elected president of Association of Student Chapters of AIA.

● "Color in Architecture" will be theme of North Central AIA Regional Conference, Milwaukee, Sept. 22-23. . . . N.A.H.B. announces 3rd annual National Executive Marketing Conference of Homebuilding Industry; participants will discuss "Next Decade in Homebuilding," in St. Louis, Sept. 24-25. . . . Sir Leslie Munro, Dr. Paul A. Siple, Wendell Bell, Carlos Contreras, Dr. Karl With, Robin Boyd, and John A. Kouwenhouven will examine "Wellsprings of Design" at Pacific Rim Conference of California Council of AIA to be held in Honolulu, Oct. 7-14. . . . Sessions of B.R.I. Fall Conference, Washington, D.C., Nov. 17-19, will be devoted to sandwich-panel design criteria, architectural-metal curtain walls, new heating techniques, building research, and international building research.

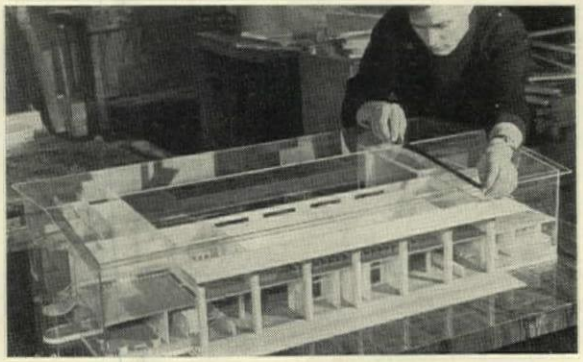


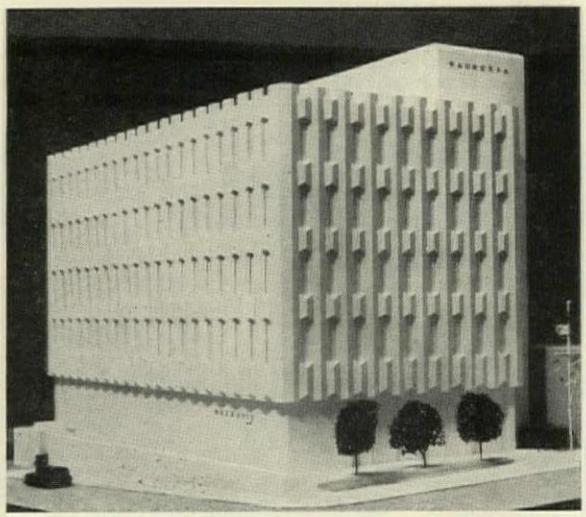
● Second Frank Lloyd Wright building in Greater New York (first was Guggenheim Museum, JULY 1959 P/A, pp 75-77) is prefab house on Staten Island. Designed by Wright for Erdman Associates of Madison, Wis., house has skin of sand-colored Masonite board with wood battens giving strong horizontal emphasis. Roof is of terne with mahogany edges.

● John Haro of Albert Kahn Associated Architects & Engineers, Inc., received 1959-60 Arthur W. Wheelwright Fellowship from Harvard. He will study historic monumental and religious buildings and current building technology in Europe. . . . Photographer Ken Hedrich of Hedrich-Blessing, Ltd., was awarded AIA Fine Arts Metal in New Orleans. . . . Dr. Sterling A. Callisen was elected president of Parsons School of Design, New York. . . . Architect William F.R. Ballard became Chairman of Board of Citizens' Housing & Planning Council of New York.

● Katherine Morrow Ford, wife of P/A Editor Thomas Creighton, died June 26. Former architectural editor of *House & Garden*, she was author with Creighton of *Quality Budget Houses, Design for Living, American House Today*.

● Soviet Exhibition of Science, Technology, and Culture at New York's Coliseum laid heavy stress on advances in production, manufacturing, and science. Most popular exhibit was three-room model apartment described as being representative of quarters occupied by average Soviet family of four. Living room (*above*) featured wall storage unit with kitchen hand-through opening above dining table. Accents for somewhat severe design were provided by such traditional native objects as pottery figures and oriental rugs. Other two rooms of apartment were master bedroom and children's room. Apartment is same one shown last year at Brussels World's Fair. Great stress in the construction section of the exhibition was laid on city planning. Many models of city-planning projects—such as Moscow's Southwest district—were shown. These developments are being built up block by block (or micro-district) according to master plans. Apartment houses (*model below*) are making extensive use of prefabricated concrete panels manufactured by vibration-rolling method recently developed. Social center of micro-districts is standard club (*bottom*) containing 800-seat auditorium, movie theater, and rooms for art groups, and recreation.





● Castellated Wachovia Bank and Trust Company Building in Wilmington, N.C., has exterior facing of precast-concrete panels, prism-shaped with textured surface of quartz. Light will reflect from angled spandrels differently at different times of day, causing quartz to sparkle. Designed by A.G. Odell, Jr., & Associates, with Ballard & McKim as Associate Architects.

● Architect Carl Koch is directing research and design program for aluminum as basic home-building material for Olin Aluminum and *Living for Young Homemakers*. . . . Mies van der Rohe received Royal Gold Medal for Architecture of Royal Institute of British Architects in London.

● P/A First Design Awards winner for 1959, the redevelopment of Sacramento, Calif., began construction after formal groundbreaking ceremonies July 27. First building will be multimillion-dollar lease-purchase Federal Building.

● Annual student-training program of Voorhees, Walker, Smith, Smith & Haines, New York, is underway for fifth time. Eighteen students from 17 schools are acquiring practical experience in the office this summer. All facets of practice are stressed.

● Harvard will offer advanced courses in Urban Design beginning a year from this fall. Open to candidates holding one of the professional degrees from Graduate School of Design in architecture, landscape architecture, or city planning, the one-year-minimum course will lead to degrees of Master of Architecture in Urban Design, Master of Landscape Architecture in Urban Design, or Master of City Planning in Urban Design.

● Modular Building Standards Association has announced publication of *M.B.S.A. Reports*, a compilation of current technical articles on modular progress; news and status of ASA's recently constituted Committee A62 on dimensional standards for building products; and technical brochures on new modular products introduced by manufacturer-members. Publication will be distributed to all MBSA members.

● SOM's two new San Francisco buildings—Crown Zellerbach and John Hancock—are subject of an exhibit at San

WASHINGTON NEWS by Frederick Gutheim

Two outstanding firms of architects have recently been engaged to design the National Cultural Center and the Air Museum (part of the Smithsonian Institution complex). Edward Durell Stone will design the Cultural Center, a building for which between $35,000,000 and $50,000,00 must still be raised by trustees appointed earlier this year. Harbeson, Hough, Livingston & Larson will prepare preliminary designs for the Air Museum. The site lies just east of the Smithsonian's venerable Gothic headquarters building on the south side of the Mall.

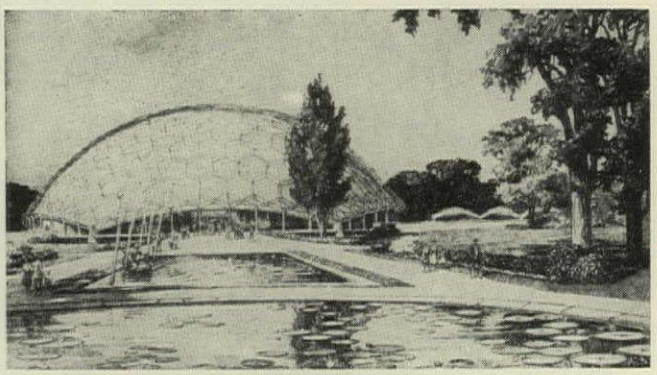
The Cultural Center presents an architectural opportunity of the first order. In part this derives from its site, along Potomac River just north of Lincoln Memorial, which is sufficiently detached from heavy commitments to monumental architecture to allow it to develop a fresh atmosphere of its own that will be appropriate to its special and, I hope, festive role. It also derives from the circumstance that the Center is only a quasi-public institution, and is thus relatively independent of Federal building-design procedures and precedents. Many problems remain to be overcome at this early stage, of course. The Center still lacks a program that will give it any separate identity from Lincoln Center for the Performing Arts in New York. Its location in the tangle of approach highways linking the new Potomac bridge to the inner expressway loop also raises sticky questions. But the design problem will remain the central problem.

On the occasion of Frank Lloyd Wright's birthday commemoration, the Institute of Contemporary Arts here collected and screened all of the major films and kinescopes of the late architect. One of these was a splendidly filmed account of Wright's last appearance in Washington, mainly devoted to a colloquy with Robert Richman, the Institute's talented director, on the design of the National Cultural Center. Perhaps with his Monona Terrace project, a city-county civic center in Madison, Wisconsin, in mind, Wright sketched in words his conception of a unified complex of art institutions, occupying a platform covering a huge parking facility, extending across the marginal highways and overhanging the Potomac. Some equivalent conception, solving at one stroke the problems of site, access, function and design is invited. One structure is indicated, rather than a series designed by individual architects.

The Air Museum is quite different. As earlier studies by McKim, Mead & White illustrated, the demand for a building housing full-sized aircraft raises stupendous difficulties of scale, and the location on the Mall inviting comparison with the National Gallery of Art, introduces an architectural obligation that is all but impossible to reconcile with the building's function. Perhaps it is just as well that the H2L2 contract is written as it is. Indeed, the government could well use more such exploratory design contracts, for it is in precisely this stage that the independent architect can make his original contribution.

Francisco Museum of Art, Aug. 21-Sept. 20. Associated architects on Crown Zellerbach building were Hertzka & Knowles.

● Fuller geodesic dome will enclose rare plant collection of "Shaw's Garden" in St. Louis. Architects Murphy & Mackey, with Missouri Botanical Garden Director Dr. Frits W. Went, have planned versatile climatic-control system



for giant greenhouse. Electronic-panel controls will be able to produce rain, mist, fog, arid air, or almost any other kind of atmosphere demanded by plants. Dome will be 175 ft in diameter at base and over 70 ft high at center, with no interior supports. Columbus Division of North American Aviation, Inc., will build structure.

● Knoll Associates, Inc., Knoll International, Ltd., and Knoll Textiles, Inc., have been acquired by Art Metal Construction Co., New York, manufacturer of metal office equipment. Florence Knoll becomes Director of Design and Research for Art Metal, and will serve on its Board of Directors. She has announced plans for research into the design of metal office furniture.

● Michigan Society of the Professions has been formed to direct "its total effort to the interests and problems common to *all* professions." Architecture, dentistry, engineering, law, and medicine are professions represented. Architects on executive committee are Elmer J. Manson, Secretary, and James B. Morison, Director.

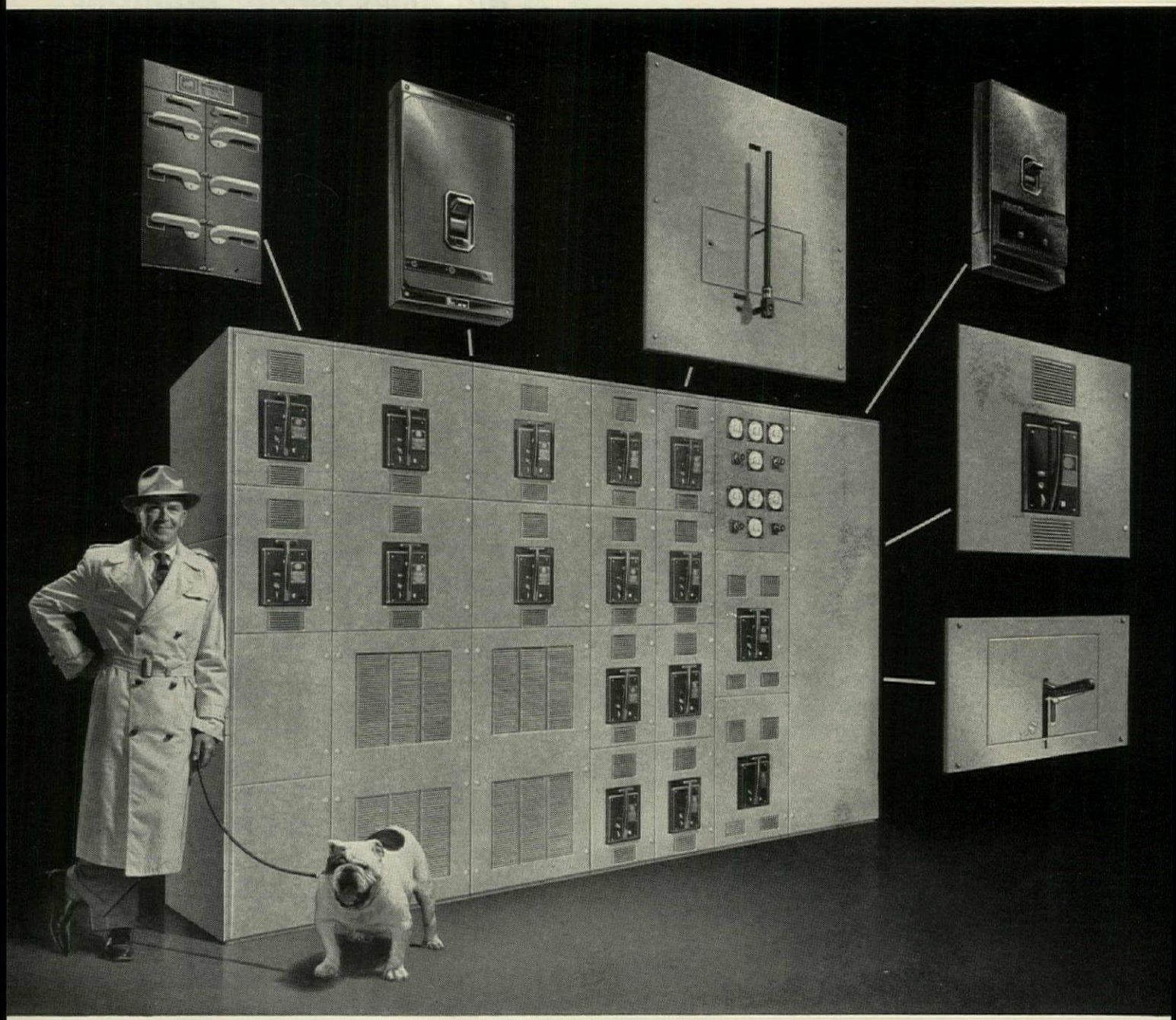
● Exterior facing of quartz-aggregate precast-concrete panels with exposed, white-concrete structural frame will distinguish new Science Building for Wayne State University in Detroit. Open circulation arcade is feature to be repeated in future buildings of a master plan for the campus. Architects are Albert Kahn Associated Architects & Engineers, with W.B. Sanders as Design Consultant.

FINANCIAL NEWS by William Hurd Hillyer

"How high is up?" asks the small child. As to inflation, there is no definite answer at this time. Thanks to the efforts of AIA and other professional organizations, those who design buildings affected by the Interior Department Appropriations Bill may be better prepared to withstand rising living costs. The bill as passed by the House contained Section 401 limiting design and engineering fees to 5% of the total cost. The Senate Committee, while in sympathy with the desire to eliminate excessive charges, feels the limiting section might produce increased construction costs by failing to attract the best talent. The committee has recommended that this section of the bill be deleted. This deletion will probably be upheld by the full Senate but the two versions of the bill will have to go to a Senate-House conference.

How sound is the money received by the architect for his services? Manufacturers Trust Company of New York answers as follows: "Our national economy is sound. But there is no assurance it will remain so. A nation, like a person, must 'live within its means,' or it will soon be in trouble." After shipping $2.3 billions of gold to foreign nations in 1958, our export this year has risen sharply of late, and is now at $364 millions. We still hold nearly $20 billions of the precious metal—over half the known gold stock in the entire world outside of Russia (who divulges neither her production nor holdings of gold).

The banking system is much concerned with inflation. Lee P. Miller, president of American Bankers Association, in addressing the annual convention of District of Columbia Bankers Association said: "The danger we face is that as the labor force becomes more fully employed and excess productive capacity is absorbed, the pressure on prices will increase. That is what happened between 1955 and 1957." John W. Remington, vice president of American Bankers Association, told the convention of Michigan Bankers: "While the recent upturn in business has been encouraging, I have also detected in my travels a widespread concern over the danger that inflationary pressures may be intensified in the months ahead." In addressing the convention of American Institute of Banking, William F. Butler, vice president of New York's Chase Manhattan Bank said: "The increase in the money supply must be kept in line with the growth in real production, which means a balanced Federal budget and monetary restraint in times of business expansion and high employment. The increase in wage rates must be kept in line with the growth in the technical efficiency, or productivity; this means annual wage increases of 3% as opposed to the average of more than 5% in recent years." Cleveland Federal Reserve declares that "recent stability in the general price level offers quite a contrast to price trends and expectations of a year ago," which is an encouraging note.



ANNOUNCING: THE NEW BULLDOG DF-60
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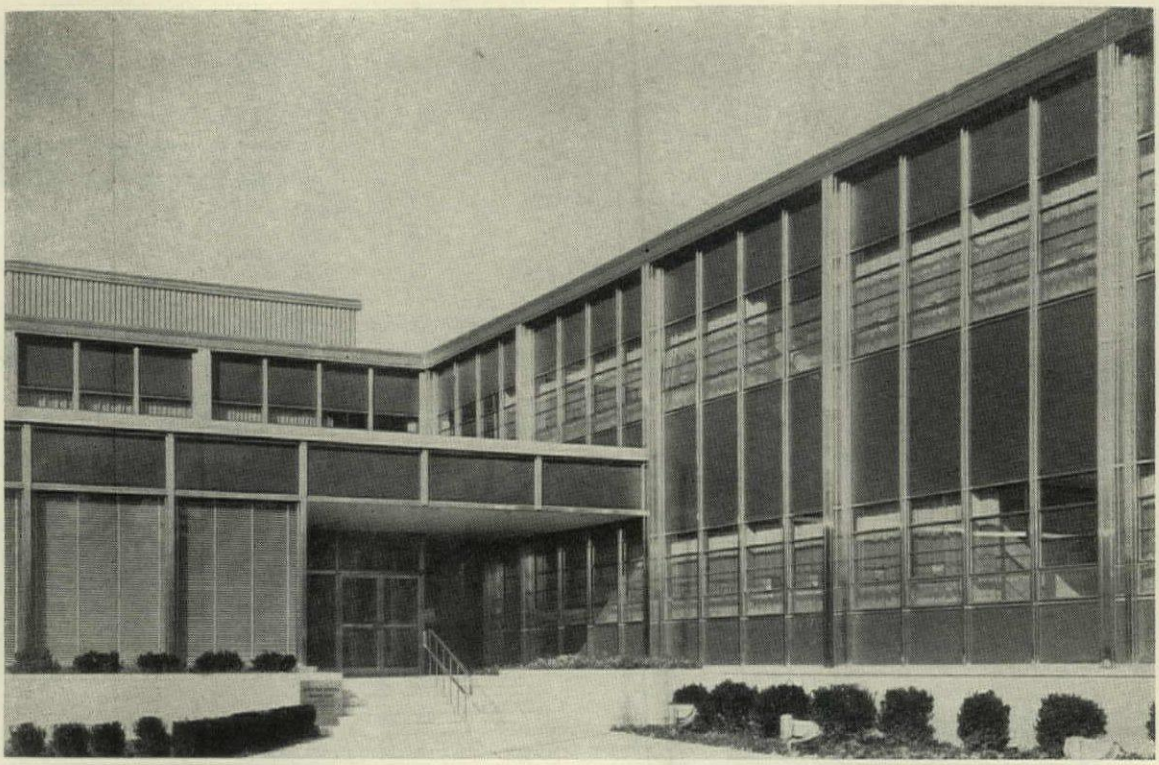


HIGHLIGHTED CURTAIN-WALL PANELS USED ON NEW RESEARCH BUILDING

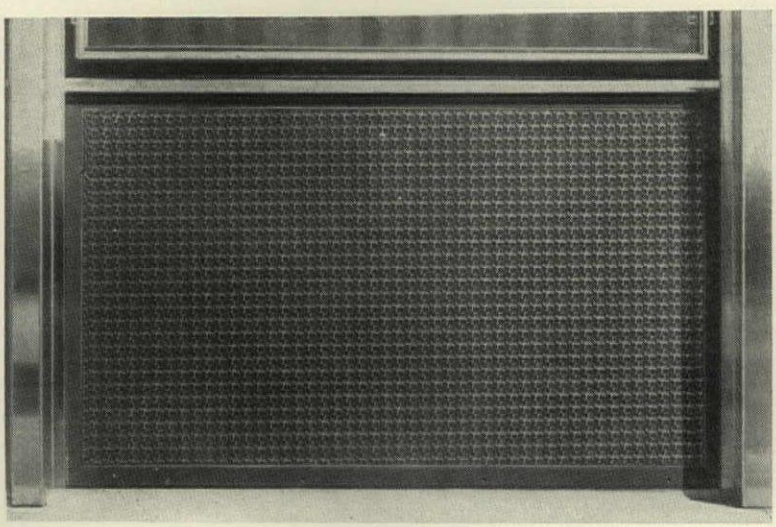
Process Provides Multi-Faceted Exterior

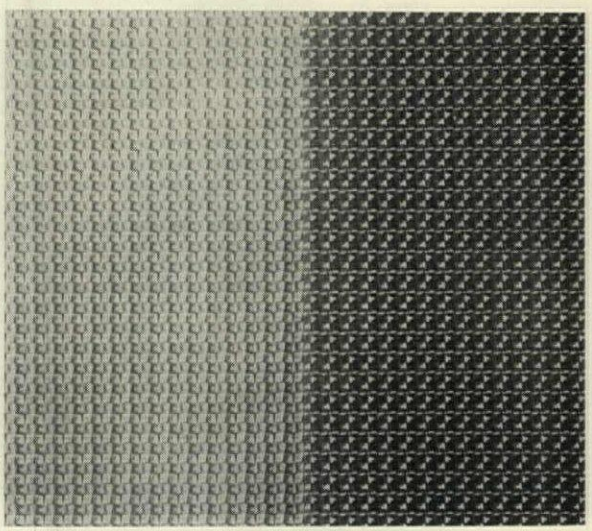
A new process used on the stainless-steel panels forming part of the curtain wall of the recently-erected Republic Steel Corporation Research Center in Independence, Ohio, (The Austin Co., Architects-Engineers) opens the way to more varied curtain-wall designs and applications.

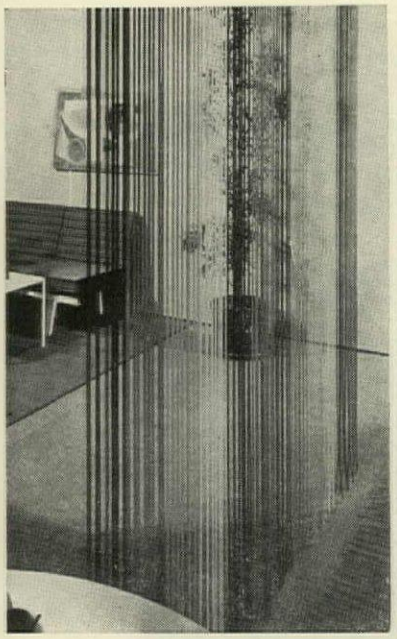
The metal used on the panels of this building, unlike sheets of the same alloy used in previous construction, is embossed with a "two-tone" finish of colored porcelain enamel and shining highlights of stainless steel. The finish was obtained by embossing a design by Raymond Loewy Associates onto the flat metal in the accustomed manner, covering with blue porcelain-enamel frit, and then, prior to firing at about 1000 F, wiping the enamel from the higher surfaces to expose the stainless steel. After firing, the stainless steel exposed by wiping was electro-polished to give a pattern having the low-lying portions of the metal colored and the high spots exposed in natural stainless steel.

Development of the sheets followed investigations to provide more design versatility than is presently available in flat metal panels, and also to overcome the frequent optical illusions experienced with flat panels, such as distortion of centers and "oil canning," or the appearance of non-flatness. Co-operating in research on the high-lighted, patterned panels were the American Iron & Steel Institute and the Stainless Steel Producers' Committee of AISI. Actual development of the "rigidizing" technique was by Rigidized Metals Corporation of Buffalo, N. Y. The embossed, burnished panels utilize 20-gage type 304 steel, providing equal impact resistance to the 14-gage steel customarily used.

Rigidized Metals Corporation **100**







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SELECTIONS FROM THE

Steel Streamers Act as Room Divider

"Ribbon Wall" flexible-steel streamers hang from a ceiling track, can be used to separate areas of a room; half-divide above a piece of furniture; shelter series of shelves; curtain windows; or simply decorate wall space. Designed by George Nelson, strips come in olive, orange, turquoise, blue, yellow, and white; colors may be alternated and mixed. Ribbons may be cut to any desired length, and track is available in any given measurement. There are 16 strips to the foot. A 6' x 8' curtain would cost approximately $75.
Howard Miller Clock Company **101**

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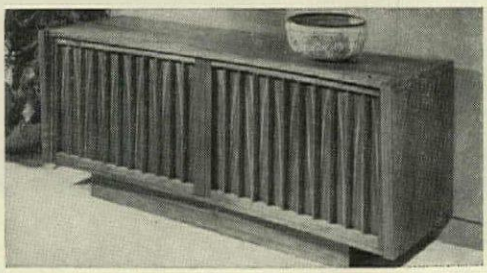

Cabinet Has Hand-Crafted Look

Cabinetwork designed by George Nakashima for "Origins Collection" features sensitive use of fine woods and veneers to bring out their inherent beauty. This cabinet has a wide-sweeping front in a thin arc, cantilevering from an inset base. Laurel wood and walnut are combined. Piece can be used as a buffet, or interior can be engineered to accommodate stereophonic equipment.
The Widdicomb-Mueller Corporation **102**

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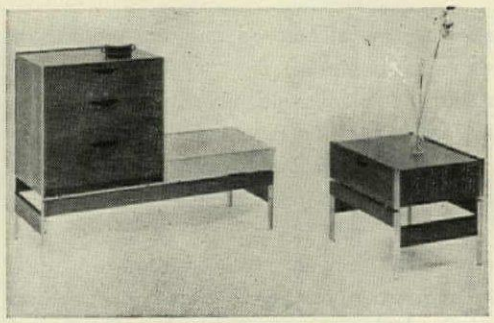

Modular Units Combine Wood and Aluminum

"Modulum" series designed by Architect Richard W. Thompson features storage units, platforms, cabinets, desks, seating units, and headboards, all constructed on a 22" module. Drawers are oak with American matched-walnut used throughout. There is wide choice of wood finishes and colors to choose from. Aluminum is custom extruded and available in a variety of anodized finishes and colors. Shown are large platform with cushion and three-drawer case, and single platform and case.
Glenn of California **103**

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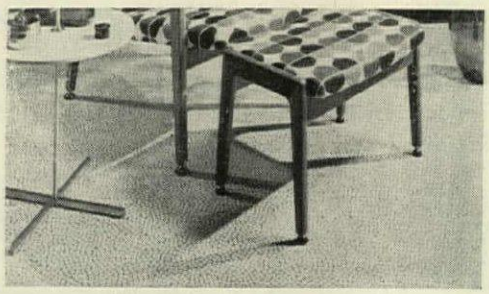

Vinyl Flooring Shows Mosaic-Tile Pattern

"Venetian Chip" is latest pattern in Vinyl Accolon series of rotovinyl floor coverings. Pattern is a random arrangement of chips resembling mosaic tile. Four versions are available: taupe multicolor, tan multicolor, gray multicolor, and white with gold metallic. Comes in sheet form 6, 9, and 12 ft wide, and in pre-cut rugs 9' x 12', 12' x 12', 12' x 15', and 12' x 18'.
Armstrong Cork Company **104**

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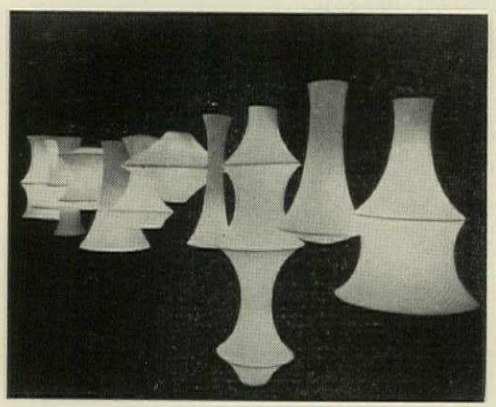


Lanterns Have Fanciful Shapes

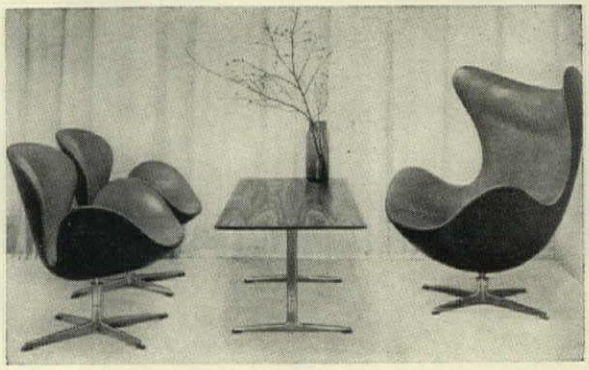
Vinyl-sprayed "Net Lights" are constructed of fish net stretched tautly over rings of various dimensions to create series of dramatically tension-formed curves. Lights are supported by white-metal canopy, and finished top and bottom with oiled walnut or white-metal rings. Depending on size and shape, they carry one to four bulbs. Designed by George Nelson.
Howard Miller Clock Company **105**

SUMMER MARKETS

Chairs Use Molded Plastic for Unique Forms

Designed by Arne Jacobsen, "Egg" (right) and "Swan" (left) formed-plastic and foam rubber chairs are very light. Egg weighs 30 lb and Swan weighs 15 lb. Bases are chrome; upholstery can be either imported mohair fabric or leather. Rectangular coffee table has solid teak top and chrome base. Retail prices of chairs (in fabric): Egg, $475; Swan, $275; table is $150.

Dux, Incorporated **106**



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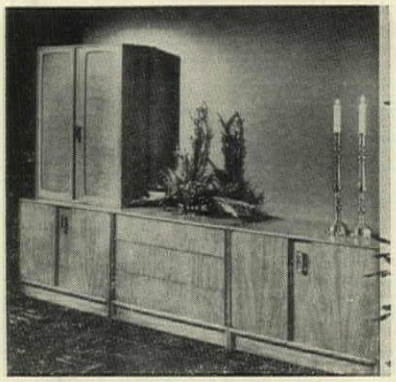
Contemporary Furniture with Classic Look

Storage group in "Portfolio" line features fine mahogany grain, sparing use of blue-glass-on-bronze hardware, and cane panels on hutch. Furniture, designed by Ray Sobota, has three wood finishes: light, warm tone called "Topaz"; medium, slightly grayed brown, "Opal"; and dark finish with red hint, "Garnet." Three lacquer finishes in mahogany are also available: sapphire blue, jade green, and amber. Chest with doors are about $150 each; three-drawer chest about $155; and hutch about $240.

Mount Airy Chair and Furniture Companies **107**

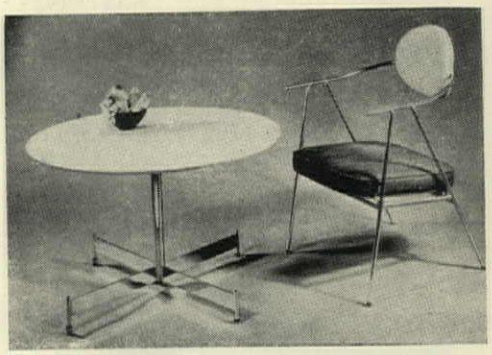


107

Table and Chair Are Adjustable

"Mobile Table and Chair" can be adjusted to dining or lounge height. Table works on new principle that makes it possible to raise or lower it to any position within a 10" area. It is lowered on an air cushion. Metal-rod chair has upholstered back and seat. Seat is raised or lowered by simple hinge device.

Laverne, Incorporated **108**



108

Armchair Has Flowing Curves

Molded-wood armchair designed by Arne Jacobsen has a flowing, sculpturesque feeling. Chair comes in natural walnut or teak, or black. Seat is mounted on chrome legs at center and also sits on four rubber shock mounts. Wood has a slight natural resilience which creates spring and comfort; chair can also be bought upholstered. Arms are molded wood.

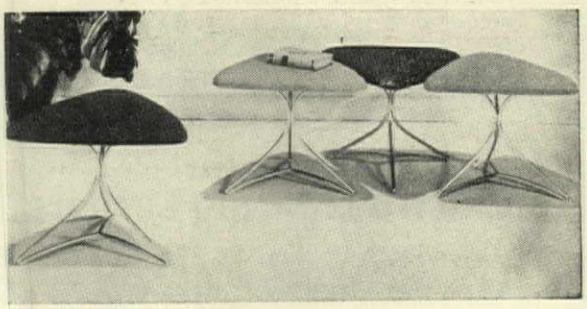
Dux, Incorporated **109**

109

Stools for Many Uses

Versatile hassocks tuck into corners when not needed as footstools or extra seats. Groups may be lined up like a bench or pulled up for seating around a low table. Suitable for indoor-outdoor use and for small bathrooms and dressing rooms. "Pedi-stool" is available in wide range of colors and plaid textures with bases of brushed-brass anodized aluminum, or wrought iron in black or white. Brass finish, $16.50; black and white, $11.50, approximately.

Selig Manufacturing Company, Inc. **110**



110

p/a products

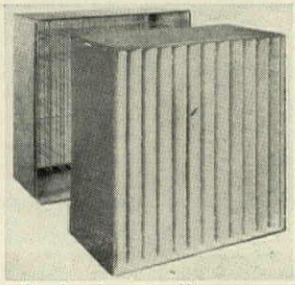
Aluminum Panels Make Durable Ceilings

Baked enameled aluminum panels designed primarily for decorative uses in store fronts, marquees, etc., can be applied to other uses. Color-Vee panels are formed in 2", 4", or 8" vee sections, fabricated from 36" wide and 12' long Colorweld flat sheets.

Reynolds Aluminum Supply Company **111**

Filters Reduce Air Conditioning Noise

According to recently conducted laboratory tests, "Aerosolve" 12" deep filter for 250 FPM duct velocity contributes substantially to reduction in sound levels in air conditioning systems. All-glass cartridge with fine-fibered glass pad

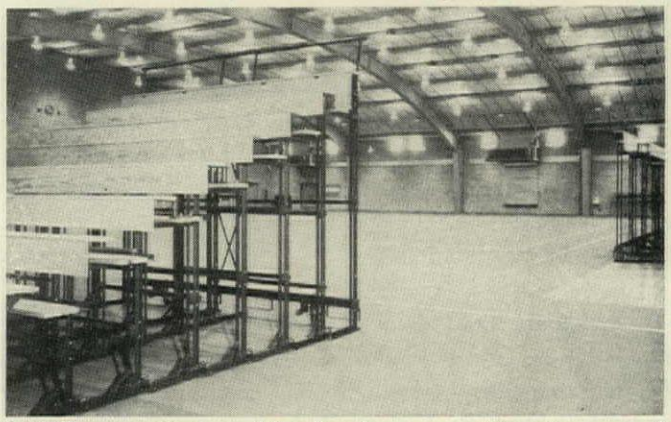


medium provides high dust collection efficiency, is also responsible for noise-attenuation characteristic. New 24" deep filter for 450 FPM duct velocity is also available.

Cambridge Filter Corporation **112**

Resilient Gym Flooring Is Continuous Surface

Continuous resilient flooring combines "point loading" resistance and resilience for a "playable" surface. In a high school field house provision was made for the point loading movement of retractable bleachers by specifying a non-



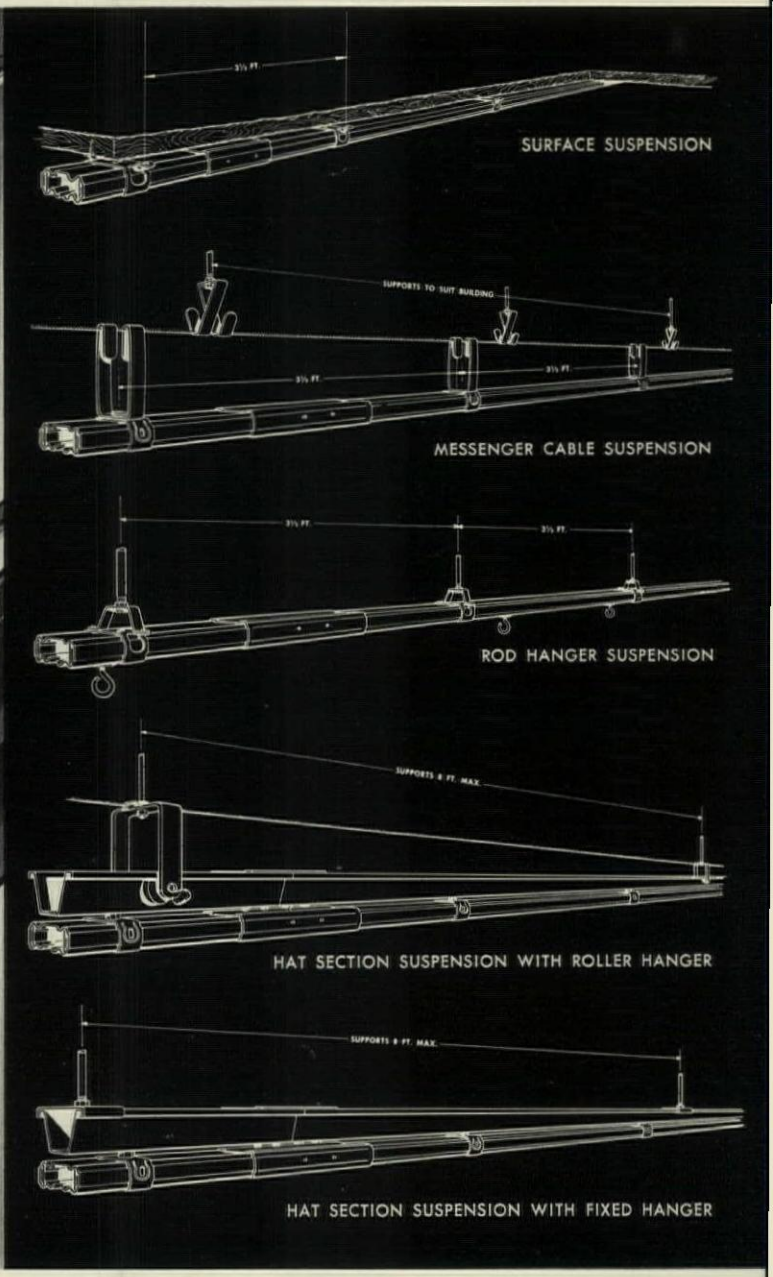
rigid flooring that would take abuse, consisting in general of 2" gravel sub-base; a 5" Bitumuls penetration Macadam base; and surfacing with 1½" of Laykold mastic mix and Laykold colored surface.

Stone Construction Company
State Asphalt Distributing Company **113**

Tiny Lamp Increases Light Efficiency

Repeating-iodine-cycle principle is applied to line of pencil-thin incandescent "Quartzline" lamps. Benefits include appreciably greater light, longer life, and elimination of blackening and maintenance in a lamp 200 times smaller than standard. Lamp consists of coiled tungsten filament supported at intervals through quartz tube ⅜" diameter, with push-pull socketing. Currently available in two sizes: 500-w (4½" long, for standard 120-v power); and 1500-w (10" long, for 277-v operation). Rated life of both is 2000 hours.

General Electric Company **114**



NEW FREEDOM OF DESIGN– UNIVERSAL LIGHTING DUCT HAS 5 METHODS OF SUSPENSION!

You can solve virtually any lighting fixture placement problem with Bull-Dog Universal Lighting Duct. The prefabricated, standardized duct is amazingly easy to assemble and offers a choice of *five different suspension methods* for either the 20-amp or 50-amp ratings. One or a combination of these methods will adapt to any structure . . . and meet any installation requirement quickly and economically.

"ULD" is a continuous electrical outlet, with conductors running the entire length of the duct. Duct sections telescope together mechanically and electrically by a plain coupling. Light fixtures connect quickly by means of twist-out plugs which can be added or repositioned at any point. Plugs are available for direct fixture attachment or will take a standard attachment cap. The duct both feeds and supports fixtures . . . can be easily relocated as lighting needs change.

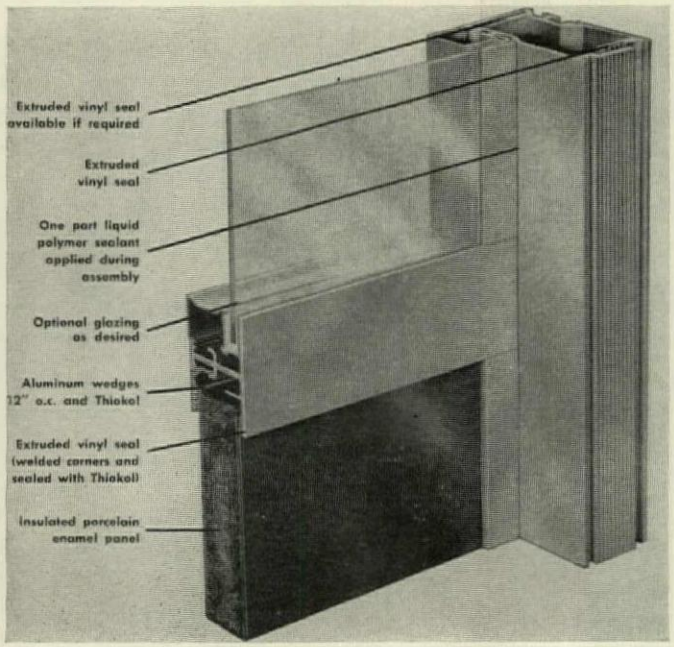
Your clients will find Universal Lighting Duct is less costly than installed pipe and wire. And if the lighting plan is altered during construction, flexible "ULD" can be repositioned without costly "rewiring".

Inform your customer of the economies of Universal Lighting Duct. He'll find it is the most efficient, economical and flexible lighting duct system available. "ULD" is U/L listed.

BULLDOG ELECTRIC PRODUCTS DIVISION
I-T-E CIRCUIT BREAKER COMPANY
BOX 177 • DETROIT 32, MICHIGAN

In Canada: 80 Clayson Rd., Toronto 15, Ont. Export Division: 13 East 40th St., New York 16, N.Y.

For more information, turn to Reader Service card, circle No. 304



Architects Design Handbook provides full- and 1/4-size detail drawings of all components contained in integrated porcelain-enamel color wall system for one-, two-, and multi-story construction. Details include panels, door framing, sun-control units, and ventilating louvers. Specifications sheet covers materials, fabrication details, structural design, erection, finishes, and protection and maintenance. Among advantages listed are elimination of field calking, absence of steel sub-framing, ready-for-erection delivery at job site, and one source of responsibility from fabrication through erection.
Texlite, Inc. (AIA 17A, 25-p.) **200**

AIR AND TEMPERATURE

Electronic Air Cleaner

Bulletin describes Model B "Rollotron" electronic air cleaner and gives details of operation and electronic principle, explanation of agglomerator and storage sections, equipment drawings, capacity and dimension tables, specifications, list of typical installations, and graphic description of horizontal version of cleaner. Features are simplicity of operation and maintenance; high efficiency with minimum maintenance in one space-saving unit. Needs no water, no washing, no drains, no oiling of plates and has no freezing problems.
American Air Filter Company, Inc.
(Bulletin 249-A, 16-p.) **201**

Heating and Air-Conditioning Equipment

Brochure serves as reference source for wide variety of heating and air-conditioning units furnished from single source. Detailed are features of each product in complete line of box-fin baseboard radiation, industrial and commercial radiation, motorized zone control valves, co-axial refrigerant condensers, Zone-A-Matic packaged heating units, basic boilers and water heaters, Airvec refrigerant condensers, and finned tubing.
Edwards Engineering Corporation (4-p.) **202**

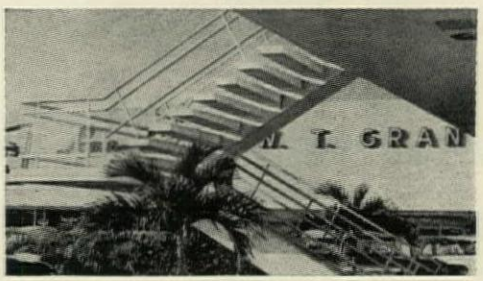
Control of All Mechanical Systems

Booklet illustrates components and operation of supervisory air-conditioning datacenter—a one-man supervised control console which handles an entire air-conditioning system, may be used as basic unit to control small number of systems. Used with auxiliary selectograph units, system permits practically infinite future expansion, with control of all mechanical systems in a building centralized in the console. Vertical and horizontal selectograph units, installed to match console height, may be installed concurrently with datacenter, or added later. Console is 52" high, 48" wide, 42" deep (including 18" writing shelf), built of standard units with fixed dimensions.
Minneapolis-Honeywell Regulator Company (AIA 30-E, 7-p.) **203**

CONSTRUCTION

★ Concrete in Contemporary Applications

Publication contains illustrations and technical information on uses of concrete in existing building types including



shell construction. Shown are versatility of structural application, and attractive and functional results achieved through imaginative use of concrete.
Portland Cement Association (No. 62, 18-p.) **204**

Acoustical-Ceiling and Wall-Suspension Sections

Brochure illustrates line of acoustical-metal suspension sections for walls and ceilings. Included are variety of channels, moldings, suspension tees, roof deck cross tees, and necessary parts and accessories. Moldings are galvanized steel, bonderized and coated with vinyl baked-on enamel. Among items listed as of special interest are improved mitre moldings designed to hold 1/2" and 3/4" tile, a special tempered steel "one-hand" clip system which automatically centers itself to all channels and adjusts to possible variation in channel widths.
Brasco Manufacturing Company (AIA 39-B-1, 4-p.) **205**

Insulating Marble-Faced Curtain Walls

Manual provides general description of lightweight (claiming up to 50 percent less weight than standard marble veneer) insulative, weatherproof wall panels with Vermarco marble facings, designed and fabricated to combine virtues of real marble with desirable qualities of curtain wall systems. Discussed and illustrated are flush-mount, grid-wall, window-wall panels. Thicknesses including insulation core, in basic series 100, 200, 300, are 3", 1¾", 1½". Available in normal sizes up to 20 sq ft surface area. Special reinforced panels can be made larger.

Vermont Marble Company (AIA 17-A, 8-p.) **206**

Versatile Aluminum Mill Products

Brochure aids in pinpointing specific properties of aluminum products and applying them accurately to desired end use. Contained are sections on alloy and temper designations, fatigue and shearing strengths, various alloys available in foil, sheet and plate, wire, rod and bar, tubing and pipe, and extruded and structural shapes. Complete specifications included; fabricating and finishing techniques are summarized. Bibliography provides guide to available related literature and movies.

Reynolds Metals Company (18-p.) **207**

Uses of Granite in Schools

Brochure illustrates practical, ornamental benefits of granite in school building. Drawings suggest exterior and interior applications at entrances, in floors, wainscots, and gymnasiums, where wearability is a factor. Decorative uses shown include landscape furniture, play sculpture, plaques, and fountains. Stone is available in innumerable shapes, in sizes as large as transportation permits; furnished as thin as 7/8" in pieces up to 5' long and 7' high. Choice of 15 colors from dark red to fresh green; variety of shades from light gray to black. Finishes: polished, honed, rubbed, machined, mello-grooved, and split faced.

Cold Spring Granite Company (10-p.) **208**

DOORS AND WINDOWS

Industrial Rolling Doors and Grills

Brochure illustrates existing installations of all types of industrial motor- and manually-operated steel rolling and bifold doors, and metal rolling grills. Information covers conventional service openings, special applications. Features listed are quick easy operation, dependability, maximum safety, general protection, neat appearance, economical installation. List of doors includes steel rolling service doors, steel rolling fire doors, bifold doors, metal rolling grills, steel and wood Röl-Top doors. Book contains index to door types, dimensions, operating data, specifications.

The Kinnear Manufacturing Company
(Bulletin 101, AIA 16-D, 35-p.) **209**

Aluminum Storefronts and Entrances

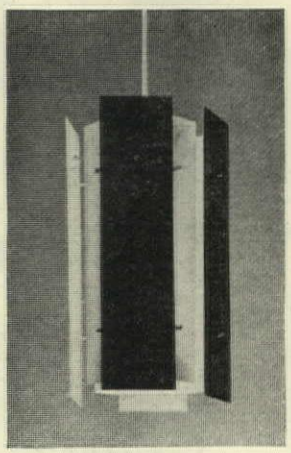
Fact file supplies illustrations, graphic line drawings and photographs of Amarlite aluminum store front and entrance installations. Complete product information on all extruded aluminum components and nylon assembly parts, full specifications provided. Optional equipment and accessories are also discussed and pictured, and a wind load chart with instructions is included.

American Art Metals Company (40-p.) **210**

ELECTRICAL EQUIPMENT, LIGHTING

Lamps Are of Scandinavian Design

Brochure shows collection of Scandinavian lighting fixtures of all types, combining utility and decorative functions. Lamps are characterized by simplicity of design creating substantial yet airy appearance. Shades come in variety of forms, including abstract and traditional, in a number of



materials. Wire-hung and direct-to-ceiling fixture shades are mat opal glass with oil-finished oak details—also available in other materials including opaline plastic, lacquered metal, raffia, wicker, all-white linen. Same materials apply to wall fixtures and table and floor lamps.

George Tanier Lighting Inc. (100-p.) **211**

Safety Factor in Controlled Lighting

Folder emphasizes safety factor of controlled lighting, importance of lighting in reducing accident rate in home, office, store, factory; raising working efficiency level through sharper visual information: gives percentage gains data against traffic accidents, crime rate etc. (compiled from 1923 to date) effected by improved lighting conditions; lists sources from which data was drawn. Current installations are shown.

Holophane Company, Inc. (AIA 31F2, 4-p.) **212**

FINISHERS, PROTECTORS

Silicone, Masonry Water Repellents

Folders describe how easy-to-apply silicone, masonry water repellents reduce maintenance costs; include guide form specifications to help specify an effective repellent in the treatment of masonry to prevent efflorescence and staining, weathering, and interior paint damage caused by water penetration in old and new construction.

General Electric, Silicone Products Department
(Booklets CDS-118 A, CDS 120 A, 1-p. ea.) **213**

SANITATION, WATER SUPPLY, PLUMBING

Packaged Firetube Boilers

Rating book for packaged firetube boilers prepared by the American Boiler & Affiliated Industries, deals with the objectives, test procedures and methods of rating employed by its member companies—packaged steam or hot water firetube boiler is defined as a modified Scotch type boiler unit, engineered, built, fire-tested before shipment, and guaran-

p/a manufacturers' data

teed in material, workmanship and performance by one firm, with one manufacturer furnishing and assuming responsibility for all components in the assembled unit. List of member companies is given.
American Boiler & Affiliated Industries, 15 Park Row, N. Y. 38, N. Y. ($1.00)

Decorating Ideas for Bathrooms

Book contains full-color illustrations of contemporary bathrooms, aids in determining colors and arrangements, selection of fittings and fixtures. Provides a good source of decorating ideas for bathrooms.
Kohler Company (20-p.) **214**

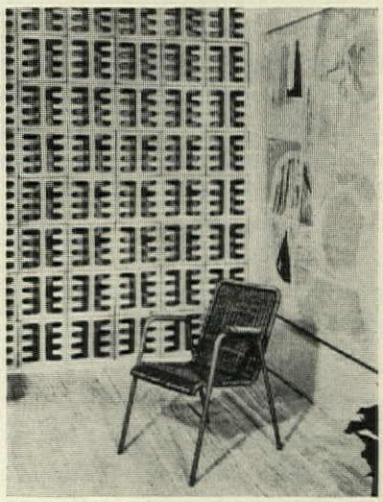
Folding Tables and Benches

Catalog on line of "One-Fold" tables carries complete details on portable tables with benches, portable tables without benches, wall tables with benches, and wall tables without benches, for school lunchrooms, cafeterias, multipurpose rooms. Available in wide range of sizes for achieving most efficient solution to any given problem. Portables and wall tables, with and without benches, are available in 6', 7', 8', 10', and 12' lengths. Information on other products for multiple use of space, such as fold-away tennis tables, band stands, stages, and choral risers, is also included.
Haldeman-Homme Manufacturing Company
(Catalog 625, 20-p.) **215**

SURFACING MATERIALS

Sculptured-Ceramic Wall Surfacing

Booklet illustrates custom-made, hand-pressed material in sculptured-ceramic wall surfacing—shows many possible tile pattern and color design variations; gives information re-



garding use, installation, colors, other pertinent data. Also included are photographs of murals, outdoor screens, decorative sand urns, planter boxes, jardinier and wall decorations, other accessories.
Design-Technics (Dept. AC, 20-p.) **216**

Outlasts conventional paint coatings by many years

NEW GLID-TILE

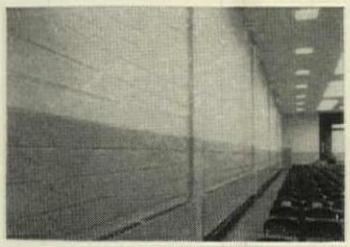
...beautifies and upgrades at the same time!

It pays to specify GLID-TILE for heavy traffic areas in offices, schools, institutions and plants, and for problem areas in food processing plants because of its resistance to impact, abrasion and most chemicals. GLID-TILE is a special polyester resin spray finish that lasts a lifetime. It is comparable in beauty and durability to glazed, ceramic or structural tile, yet the initial cost is substantially less.

GLID-TILE gives masonry block, concrete, plaster, wallboard, metal and wood surfaces a tough, protective finish nearly twenty times as thick as the average paint film in a standard two-coat system. And it is far more durable. For example, tests have shown that under heavy impact, a sub-surface of concrete broke before the GLID-TILE finish was destroyed!

It's almost impossible to scratch or mar GLID-TILE. Most acids and solvents, plus alkaline detergents, grease, oil and hot water won't harm it.

New GLID-TILE is available in eggshell or glossy finishes of almost any pastel color—in plain, spatter or web effects.



The tile-like finish seals and smooths the entire wall including mortar joints—for fast, easy maintenance.

Walls in high-traffic areas retain their tile-like beauty for many years.

✱ For complete details, attach coupon to your company letterhead and mail.

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PROFESSIONAL
MAINTENANCE FINISHES
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MODERNFOLD'S new "Soundmaster" doors divide space quickly...retard sound efficiently!

VERSATILE MODERNFOLD DOORS make your rooms do double duty. They divide one room into two, three or more...instantly!

NEW "SOUNDMASTER" DOORS are the answer to your sound control problems. Tough, noise-deadening liners are used on both sides of the steel inner framework. And sweep strips are attached to top and bottom. Every opening through which sound might pass is sealed off to control sound as never before possible!

FAMOUS FABRIC LINE offers new patterns and weaves, all washable, durable. With Modernfold's exclusive double-strength, all-steel inner framework for perfect balance, lifetime service!

"NEOWOOD", NEW WOOD GRAIN LINE for modern or traditional settings. These narrow-stacking doors are durable, quiet and easy-gliding. Available in oak, walnut, mahogany or birch finish.

Find out how Modernfold Doors can help solve *your* space problems. Call on your Modernfold distributor. He is listed under "Doors" in the Yellow Pages.

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the first and finest in folding doors

New Castle Products, Inc., Dept 2, New Castle, Indiana
(In Canada: New Castle Products Canada, Ltd., St. Lambert, Quebec)

Gentlemen: Please send me complete information about MODERNFOLD doors.

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NEW CASTLE PRODUCTS, INC., Department 2, New Castle, Indiana. Manufacturers of "Modernfold" Folding Doors, "Air Doors", "Modern-cote" Wall Coverings and "Peabody" School Furniture. In Canada, New Castle Products Canada, Ltd., St. Lambert, Que.

For more information, turn to Reader Service card, circle No. 307

Looking Forward to September
PROGRESSIVE ARCHITECTURE

Photo: Julius Shulman

WALL ASSEMBLIES

A number of limited-height structures serving various functions will be presented in SEPTEMBER P/A. Common denominator in the presentations will be the emphasis on the methods of *wall assembly* used in each building. Details of the exterior walls of these buildings, plus other examples of different assemblies, will be gathered in a special reference section. This section, together with two technical articles (one on "Curtain-Wall Specifications" and another on "Sealants") will make SEPTEMBER P/A the most authoritative issue on curtain wall construction to appear since the High-Rise Building/Curtain Wall issue of June 1957.

Major buildings to be examined in September include International Brotherhood of Electrical Workers Building, San Francisco, by Francis Joseph McCarthy; IBM Regional Headquarters, Los Angeles, by Pereira & Luckman (now Charles Luckman Associates and William L. Pereira & Associates); Sun-Times Building, Chicago, by Naess & Murphy; Texas Instruments Laboratory and Plant, Houston, by Ford, Colley and Tamminga; and Frederick U. Conard High School, West Hartford, Conn., by Nichols & Butterfield.

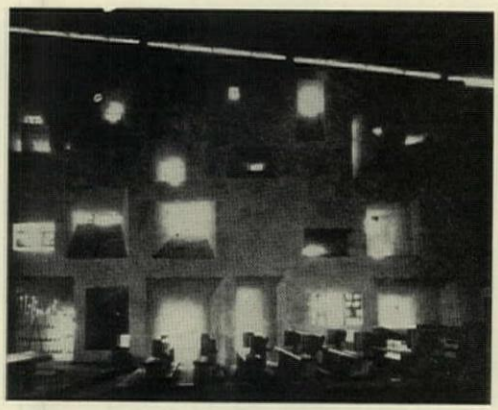


Photo: Hedrich-Blessing

THE NEW SENSUALISM: Part I

A highlight of SEPTEMBER P/A will be the beginning of a two-part critique of the "New Sensualism" in today's architecture. (Part II will appear in October.) The increasing concern of many architects with the current trend towards architecture of an emotional nature—Yamasaki's "delight," Stone's evocation of past elegance, Rudolph's structural imagery—will find answers (and provocations) in this liberally-illustrated, thoughtful examination of the goals and accomplishments of our "sensualists."

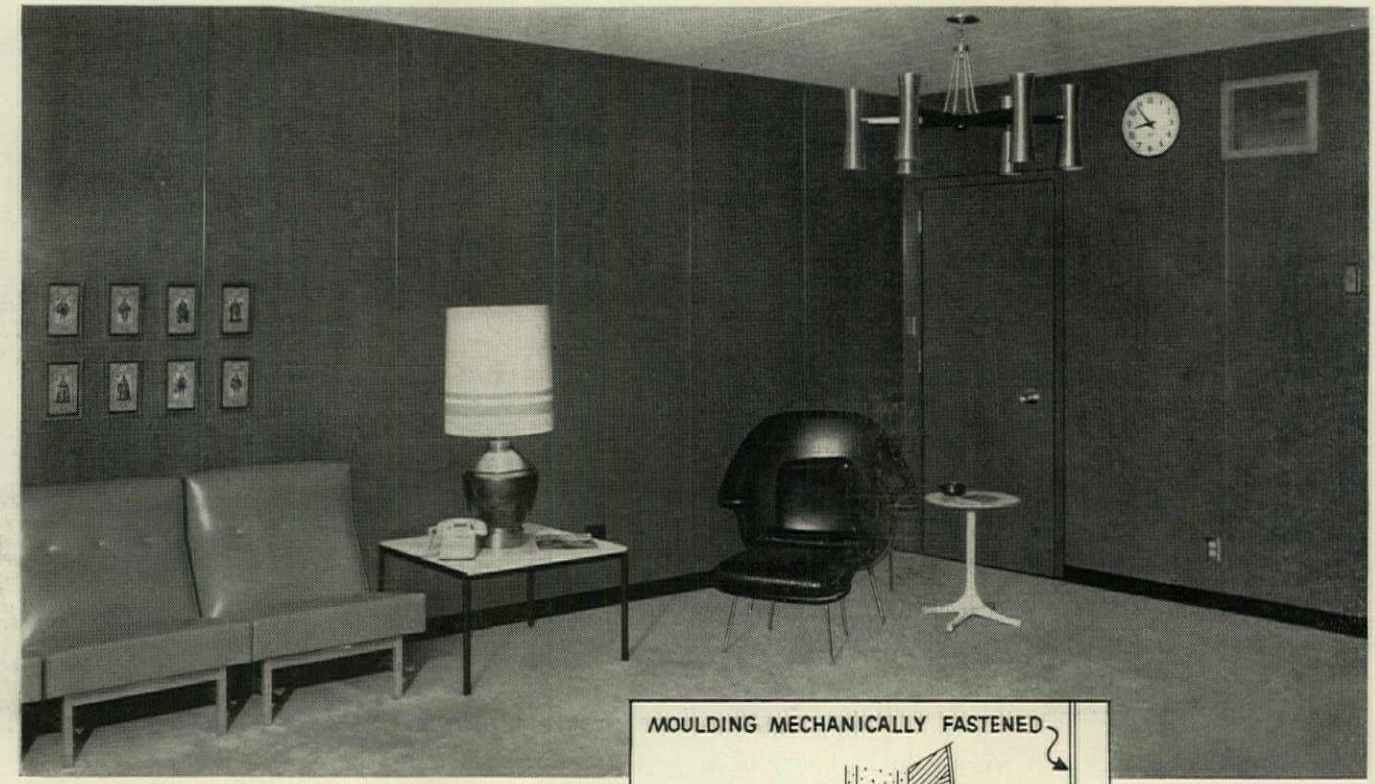
Photo: Louis Reens

CONSOWELD

APPLIED DIRECTLY OVER MASONRY WALLS

saved installation costs and will continue to save on maintenance, year after year!

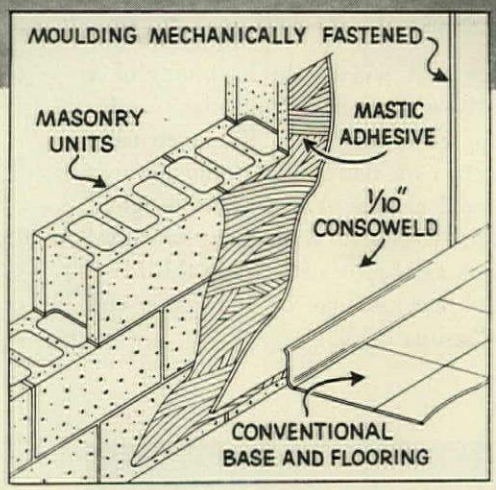
YMCA CENTER, PORT EDWARDS, WISC. ARCHITECT: DONN HOUGEN



Consoweld 10, the extra-thick (1/10-inch) laminated plastic, was applied directly over masonry walls in this new YMCA building. It required no special preparation, no bracing or shoring. Materials used were Consoweld 10, patterned-matched mouldings (mechanically fastened), and Consoweld Mastic Adhesive. Consoweld's "Platinum Walnut" was selected from a wide variety of color-tuned patterns to create a highly functional yet striking design effect. Consoweld's durable, long-wearing surface reduces maintenance to an absolute minimum . . . never needs painting or refinishing.

83

CONSOWELD
LAMINATED PLASTIC



Consoweld 10 lends itself to all types of vertical surfaces. It can be applied directly over plywood, gypsum board, gypsum lath or masonry units. Consoweld 10 is nationally distributed by more than 100 distributors strategically located across the country.

This Coupon May Save You Money!

CONSOWELD CORP., Wisconsin Rapids, Wisc. Dept. PA-89

I have a project for which Consoweld 10 may be the answer for my wall-surfacing requirements. Enclosed are general details. May I have your installation suggestions?

Name_____

Firm_____

Address_____

City & Zone_____ State_____

For more information, turn to Reader Service card, circle No. 308

Photo by Hedrich-Blessing, courtesy United States Gypsum Company

Choice floor over concrete

Here's a floor that makes something beautiful and comfortable out of a concrete slab . . . at minimum cost. Bruce Laminated Blocks are fabricated from three plies of tough-grained Southern Oak, bonded together with heat and pressure in a highly stable unit. Installed in Everbond Mastic on concrete, plywood, or other level surface, this flooring gives a lifetime of trouble-free service.
For beauty, Bruce Laminated Blocks are given the famous Bruce factory finish that saves on-the-job finishing time and expense. Write for color booklet. See our catalog in Sweet's.

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Bruce Laminated Block

Hardwood Floors

Naturally Beautiful

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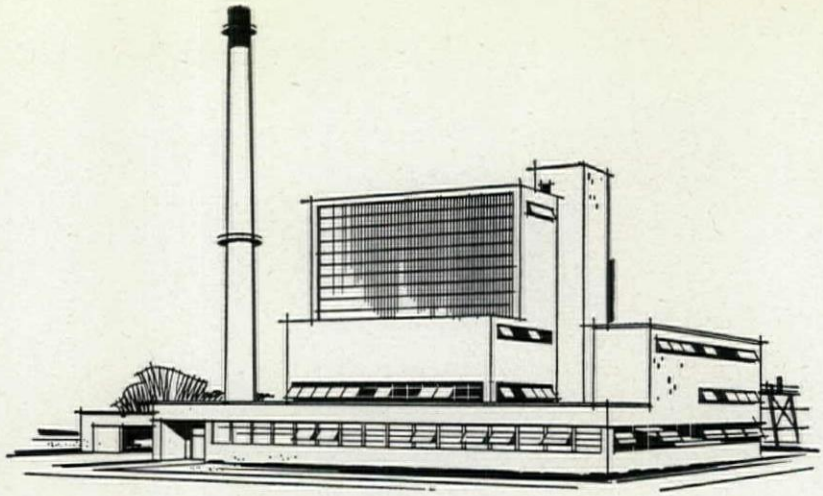


"Painting factory windows is expensive!"

"Painting factory windows is unnecessary!"

The fellow who cries "expense" probably paints *miles* of factory windows every three or four years.

The fellow who knows this is unnecessary uses Fenlite Steel Windows by Fenestra.

These are *steel* windows with the strength only steel can provide. They never need maintenance painting.

That's because Fenestra's Fenlite process protects the steel with an alloy-bonded lifetime zinc surface . . . passivated and chemically polished. Glazing compounds grip tighter. Decorative painting (if desired) makes a better bond.

Measured by standard 20% salt-spray test, Fenlite is from 3 to 12 times more resistant to start of white corrosion.

Fenlite Steel Windows actually cost less than standard field-painted steel windows.

If you want to know more about the startling economies of Fenlite windows for all types of buildings, contact your Man from Fenestra, listed in the Yellow Pages, or write Fenestra Inc., Dept. PA-8, 3409 Griffin Street, Detroit 11, Michigan.

Fenestra INCORPORATED

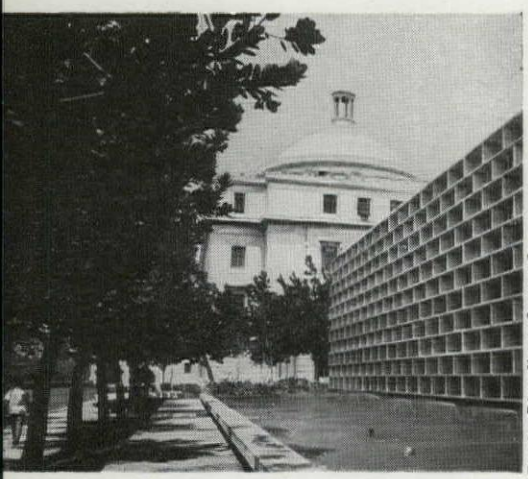
FENLITE GALVANIZED STEEL WINDOWS

Your Single Source of Supply for
DOORS · WINDOWS · BUILDING PANELS · CURTAIN WALL

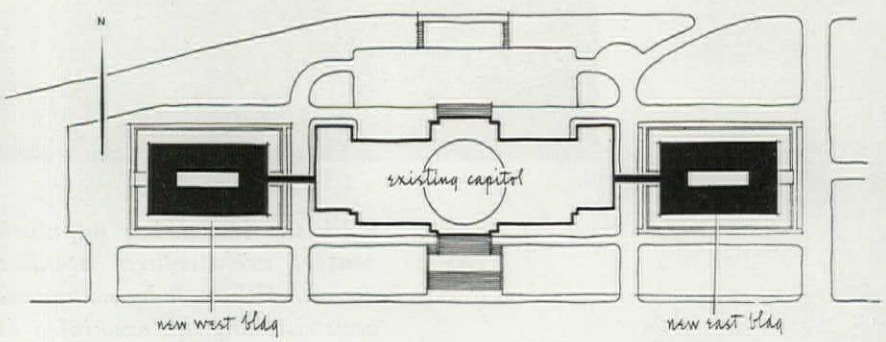
PUERTO RICAN PORTFOLIO

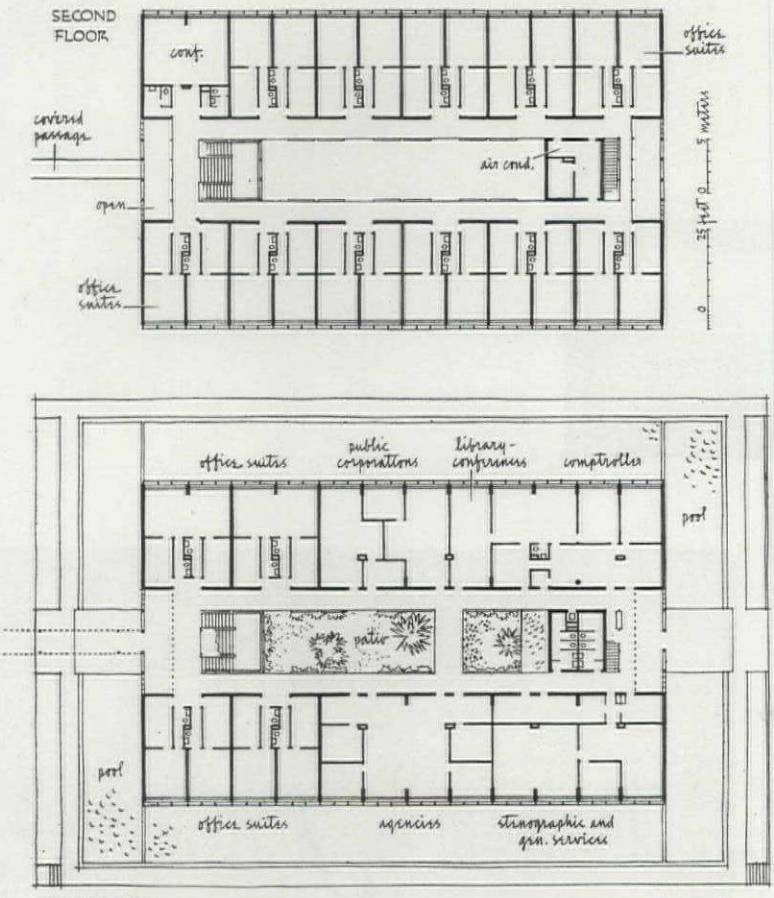
With the increasing popularity of Puerto Rico as a resort center, architectural standards have made a noticeable ascent. Although by no means a complete survey of current construction, the examples on the following pages do give an indication of the distinct direction in which architecture in this Caribbean area is heading. The photographic documentation, with one exception, is by Alexandre Georges.

Puerto Rico's Capitol Extension



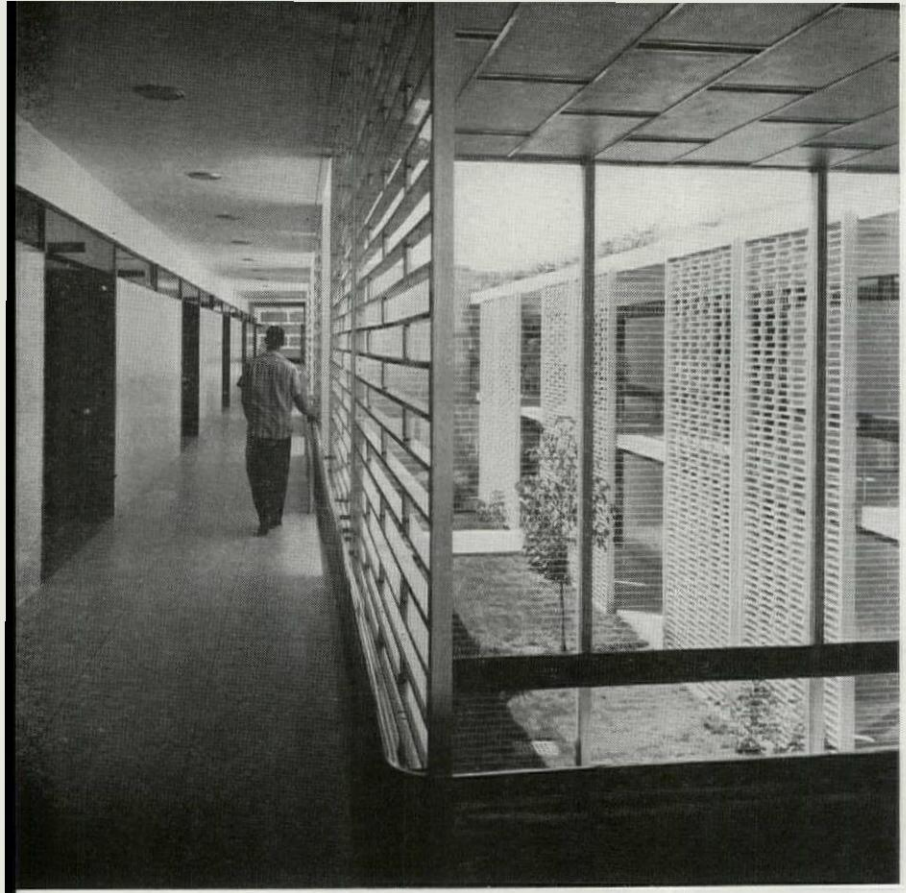
Puerto Rico News Service



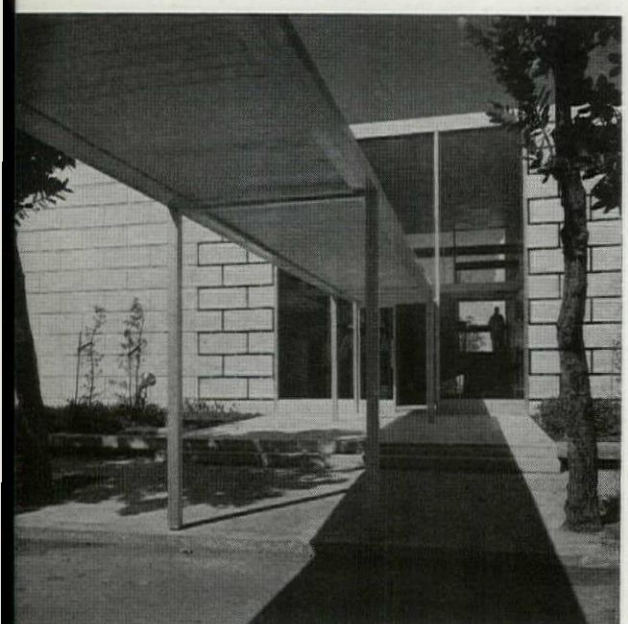


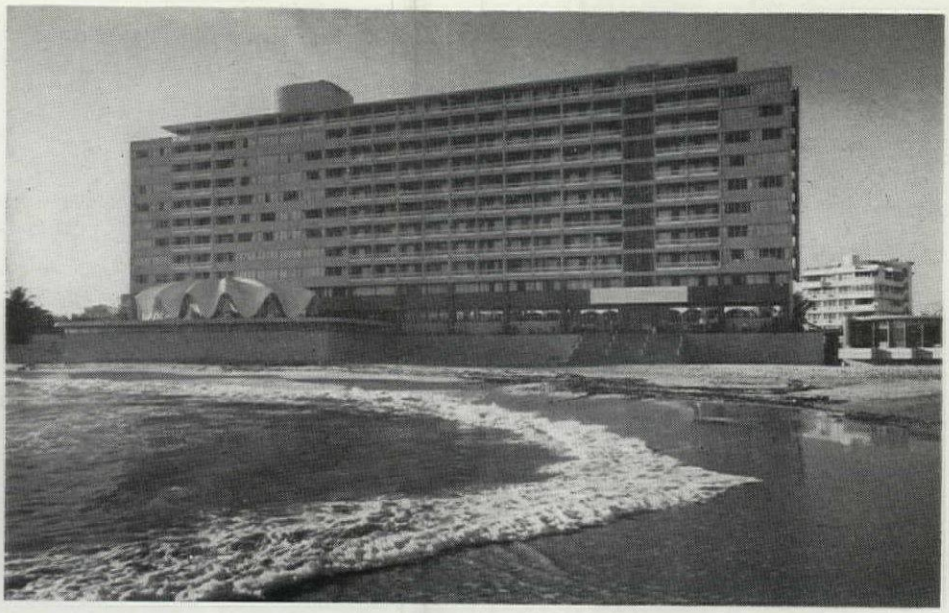
The lively progress of Puerto Rico is well emphasized by the addition of two handsome new wings to the existing Capitol. To Architects Toro & Ferrer, the problem of adding office space for 76 legislators, several conference rooms, and offices for the comptroller was an esthetic, rather than a utilitarian one. It was their primary concern "to provide a building or buildings which would look harmonious with the Federal-style Capitol Building, yet be modern; architecturally interesting, but subordinated to the Capitol; have human scale, yet be in scale with the monumentally-scaled building." In accordance with their design, two identical wings now join the existing domed structure on the east and west. "The new buildings," continue the architects, "were intentionally kept low in mass, partly hidden by existing trees to preclude competition. The north and south faces of the two buildings were covered with ashlar-patterned sunshades. The dimensions of the sunshades are those of the rusticated-marble-ashlar facing of the Capitol Building; the thickness of the members corresponding to the recessed joints and the voids corresponding to the blocks of marble. The east and west fronts have rusticated-marble facing." Reinforced concrete serves as the structural frame; aluminum for lobby roofs, bridges between open corridors, and covered passages linking with the Capitol. Sunshades are of precast concrete fabricated by "shocked concrete" method. Terrazzo is used extensively as flooring material except in the lobby areas, where travertine slabs have been laid. Corridor walls are surfaced with ceramic tile. Screens separating the open corridors from the interior patios are of asbestos cement; those separating the corridors from the lobbies are of aluminum.

Hunter Randolph was Landscape Architect; Perfecto Vazquez, Electrical Engineer; Roberto Lugo, Mechanical Engineer; Texidor & Gonzalez Seijo, General Contractor.

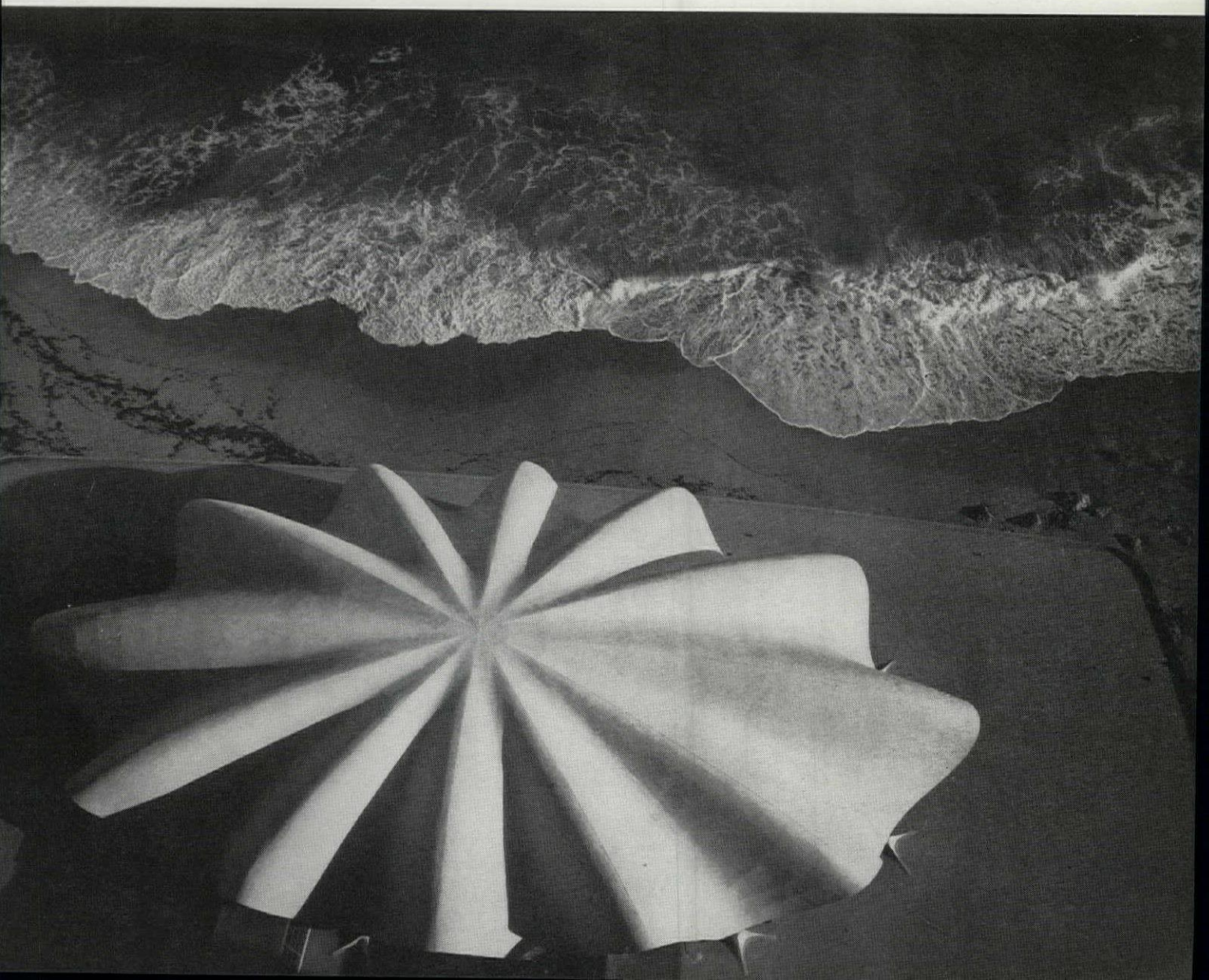


Because of San Juan's year-round mild climate, it was possible to employ open-air patios and galleries (above). *However, office suites are air-conditioned. A central refrigeration plant in each building furnishes chilled water to individual fan-coil units. The condensing water is cooled by means of spray ponds, used as a decorative element. The main stair* (right) *rises out of another pool. The upper run of these stairs is bracketed from the central support so that no weight is placed on the aluminum bridge. Covered passages* (below) *lead from the east and west of the existing Capitol to the new office wings.*





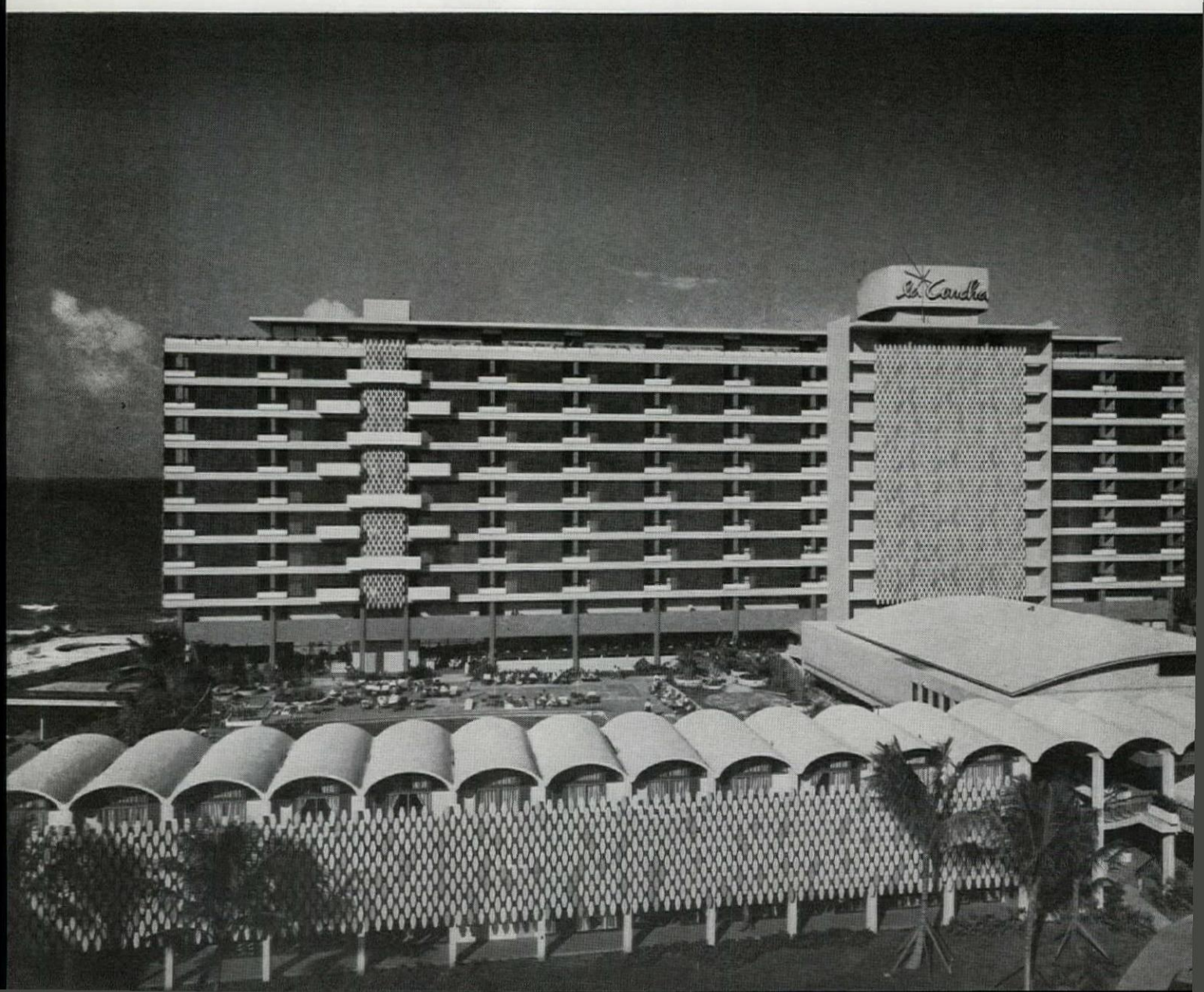
Resort Hotel for San Juan

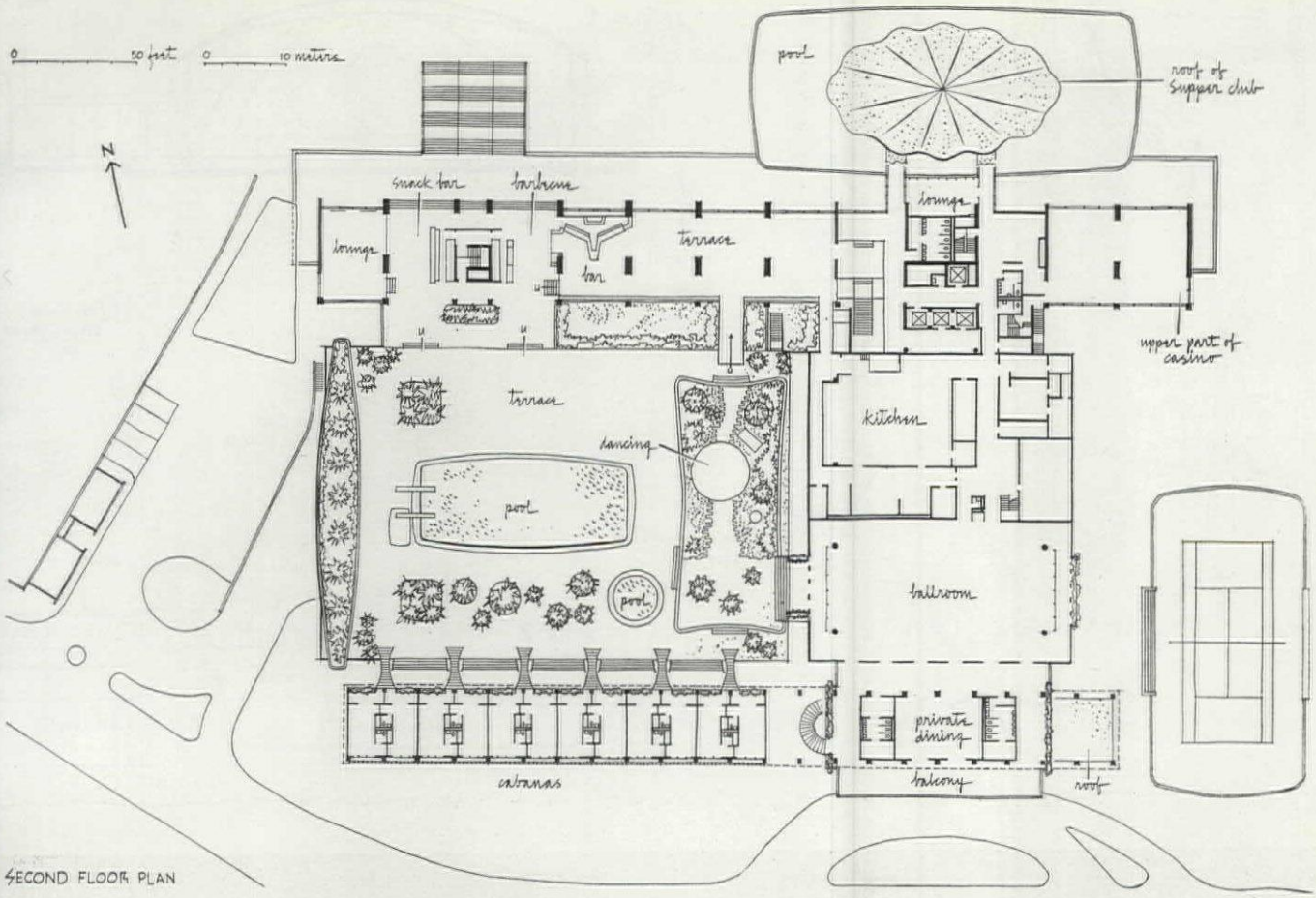


Hotel "La Concha" (the shell) is located in one of the fine residential sections of the city, where two major resort hotels already exist and two others are under consideration. The program required the provision of 250 guest rooms, a night club for 200, casino, ballroom, private and general dining rooms and (in compliance with zoning regulations) off-street parking for 175 cars. After thorough analysis of these manifold requirements, Associated Architects Toro & Ferrer, of Santurce, and Warner, Burns, Toan, Lunde, of New York, elevated the major public areas to the second-floor level, placed the main lobby at the first floor and provided car storage beneath a broad pool terrace. The 12-story guest wing was sited parallel to the beach, and the hotel was given an identifying element in the form of a shell-roofed night club. Placement of the guest wing on the ocean side insured privacy and quiet for the guests, placed the pool terrace on the sunny side, and, at the same time, protected it from strong sea breezes.

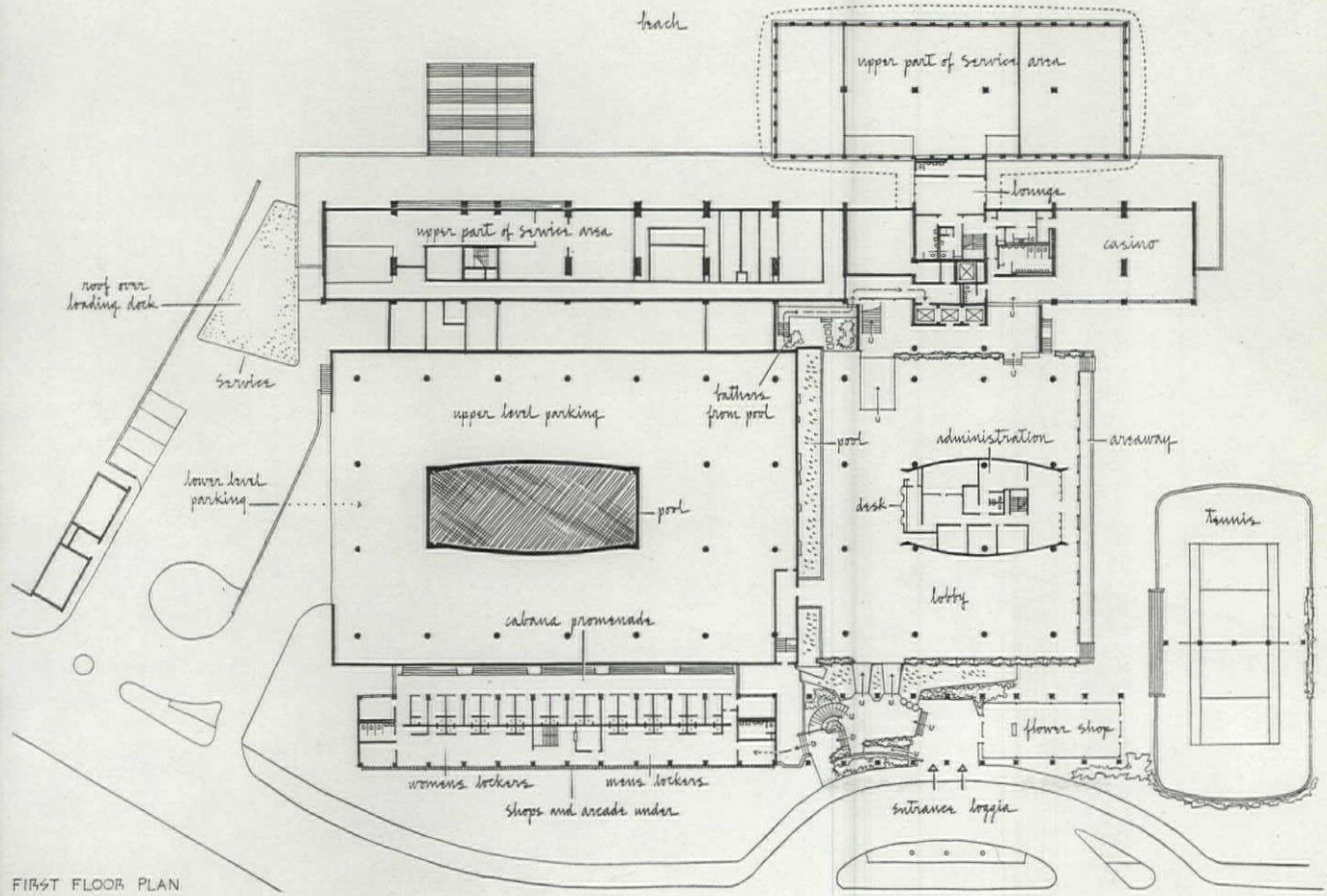
One central kitchen serves all of the major dining facilities on a single level. "In developing the design," write the architects, "recognition was made of the benign climate and almost uniformly directional trade winds, so that the lobby and main dining areas are almost completely open, with only a glass wind screen along the windward side. These conditions also allowed access to the guest rooms along open galleries overlooking the pool terrace." Except for the use of steel bow-string trusses to span ballroom and kitchen, reinforced concrete was chosen for its economy, familiarity to local construction workers, and durability in the extremely corrosive salt air. The structural system of the guest room wing above the fourth floor changes from column and beam to bearing wall and beam. Most of the large decorative screens were made of "shocked" concrete, a Dutch patented process for densifying and strengthening concrete, a method which makes delicate and intricate patterns possible. A laminated-plastic panel, surfaced on the inside with plywood and on the outside with glass fiber, was used as roof decking for the passages leading to the supper club and cocktail lounge. This resulted in a thin, lightweight roof construction with good thermal insulative qualities.

The Foundation Engineering Company was the Structural Engineer; Zumwalt & Vinther, Mechanical and Electrical Engineers; Salvadori & Weidlinger, Structural Designers of the shell; Carson, Pirie, Scott Company, Interior Design and Furnishings; Hunter Randolph, Landscape Architect; Bolt, Beranek & Newman, Acoustic and Sound Consultants; Taylor-Metropolitan Construction Company, General Contractors; Associated Federal Hotels, Hotel Operators.

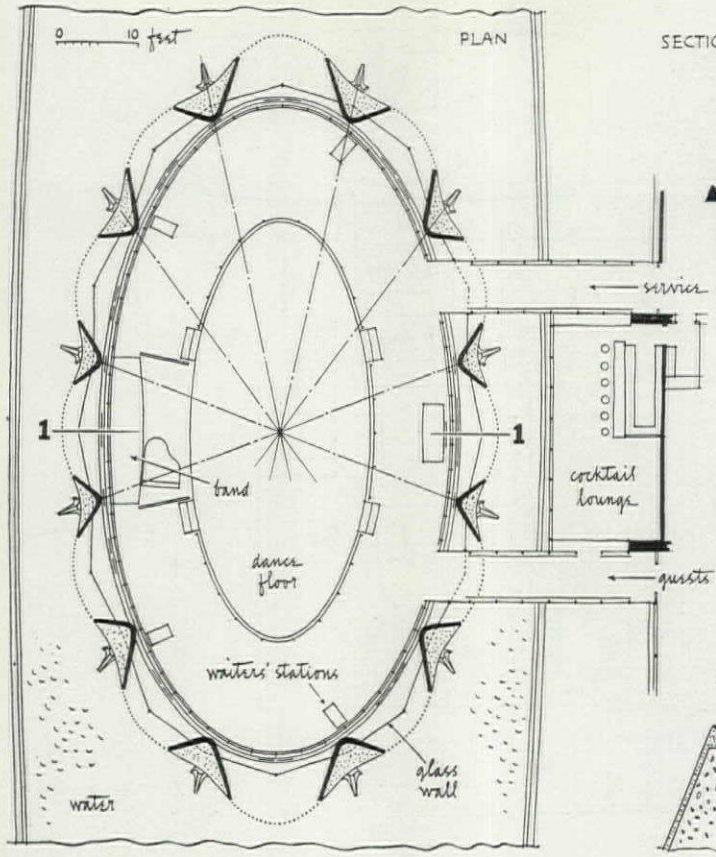




SECOND FLOOR PLAN



FIRST FLOOR PLAN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PLAN
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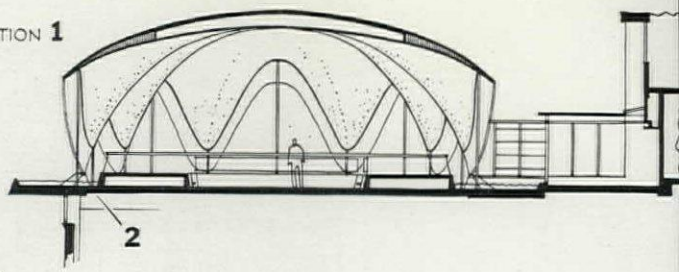
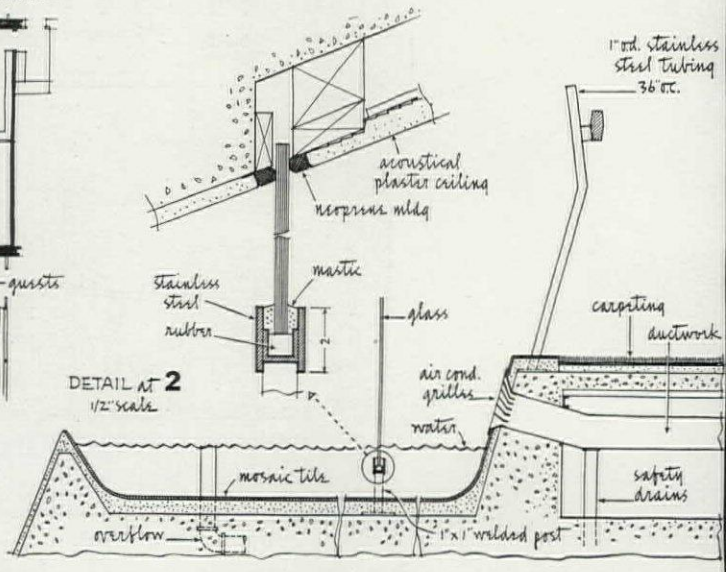

SECTION 1
2


1" od. stainless steel tubing 36" oc.
acoustical plaster ceiling
neoprene mtg
stainless steel
rubber
mastic
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carpeting
ductwork
air cond. grilles
water
safety drains
mosaic tile
overflow
1"x1" welded post
DETAIL at 2
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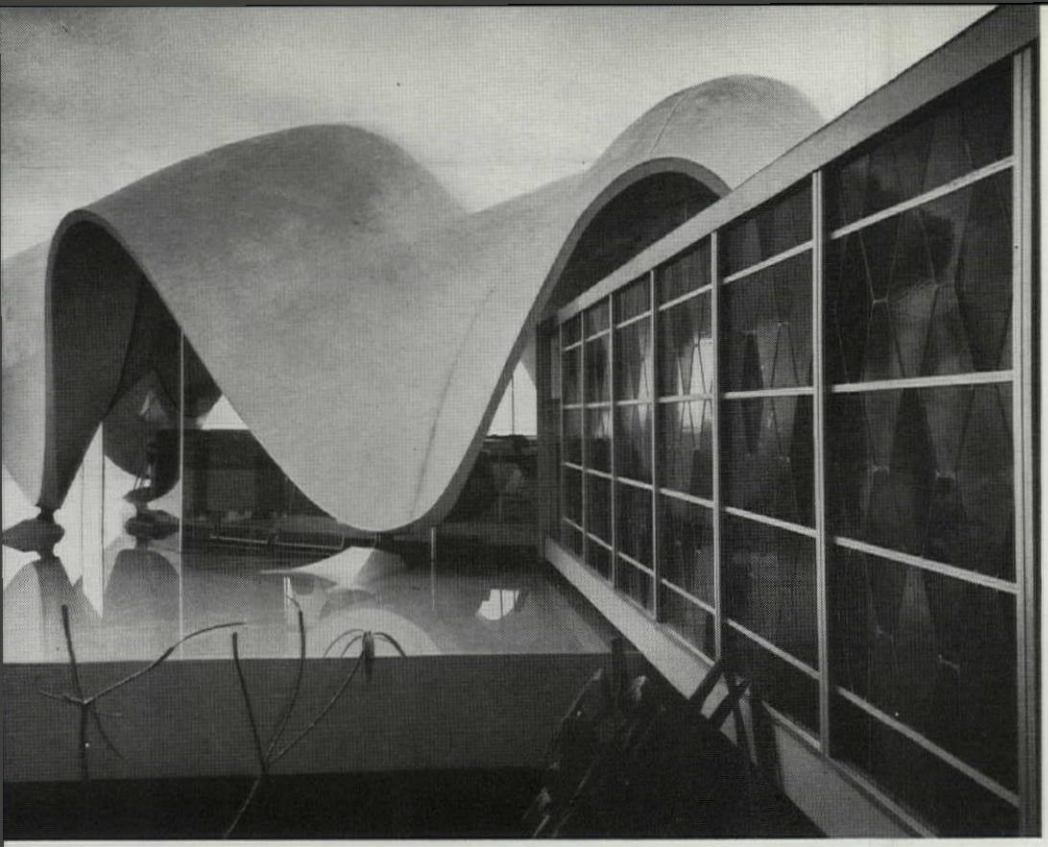
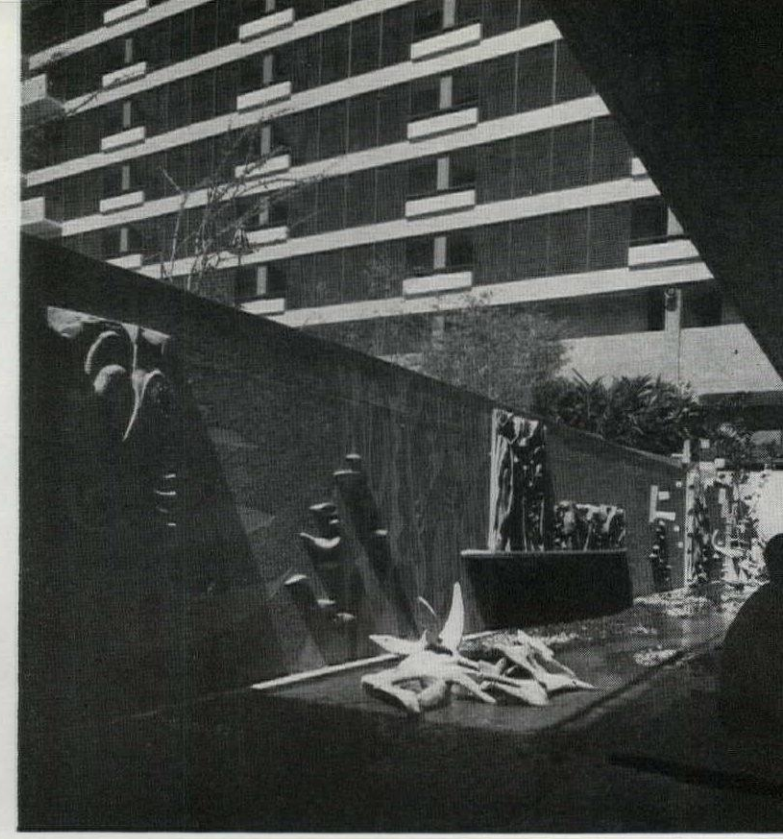
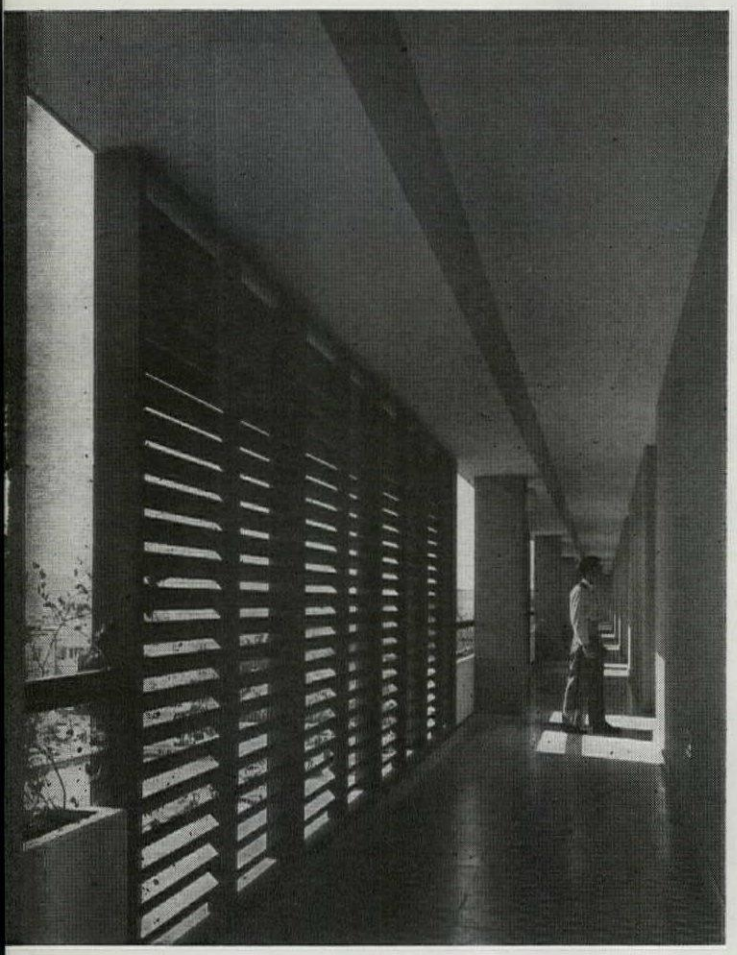


A pierced limpet shell, found in abundance on Puerto Rican beaches, was the inspiration for the roof shape of the supper club and for the hotel's name. Passages (above) *are glazed with leaded, stained glass in violet, pink, and amber, after a design by Armando Vargas. Inside the supper club* (acrosspage), *sound-absorptive material was specified to counteract the concave shape and extensive glass areas. The space is air-conditioned through a duct system built into the dining platforms. Air delivery is directed toward the outer periphery and dispersed against the shell. In other public areas, steam for reheat and chilled water are supplied to fan-coil units.*

Contrasting with the many masonry finishes throughout, walls of the lobby (right), *are surfaced with teak planks. They were chosen for their compatibility with the general decorative scheme, resistance to termites, and richness of appearance.*

Proximity of ballroom (below) *to street permits non-resident guests to enter without having to pass through hotel areas.*

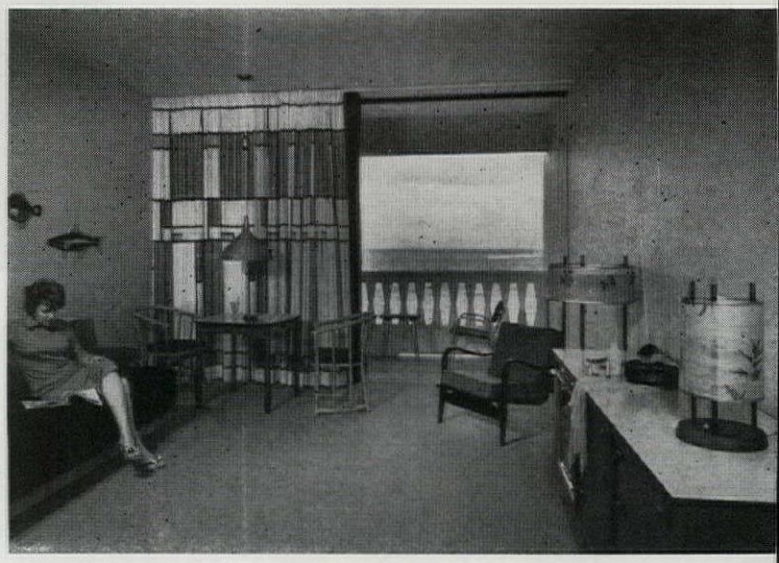


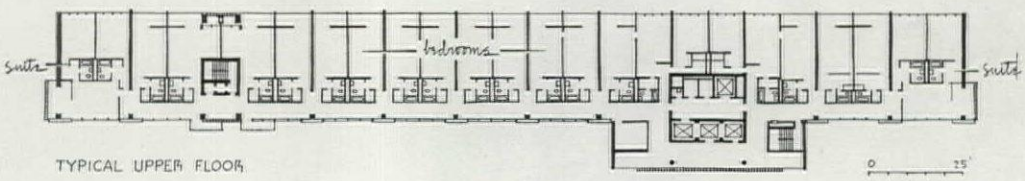


A narrow water garden, open to the sky, borders one side of the main lobby (above). *Background for this garden is a sand-surfaced, concrete mural by sculptors George Nocito and Bert Schwartz.*

Galleries of guest wing (left) *are open toward the pool terrace* (acrosspage). *Floors in this area and in entrance foyers and balconies of guest units are of local cement tile.*

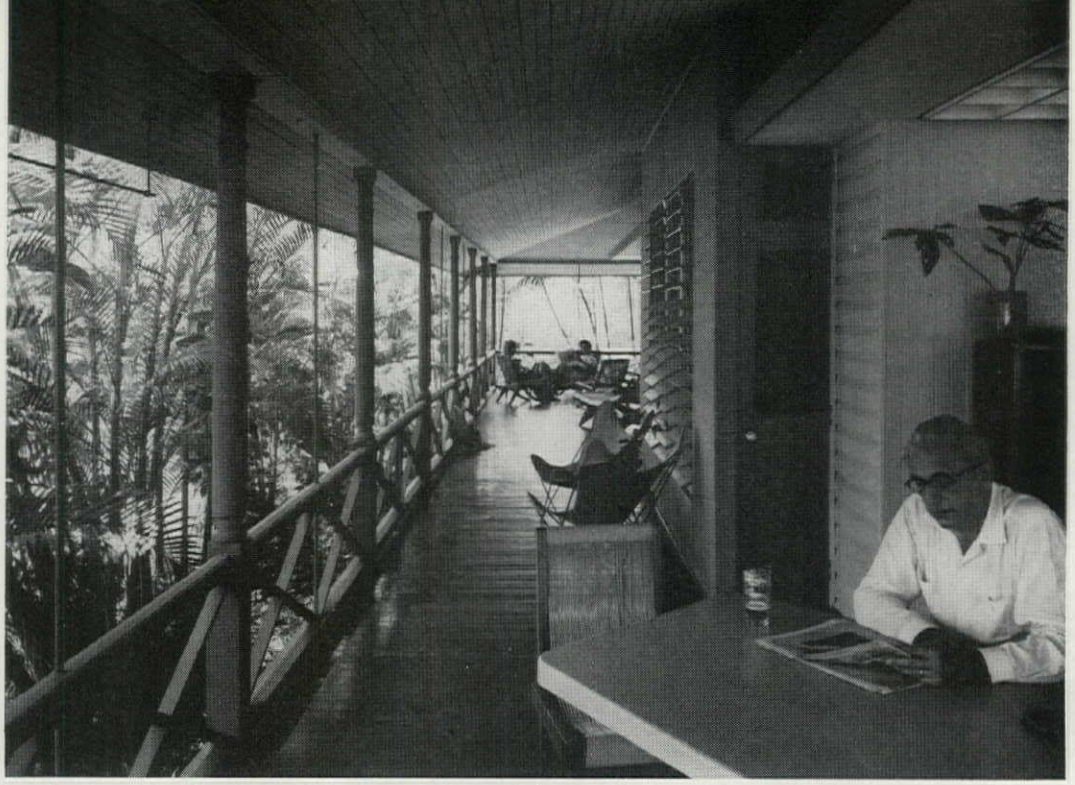
Though all guest rooms (below) *have natural cross-ventilation they may also be artificially cooled by chilled water supplied to room induction units.*





TYPICAL UPPER FLOOR


La Concha



From the Office of Henry Klumb

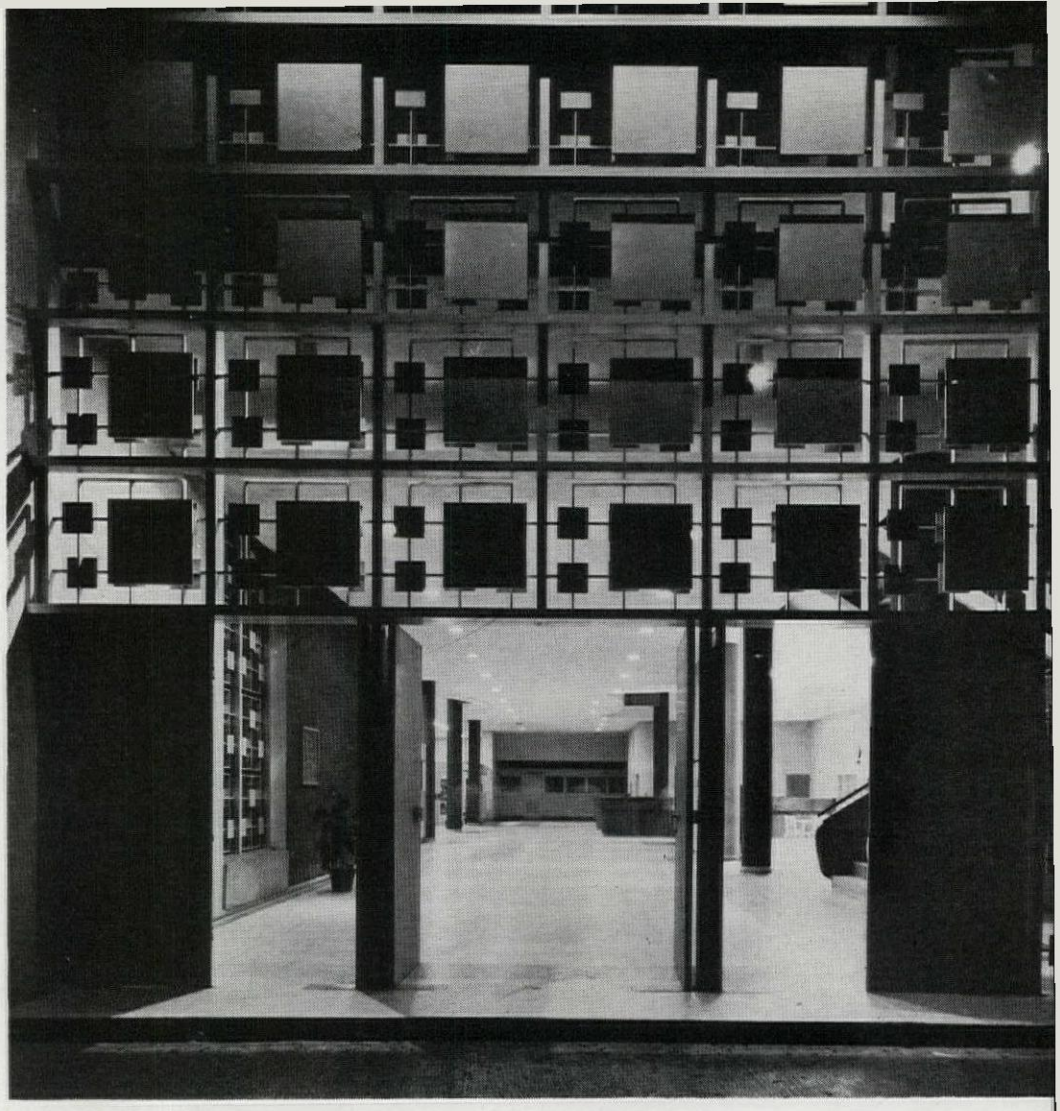
Faculty Housing (above), *University of Puerto Rico. Apartments and duplexes; recreation center and nursery on campus. Construction: reinforced concrete.*

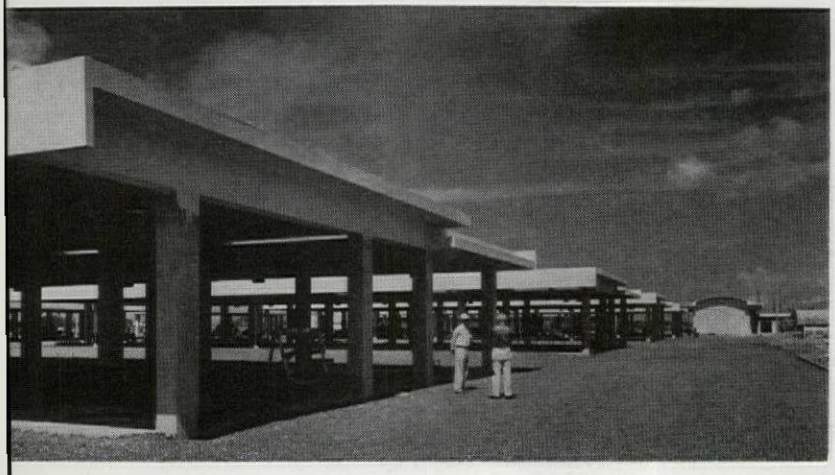
Shopping Center (acrosspage bottom), *Rio Piedras. Fullana Corporation. Engineers. Construction: reinforced concrete, pre-stressed joists and plank construction.*

Henry Klumb, who received his early architectural training in Germany and later continued his studies in the US with Frank Lloyd Wright, went to Puerto Rico in 1944. Since that time many of his architectural commissions have been executed, and with his practice he has gained considerable insight into the needs and special requirements of the region. Any review of present-day Puerto Rican architecture would be incomplete without inclusion of work by Henry Klumb. As indication of his talent and the wide range of his architectural practice a number of his completed buildings are shown on these pages. He is now busy with new construction for several colleges, a church, shopping center, manufacturing plant, resort hotel, seminary, two housing projects, and several office buildings and homes.

Klumb enjoys and respects his adopted country and says with pride, "the Island's architecture always had a purpose, and because of that, it belongs. I do not believe it right to design buildings with the only purpose of securing theatrical effects to the detriment of economy and sound planning. This has happened in Mexico and is happening in many South American countries. To me, the basic thing is the logical solution of a given problem. I do not believe in imposing solutions. . . . We have to take into consideration the purpose the building is to serve, the available materials and means of construction on hand, economic and social factors and the basic needs, not of the individual alone, but also those of his neighbor and his community at large."

One of his major concerns has been the design of buildings suitable for Puerto Rico's semi-tropical climate. He recommends, "make better use of the breeze . . . channel the wind and at the same time protect from it. The overhang is necessary as it provides protection against sun and rain, and forms a transition from the outside—in, and from the inside—out." His own home (*acrosspage top*), a remodeled plantation house, serves as an excellent illustration. "The house itself is so surrounded by giant ferns and breadfruit trees," reports Alexandre Georges after his recent photographic mission, "that one is not aware of its presence until the very doorstep is reached. There is no exterior in the usual sense of the word—the luxuriant vegetation is the only façade. The bedrooms make up an inner core and are surrounded by a deep and entirely open veranda. Being completely open and thickly planted on all sides it is always comfortable. . . . There is a certain reapproachment, closeness to nature, integrity, and almost naïve rightness about this approach to living that seems the perfect description of both the man and his architecture."

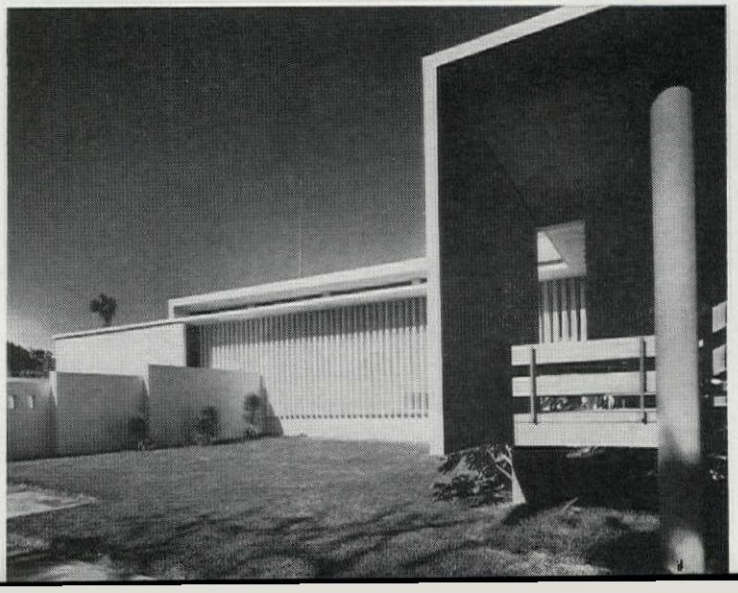




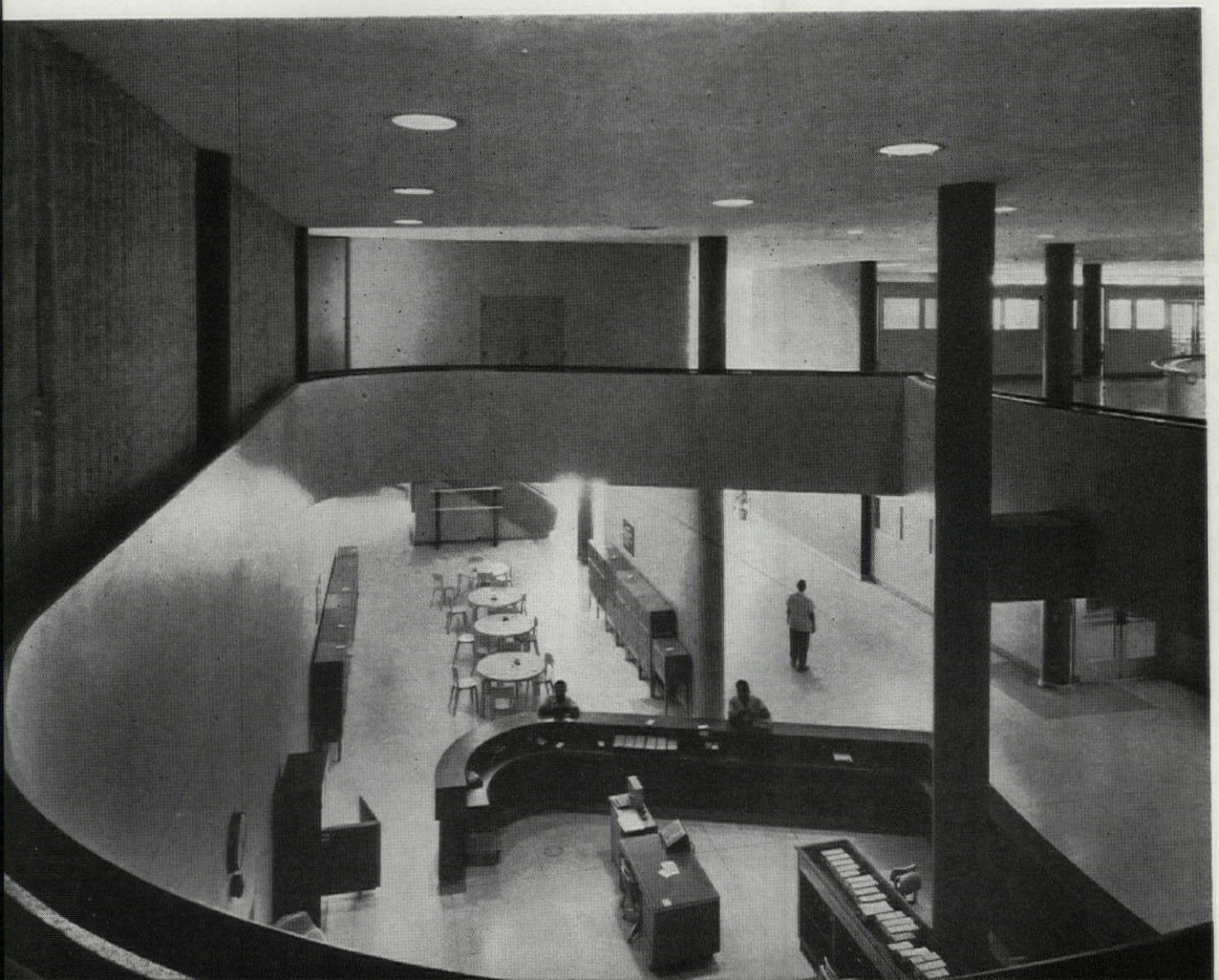
Library (above and acrosspage bottom), *University of Puerto Rico. Francisco Silvestre, Structural Engineer; Victor Garcia, Electrical Engineer; Milton Cobin, Landscaping. Construction: reinforced concrete.*

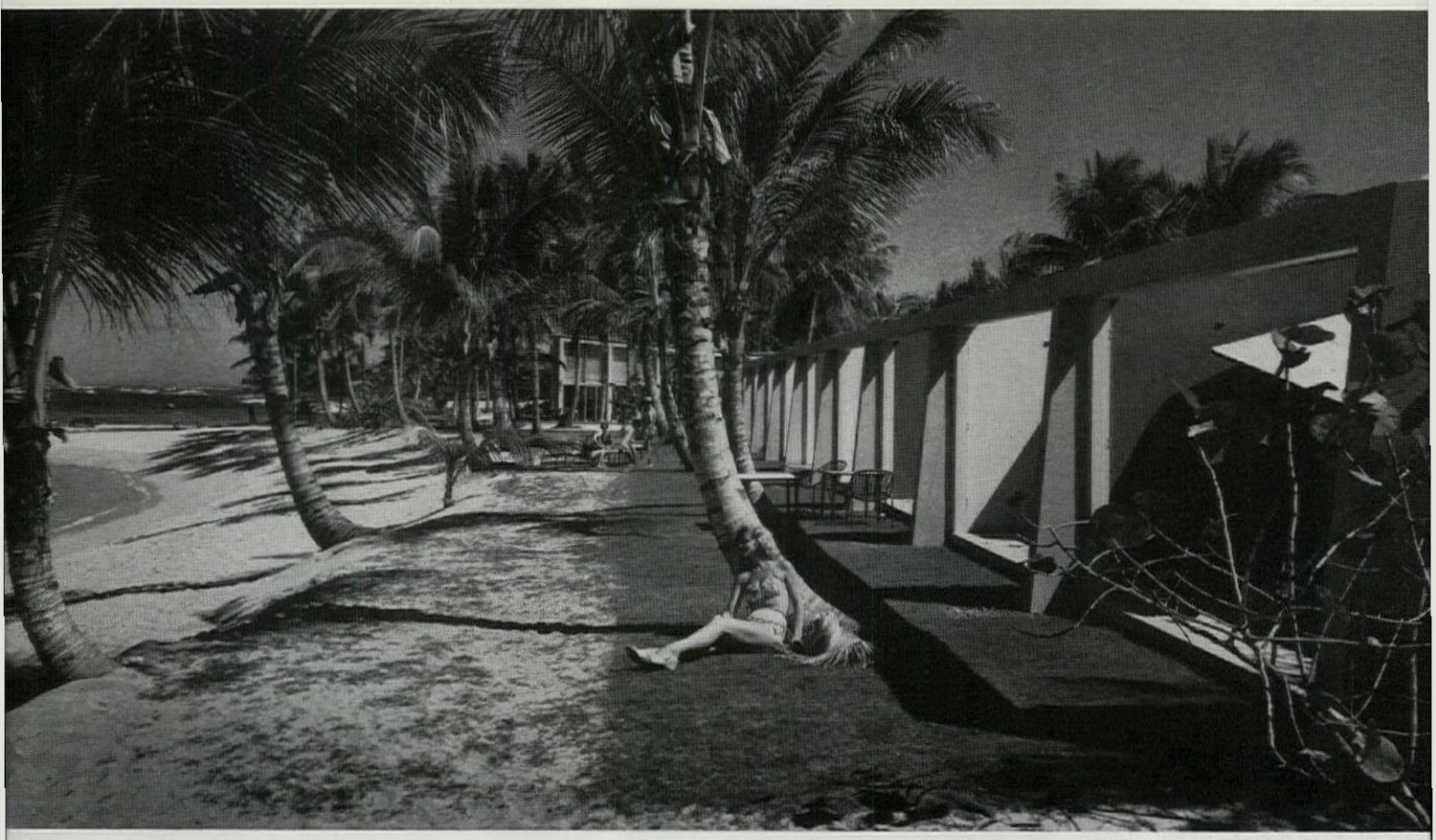
Municipal Public Works Center (left), *City of San Juan. Administration offices, garages, repair shops, warehousing, and employe facilities. Francisco Silvestre, Structural Engineer; Victor Garcia, Electrical Engineer. Construction: reinforced concrete on cast-in-place concrete piles.*

Student Health Service Building (below), *University of Puerto Rico. Francisco Silvestre, Structural Engineer; Victor Garcia, Electrical Engineer; Milton Cobin, Landscaping. Construction: reinforced concrete.*



Blessed Martin de Porres Church (right), *Bayview, Catano. Dr. Milton R. Martinez, Structural Engineer; Victor Garcia, Electrical Engineer; Milton Cobin, Landscaping. Construction: reinforced concrete and steel joists.*



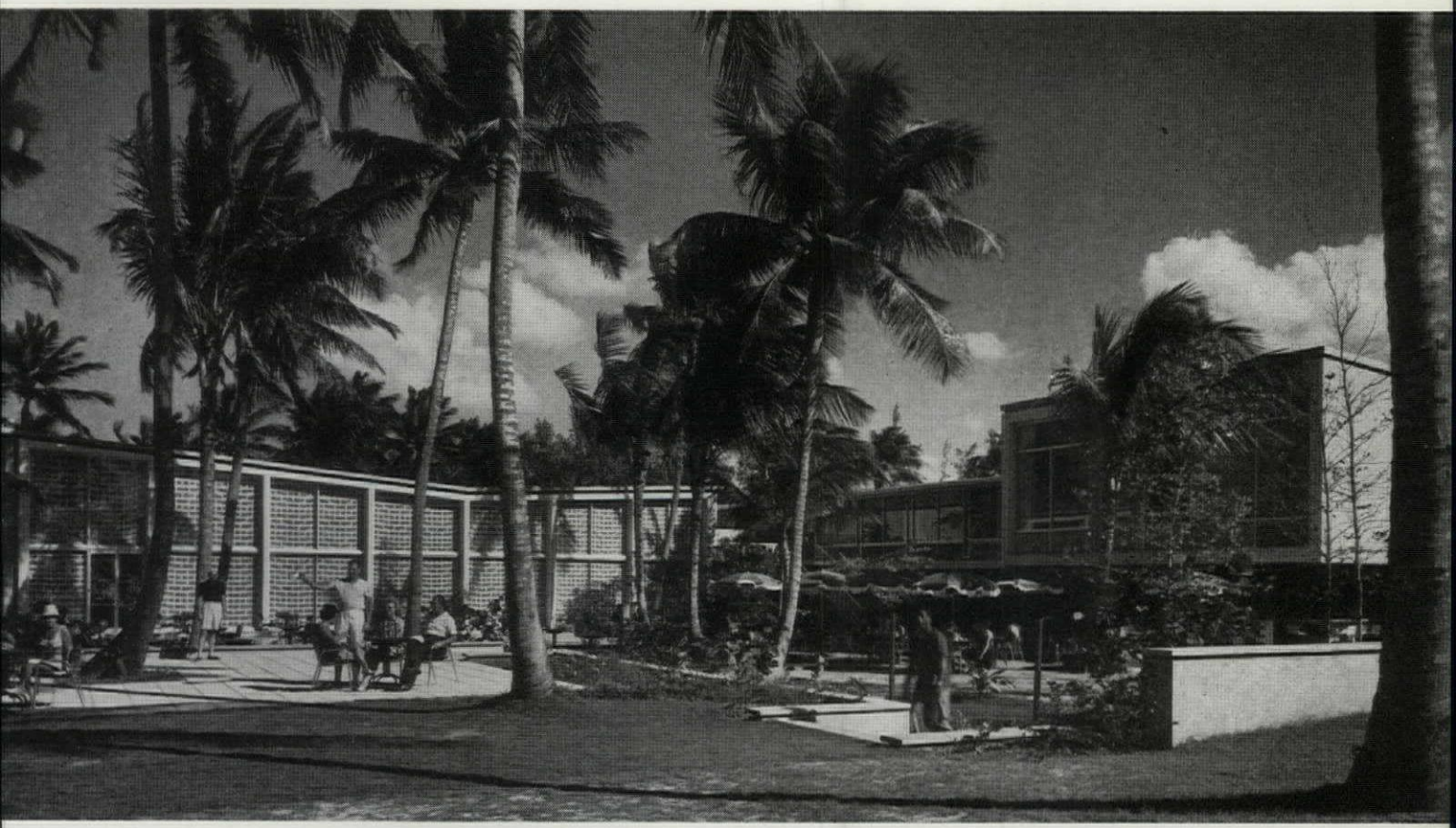


Resort Hotel for Dorado Beach

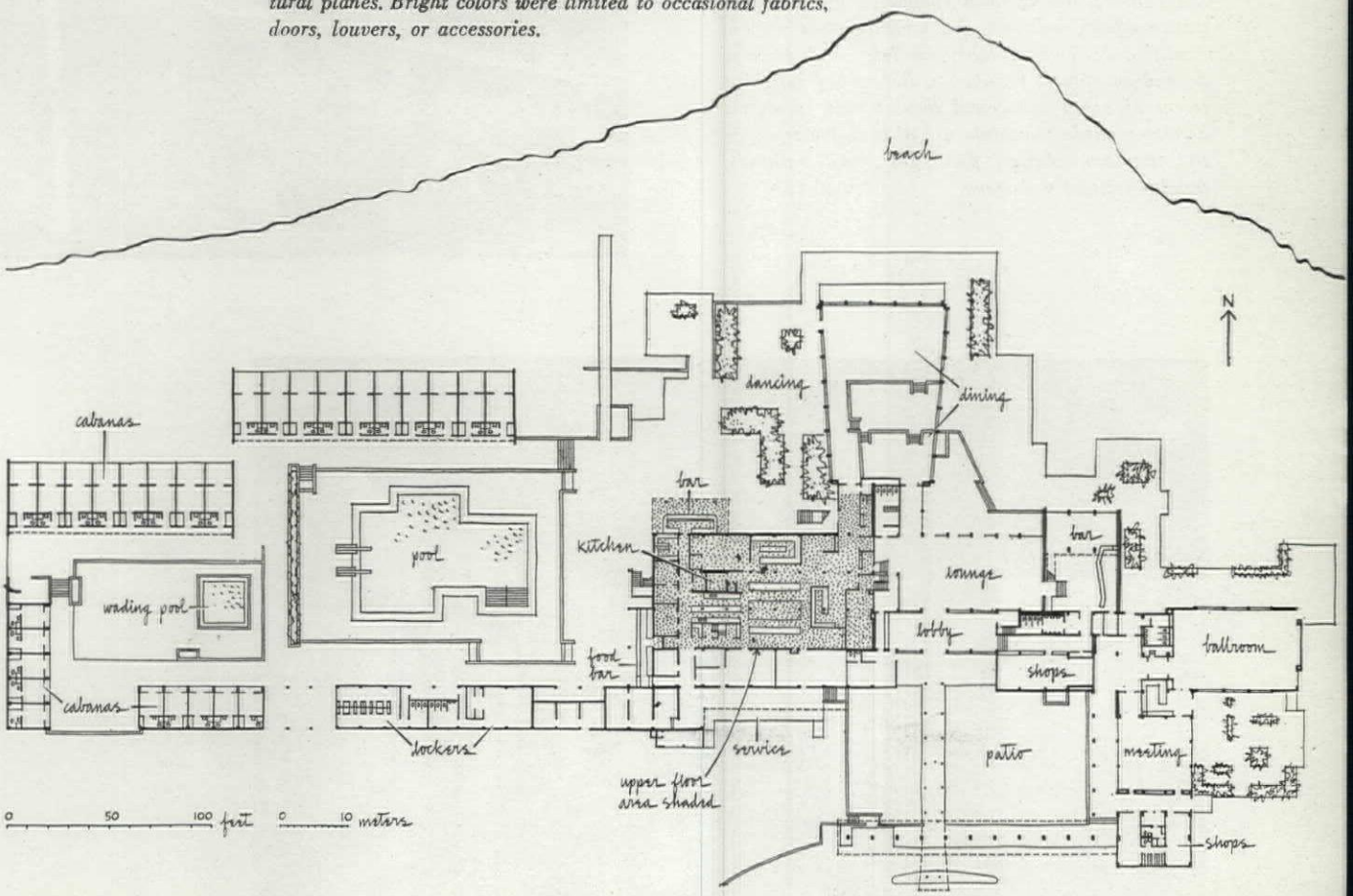
With this project—part of Puerto Rico's economic development program—it was hoped that high standards of design and construction, site preservation, and guest accommodation would set a precedent for future development of the area. The portion now completed is the initial phase of a long-range program for the 1200-acre ocean-front site. Land has been reserved for future expansion of the hotel and for a residential subdivision. The property lies about 20 miles west of San Juan and stretches the length of 2½ miles of curving bays. Dining facilities, lounges, and service facilities are consolidated at a point between two curving beach crescents. Strings of guest houses extend to either side of this central complex. Buildings are intentionally low to intrude as little as possible into the landscape. Quiet and privacy were uppermost considerations in the planning. Thus buildings were decentralized; foot and auto traffic restricted to the southerly, relatively blank, down-wind side of the beach houses; dividing wing walls were designed to serve as "blinders" so that guests, when in their rooms, might feel alone with the sea, sky, and palm trees. "Relation of outdoor to indoor spaces," write the architects, "has been particularly closely knit in the active social area around the main building *(following pages)*, pool *(across-page)*, and cabanas *(above)*." Sun control and direction of prevailing trade winds played an important part in orienting the structures. Large openings and glass areas, for example, have been oriented toward the north. Buildings were generally placed to allow cross ventilation; baffle walls and projecting wings provide shelter from strong winds.

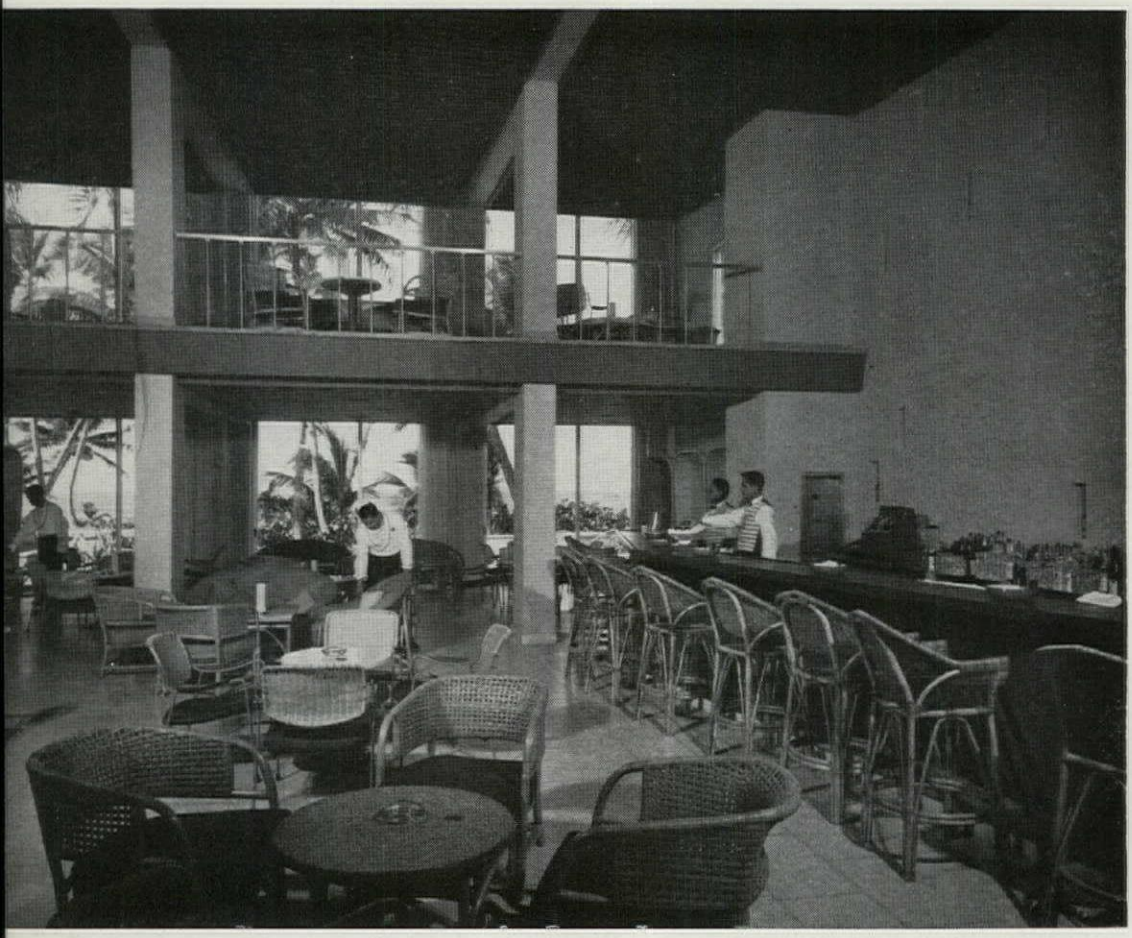
Structurally, the buildings are of reinforced concrete with footings tied together by grade beams. The conscious avoidance of hung ceilings led to wide use of flat slabs, flush tile and joist slabs, or carefully articulated beam and girder systems.

Goldstone & Dearborn were the Architects for this project; O'Kelly & Mendez, Associated Architects; Hunter Randolph & Bryan J. Lynch, Landscape Architects; Vincent C. Cerasi, Site Development; Ann Hatfield Associates, Furnishings and Interiors; Praeger-Kavanagh, Structural Engineers; Syska & Hennessy, Inc., Mechanical and Electrical Engineers; Howard L. Post, Food Service Consultant; Robert Trent Jones, Golf Course Architect; Harris, Kerr & Forster, Hotel Consultants; Becker & Becker Associates, Shop Designers; Caribbean Enterprises Corporation, General Contractor.

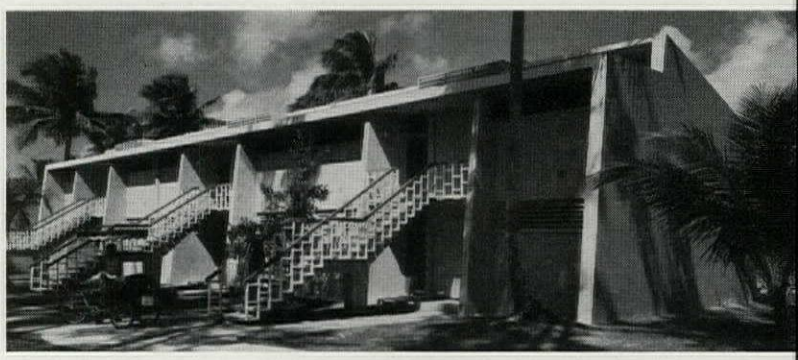


The architects' "design wish" to subordinate the buildings "to the brilliant sun, sky, sea, and flowering shrubs," is discernible throughout the development—even in this central group (plan below) *which unites all of the dining and kitchen facilities, shops, lobby, lounge* (acrosspage top), *ballroom, meeting room, and cabanas. In color, the exteriors of the buildings are generally light gray with accents of white. Dark, subdued earth colors articulate the architectural planes. Bright colors were limited to occasional fabrics, doors, louvers, or accessories.*

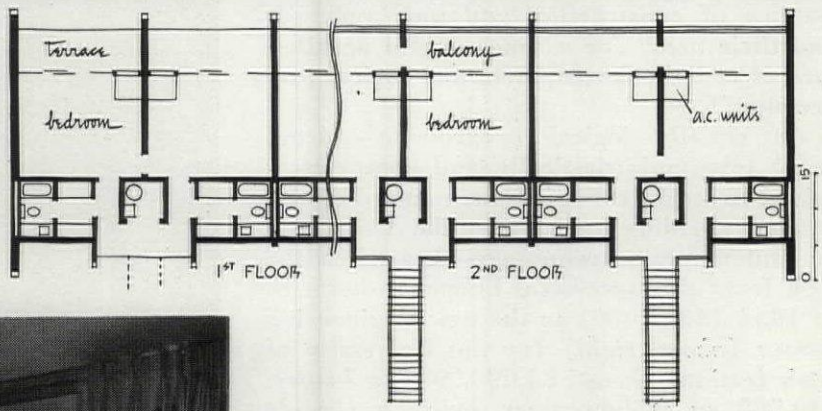


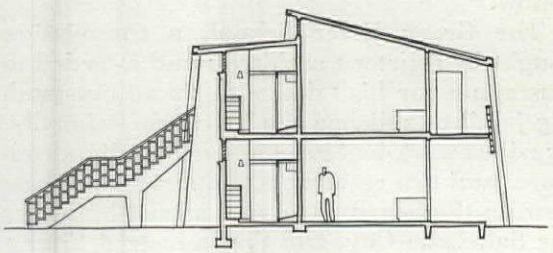


Bar (above), *dining room* (below), *shops, administrative offices, ballroom and meeting room are air conditioned; lounge, lobby, gallery, and kitchen depend on natural ventilation. Because of corrosive forces of ocean spray and local termite problem, architects made maximum use of such materials as tile, terrazzo, plaster, glass fiber, and naturally termite-resistant mahogany.*



Rooms of two-story guest houses (acrosspage center *and* above) *have either private balconies or terraces. For thermal comfort, units are designed to be completely flexible. Guests have a choice of unobstructed natural ventilation by means of sliding glass doors; moderate ventilation through adjustable louvers; or artificial cooling, making use of individually-controlled air-handling units.*





Smith *Gustavson* *Giusti* *Knight*

progress report: *The Work of Dean L. Gustavson Associates*

P/A's* PROGRESS REPORTS *continue this month with the work of a young firm in Salt Lake City: Dean L. Gustavson Associates. In six years, this office has established a distinctive style, community standing, and a reputation for superior school design. With a modest but impressive record of completed buildings as background, current commissions range from $80,000 to $4,000,000 projects, and new work is triple that of the previous best year. The architectural philosophy and ideals, as well as the practical working procedures that have made this growth possible, are described below.

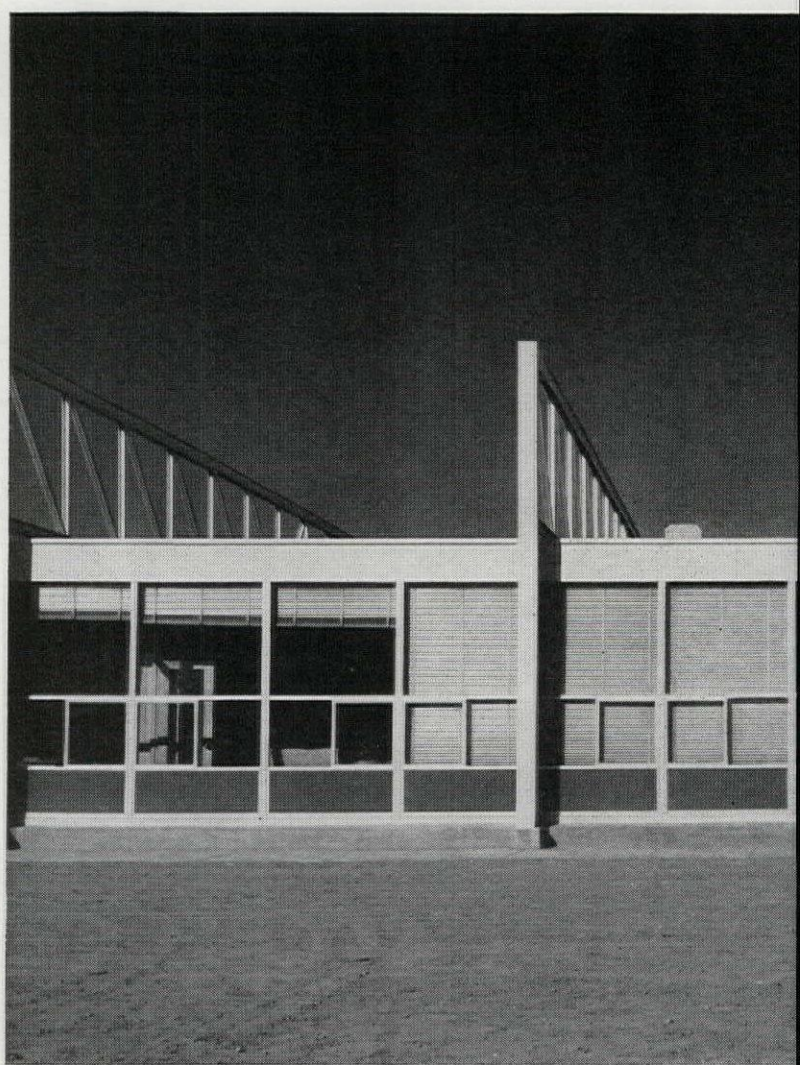
Text by Ada Louise Huxtable; photos (except as noted) by Dearborn-Massar.

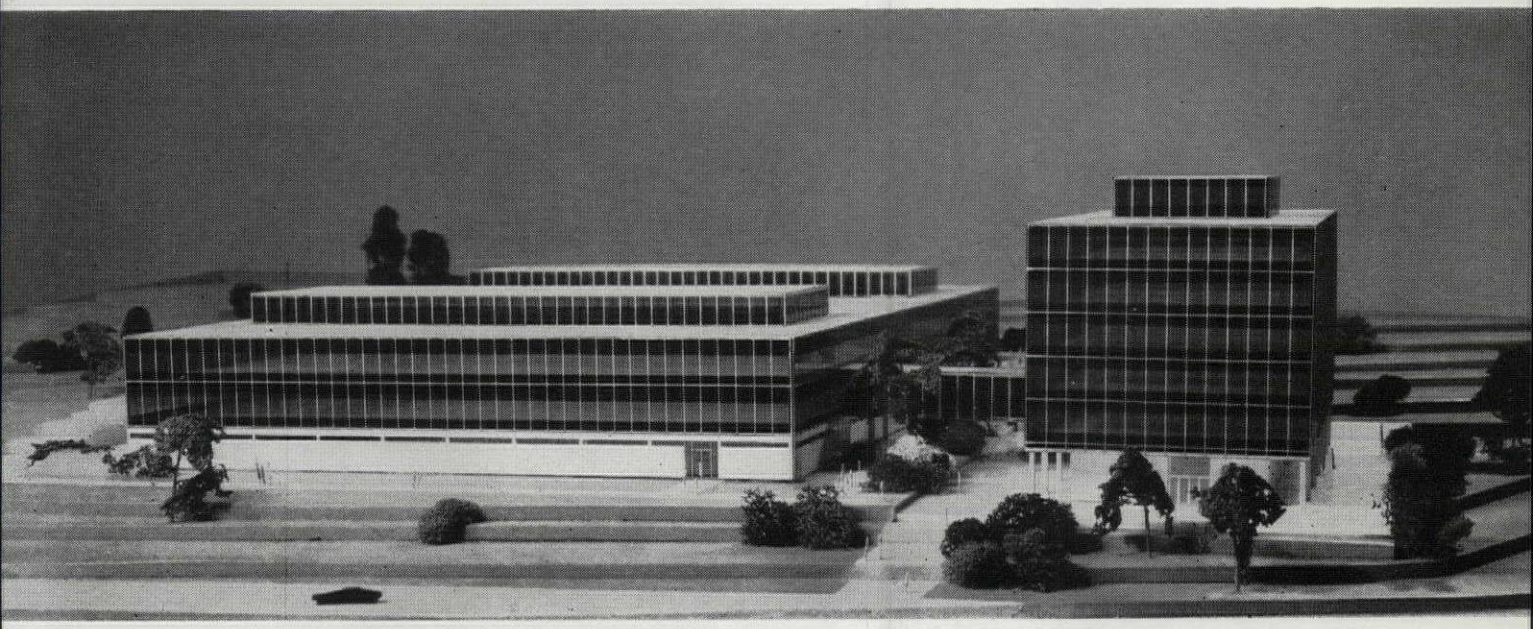
The glass curtain wall and exposed central trusses of Green River Public School, Green River, Utah (*center*), the Gustavson firm's first major work, are a dramatic demonstration of primary preoccupation with "modern systems of construction and new materials and their uses" for a "meaningful architecture of orderly development and logical progression."

An equally logical progression — from small jobs enthusiastically and competently solved to larger commissions, marked always by an over-riding emphasis on the design uses of contemporary technology—has taken the firm from this successful budget assignment of 1954 ($387,000) to the new Engineering Center (*above right*) for the University of Utah (estimated cost, $4,000,000), a 3-story, 240,000 sq ft laboratory building already under construction, with a 6-story classroom and drafting building of 80,000 sq ft to follow.

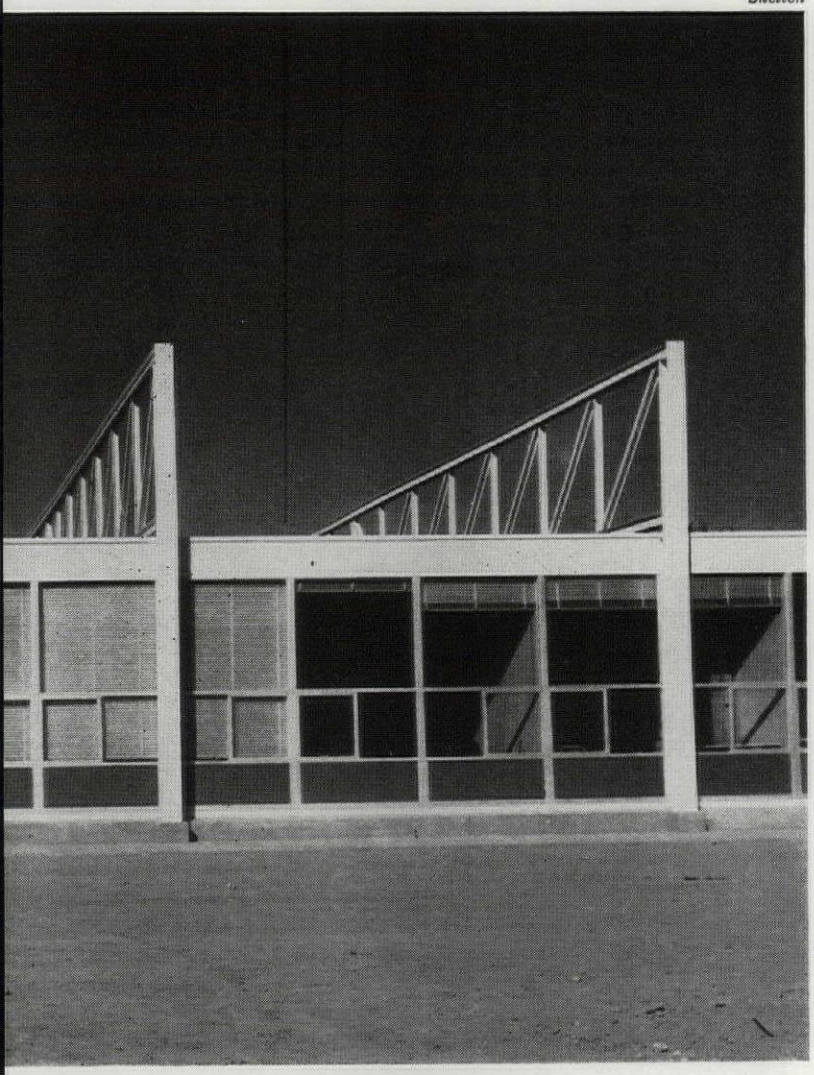
The Green River School, a commission sought by fourteen architects and awarded to Gustavson for his "desire to do an outstanding job," established the firm professionally. Previous work had been a music studio, drugstore, and two residences. Important projects now on the boards: two new school buildings for Salt Lake City, and the Industrial Education Building at Brigham Young University in Provo, Utah.

Dean Gustavson, 35, started independent practice in 1953. The present office consists of Gustavson, directing designer of the firm





Skelton

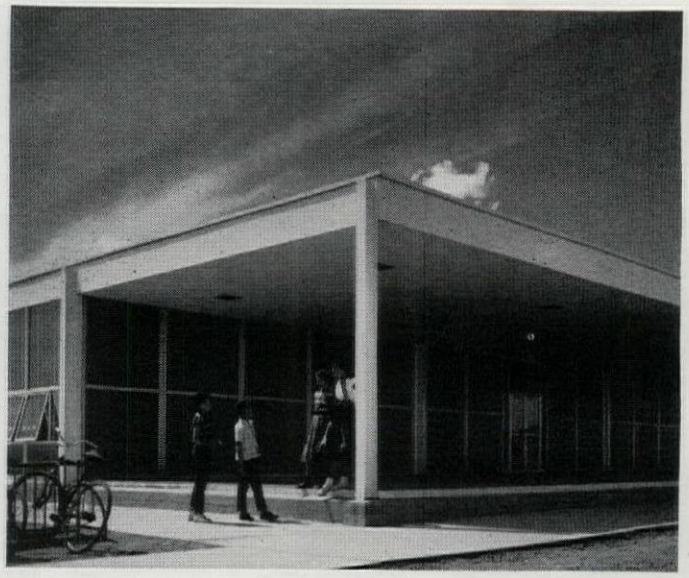


("I maintain personal control of the design and the finished product, with personal supervision during construction"); John L. Giusti, 34, his associate; L. Spencer Smith, 26, who worked for the firm summers during his IIT training and joined it last year; Clifford W. Knight a part-time specifications writer; three draftsmen; and a secretary, who collaborates closely with Gustavson on public relations. Anticipating further growth, Gustavson feels that the ideal future size of the firm would be ten or twelve persons. "Beyond that, I believe that we would lose close supervision and would become a production mill."

Backgrounds are varied: in addition to Smith, an earlier associate was an IIT man (the structural esthetic preached by Mies van der Rohe is a recognizable factor in the firm's style) although both Gustavson and Giusti are University of California College of Architecture graduates. Gustavson's schooling was interrupted by the war, during which he served as an Air Force pilot, a stint he considers an invaluable part of his architectural education, since it gave him the opportunity to "discover" European architecture. Asked for his personal design philosophy, Gustavson compares himself to Sen. Lyndon Johnson, who stated, when his political beliefs were requested, that they were the sum total of his life's experience. "God made no man so simple or his life so sterile that such experience can be summarized." Although the sum total of life at 35 is less complex and

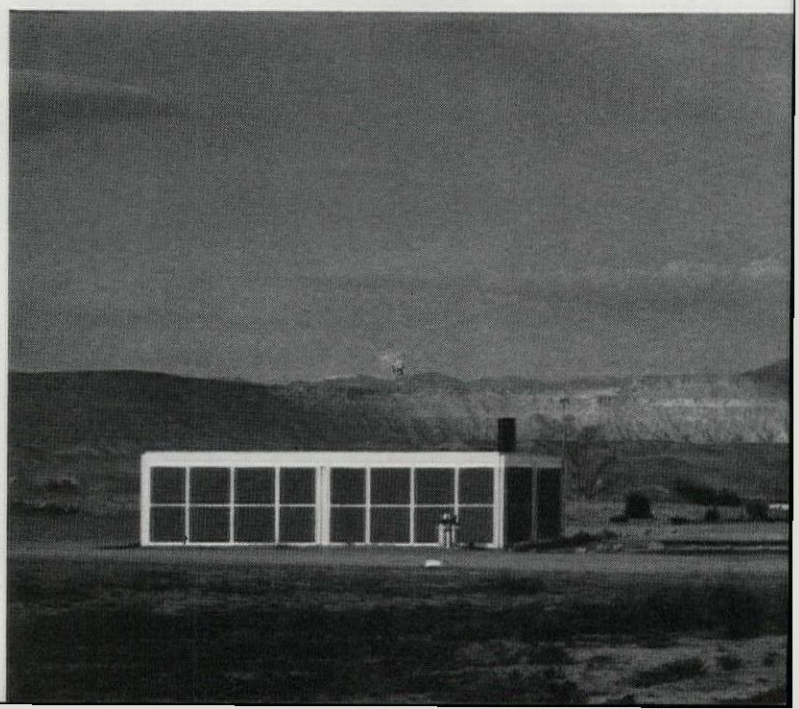
Dean L. Gustavson Associates

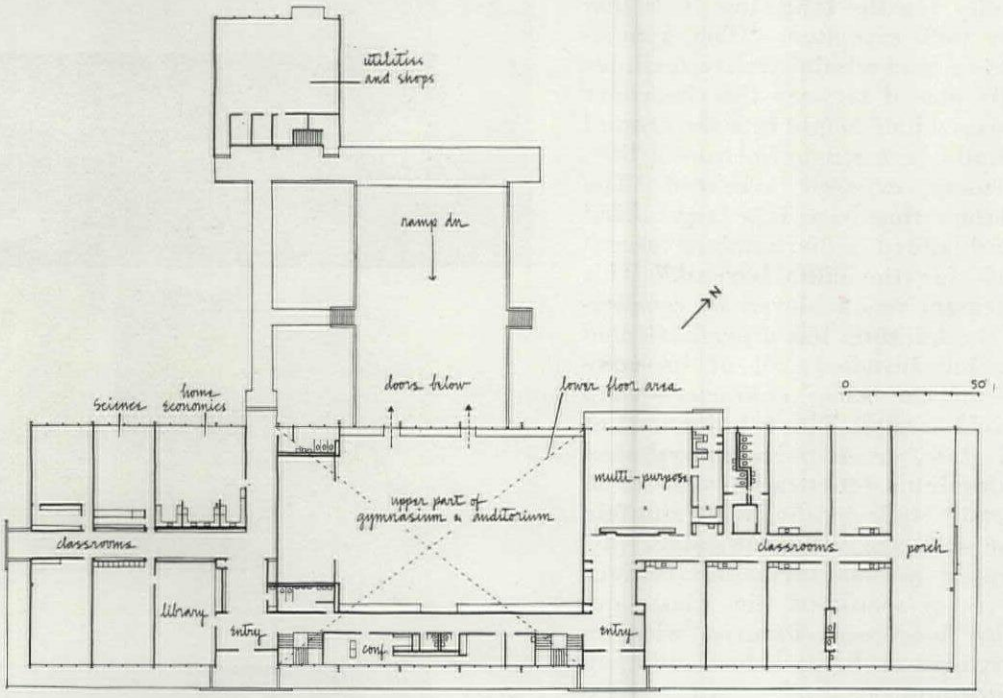
beliefs less irrevocably molded than in later years, Gustavson astutely judges that it is the cumulative effect of "experience, emotion, intellectual ability, and logic that shows the way in the development of architecture." He emphasizes the important determining factor of technology and the fact that it must be used, not to dictate a solution, but "to serve the expression we want." He makes the interesting statement—rich with implications of today's unhampered esthetic exploration, as opposed to the strict functionalist doctrine of an earlier generation—"Sometimes I have felt we have been somewhat ahead of technology and it must catch up with the expression we seek." Above all, he believes that the practice of architecture should be "exciting, and if you will, 'fun,' " and while he grants the absolute necessity of intellectual discipline, he feels that "imagination must take the lead and emotion should rule."



for a school: economical esthetics

This insistence on freedom of expression is particularly interesting in view of the restraint and classic formalism of most of the firm's work, beginning with the Green River School. Designed with an earlier associate, John W. Sugden, it stresses simplicity, economy, sensitivity to site, and a forthright use of structure and materials. At the same time, it takes deliberate liberties with function and construction to maintain a continuous, horizontal line, emphasized by the conscious decorative accent of the visible trusses. The clue to the design—which is anything but ambiguous—is to be found in Gustavson's constant if somewhat surprising equation of the words "logic" and "emotion." Today's young architect offers justifiable homage to "logic" —systems must work and be appropriate to their purposes—at the same time that he claims his right to interpret these systems for emotional and esthetic values. The use of ex-

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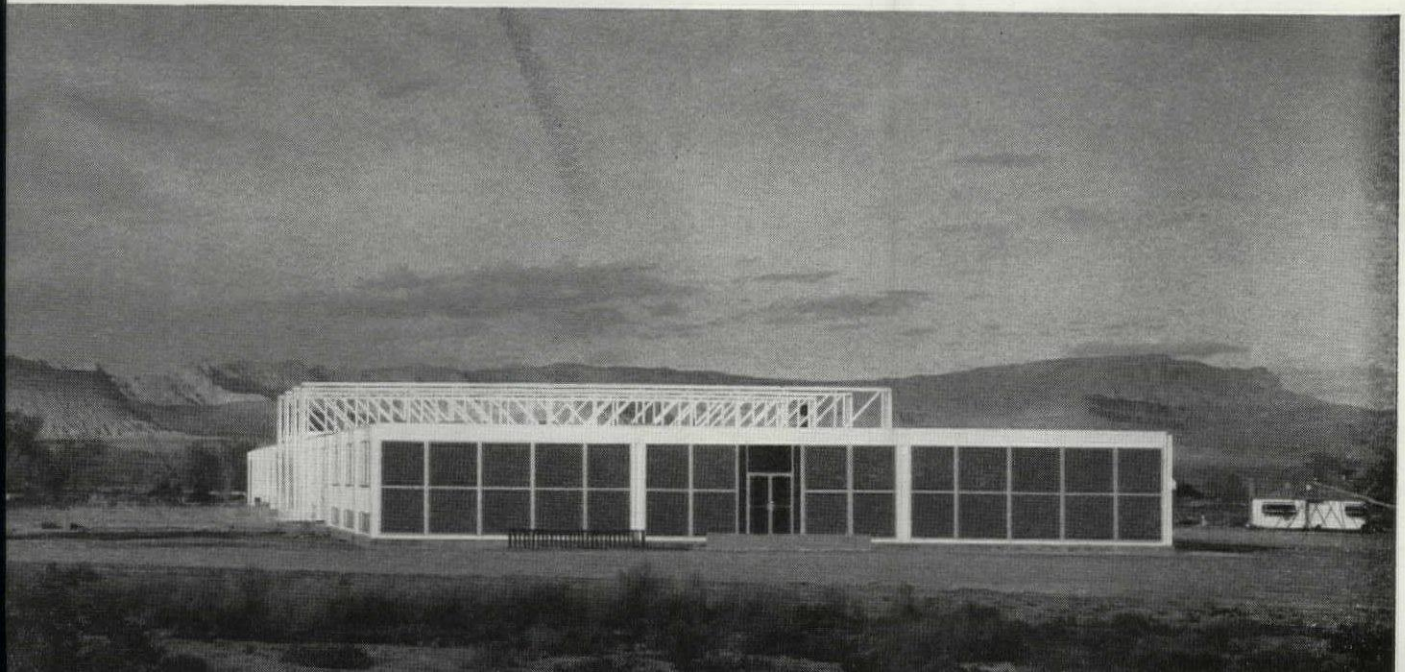

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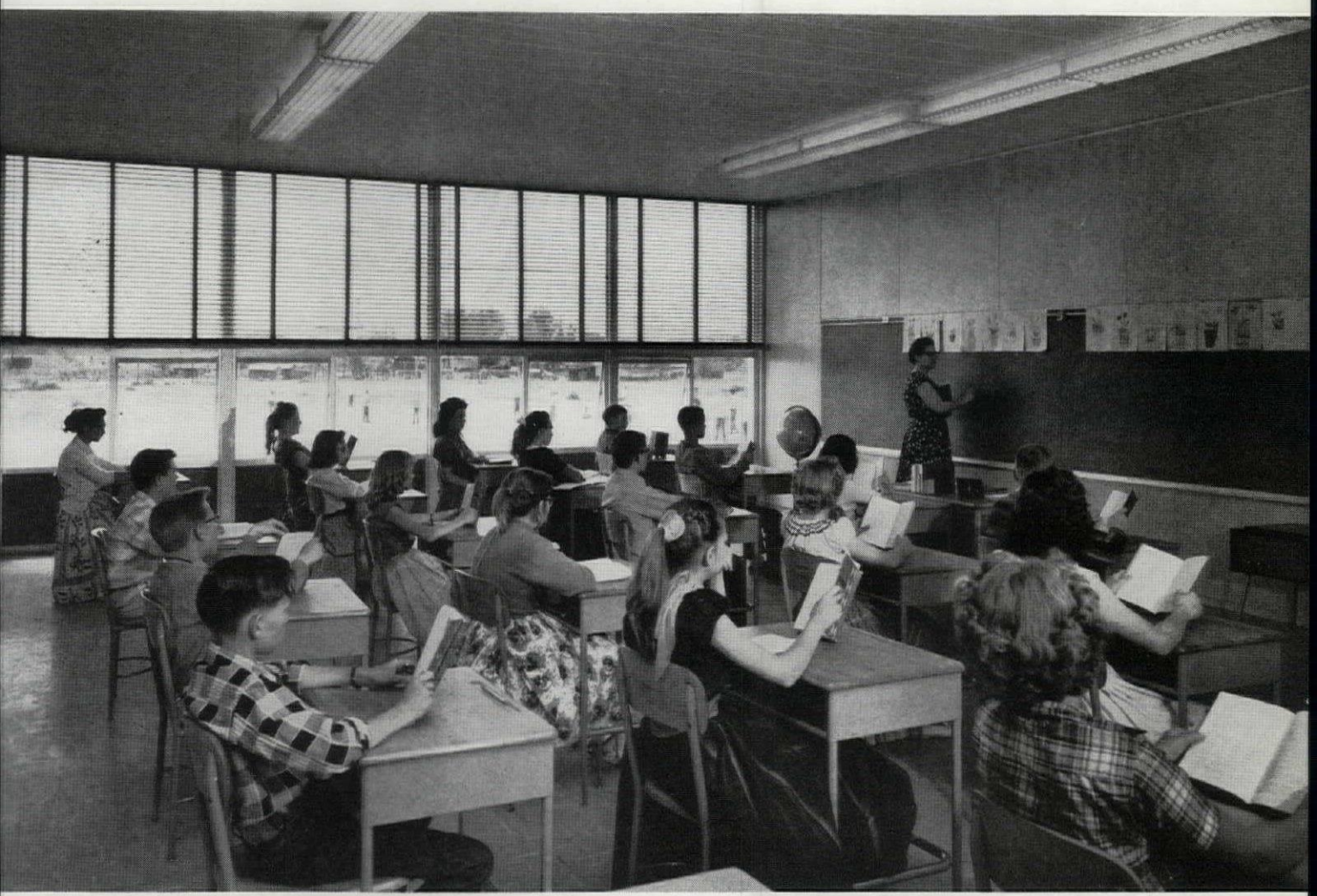
posed, workmanlike framing (logic) painted white and carefully manipulated for architectural impact (emotion) makes a concise visual statement of Gustavson's architectural beliefs.

He speaks sympathetically and somewhat romantically of the site: "I was impressed by the horizontal feeling of the desert . . . a feeling that was further emphasized by the dramatic 'Book Cliffs' in the background." Because the building was to be a complete educational unit, housing children from kindergarten through high school, a continuous, single-story structure was practical; it provided the necessary separations and afforded the opportunity for the long, low look that has been so well exploited. "The gymnasium/auditorium and administrative facilities were centrally placed between the classroom areas and lowered half height into the ground to give the building a single horizontal line, with the trusses exposed overhead. The trusses announce that here is a larger kind of space, and afford a harmonious accent and emphasis for the cliffs beyond." This effective statement was achieved by economical means: the building has a prefabricated steel frame, job installed; all of its components are of the same character—shop fabricated, field erected. The exterior wall of green tinted glass, green porcelainized steel panels and aluminum fenestration was one of the first curtain walls in the intermountain west. Interior walls are butternut stained plywood or grayed plaster surfacing; ceilings throughout are of acoustical tile. Classroom lighting is by fluorescent fixtures, with incandescent fixtures in the corridors and gymnasium/auditorium.

The small second building contains utilities: a boiler and coal room located below grade, with farm and auto shops above. The electrical system is an underground primary service to an underground transformer vault, transferred to various panelboard locations. Services were separated from the main structure so that they would not interfere with the flexibility of the building and the school's future expansion. Arnold Coon was Structural Engineer; Gerald E. Wright, Jr., Mechanical Engineer; F. C. Bates, Electrical Engineer; Davis & Butler, Contractor.

Typical office procedure on this and other jobs has been to determine the program requirements, with follow-up discussion of possible approaches to the plan and site and tentative structural solutions. Consultants are called in at this stage. Next, one of the associates prepares a schematic plan layout, with

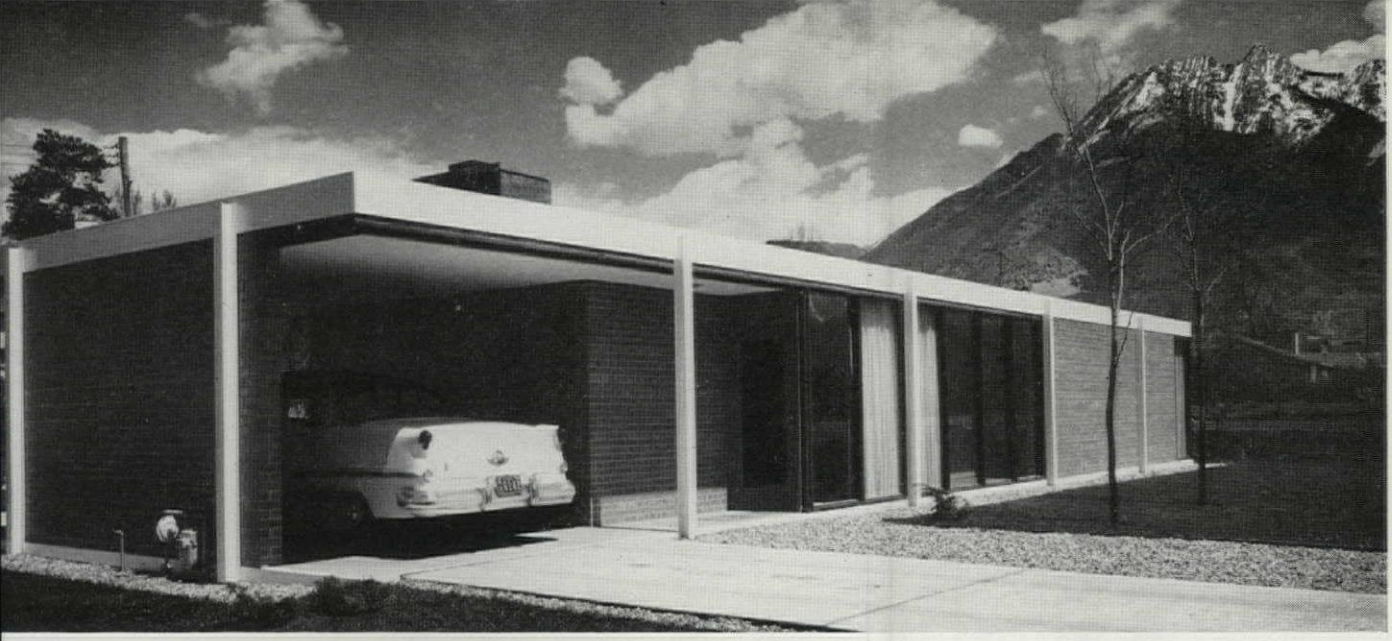


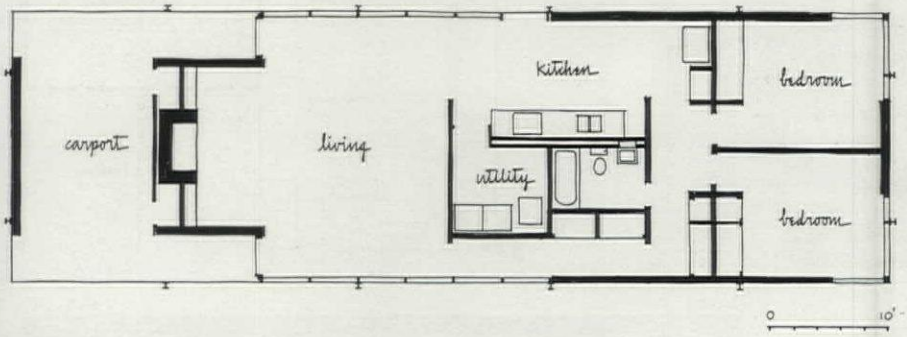
free, informal design criticism as he proceeds. Moving into the drawing phase, elevations, perspectives, etc., are developed—also by the principals—before the project goes into working drawings. Because Gustavson believes in a single-stage development of plan, site, structure, and elevation, without breaking them down into separate studies, he feels that it is logical and natural for himself, or an associate, to carry each commission this far, so that when the job goes into working drawings the design is well established and most of the general problems have been solved.

Gustavson comments that because this school was the firm's first large job, details have improved and materials have been upgraded in later work. The direct, impressive solution, however, has not been surpassed.

for a house: a steel frame

In spite of his success with school architecture, Gustavson disclaims any desire to become a specialist. "The entire field of building is architecture, and as architects, our bailiwick." The firm has also done houses, dairies, and a bank, and although each problem is approached on its own terms, the exterior steel frame appears to be a favored solution. A house built for the architect's parents in 1956 was conceived as a steel framed building of clear span from exterior wall to exterior wall. The frames were made as a single unit, shipped to the site and erected, roof beams dropped in place. "The entire process of erection took a little less than two days." Without loadbearing walls or columns to restrict the design, the interior was freely planned for the needs and interests of a retired couple. Materials are used simply and directly, for a "precise, well detailed result." The steel frame is painted white with brick infill and redwood fenestration; interior materials are oak plywood, white plaster, and brick; flooring is carpet or vinyl. Heating is a forced warm-air perimeter

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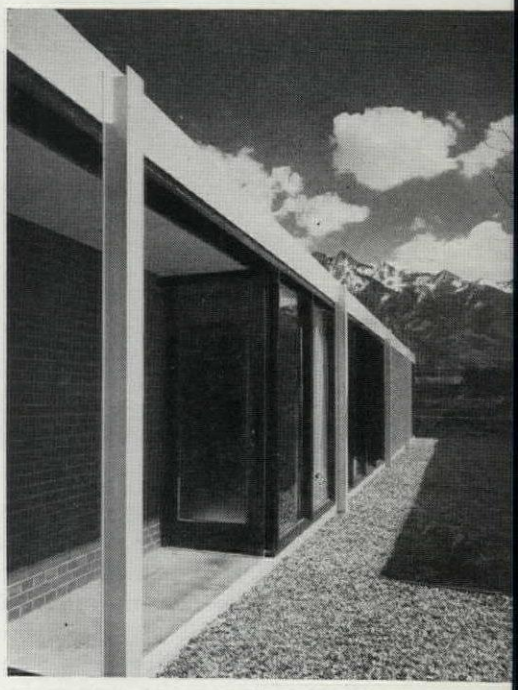

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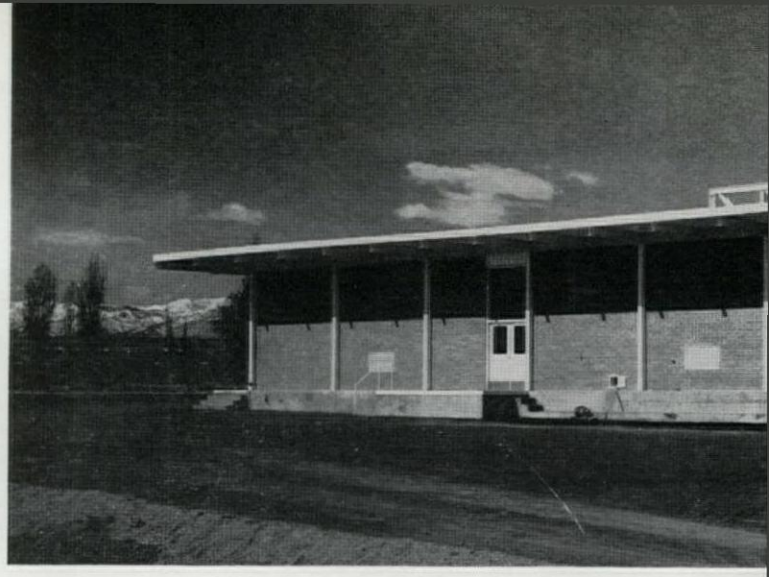
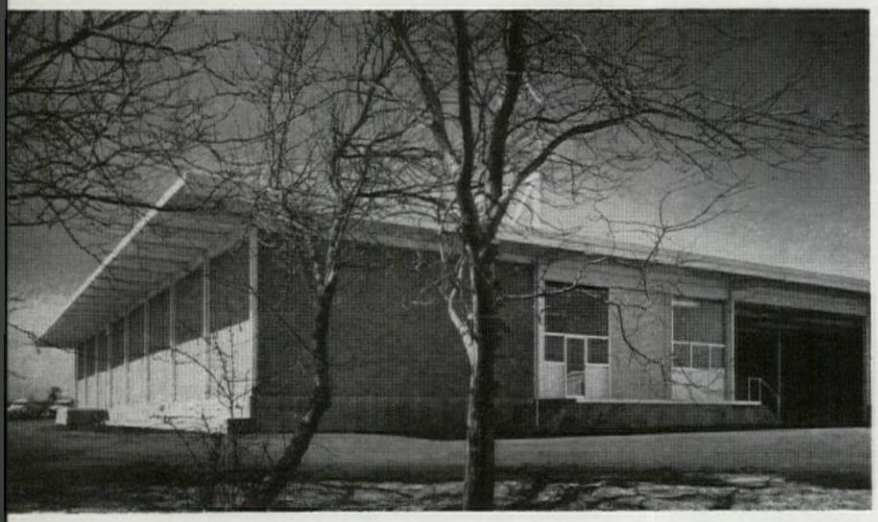
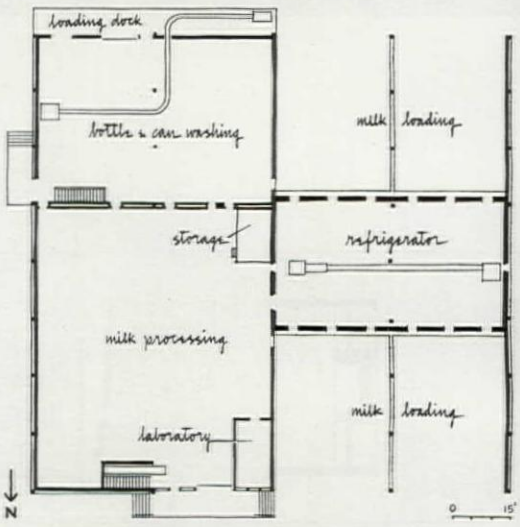




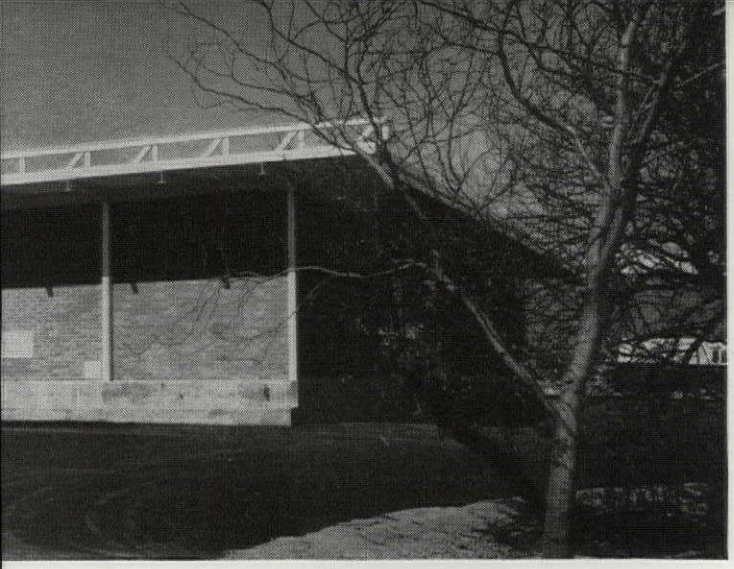


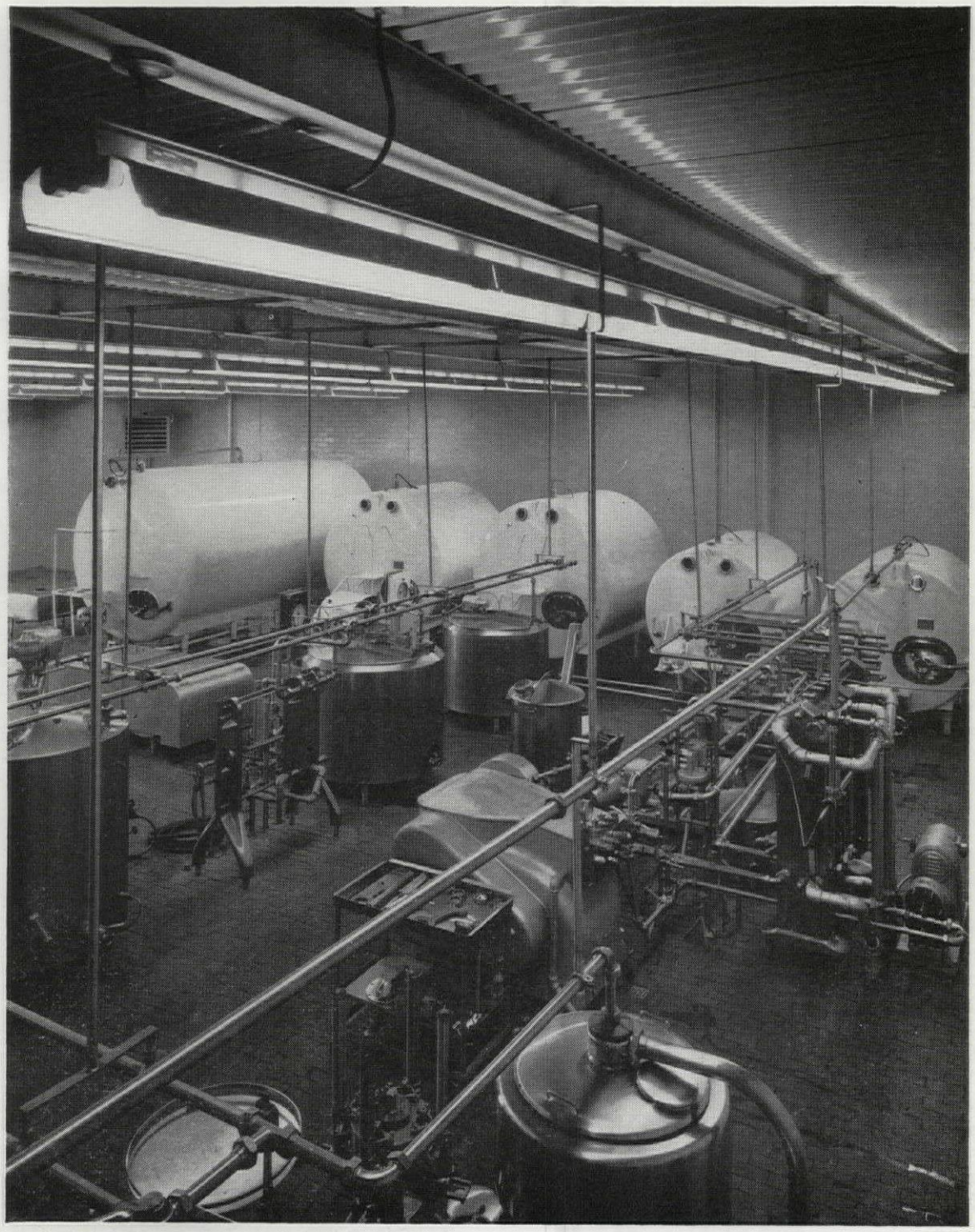
system with registers at exterior walls.

This residence—the second steel house built by the firm—aroused considerable interest in the community. "More important," says the architect, "the owners are extremely pleased. They like the simplicity, the free flow of space, the easy maintenance. To them it is a beautiful house, and they have considerable pride in it."

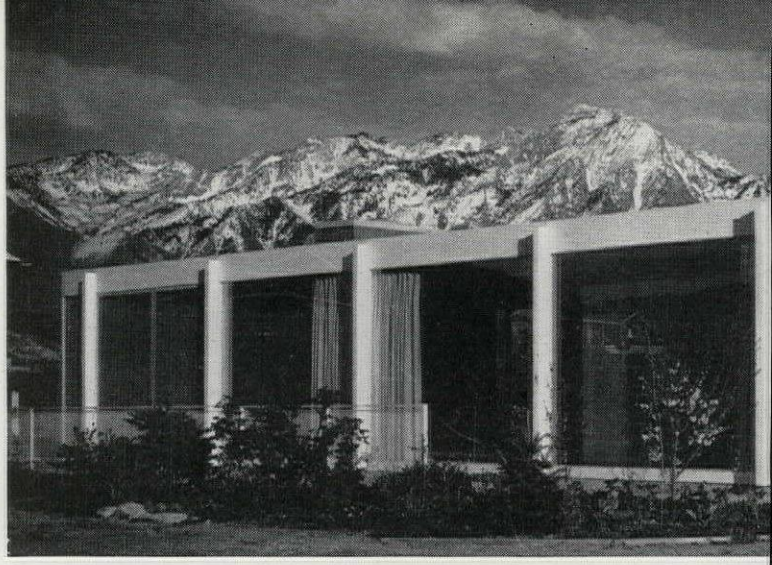
for a dairy: precision and style

Exposed steel framing is used again for a commercial commission—the Winder Dairy milk-processing building of Salt Lake City—with an exterior roof truss similar to Green River (a single one this time) spanning the large interior space required for the processing room. Because little glass was needed, the exterior walls pass behind the steel frame to provide an unbroken, glazed-tile interior surface, particularly suitable for a sanitary installation. Working closely with the owner, the architect developed the layout of all the processing functions at the same time that he designed the enclosing shell. For the objective here was not just an efficient structure, but also a handsome one. "I wanted a building that expressed lightness, even though





Dean L. Gustavson Associates



most of the walls were solid. Many such buildings degenerate into large block wall masses without character or meaning. . . . I wanted to suggest that milk processing is exciting and interesting." The means: emphasis on the precision and style of the visible structural system and the use of fresh, clean color—white-painted steel and light coral masonry outside, the same masonry (a single unit, hollow-tile wall) glazed tan inside, with off-white ceilings for a sterile, but not clinical look. A basement houses storage, refrigeration equipment, and electrical controls; heating is by steam lines connected through an underground tunnel to an already existing boiler plant.

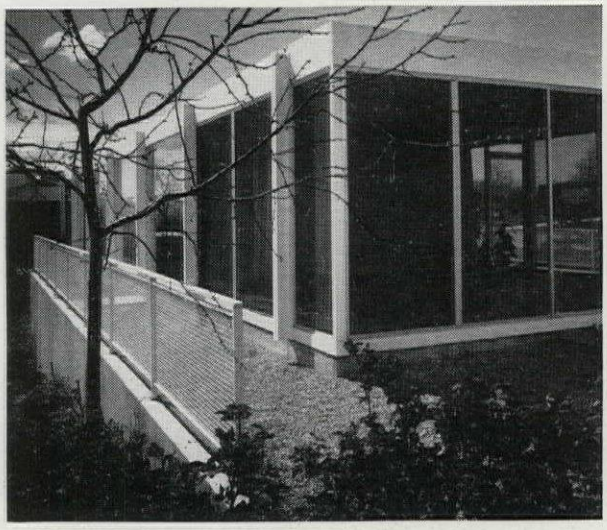
For the owner, pride has been an important payoff. The company conducts tours for schools and the public; authorities from Sweden and the United States have visited and praised the plant, which has become an effective instrument of publicity and prestige.

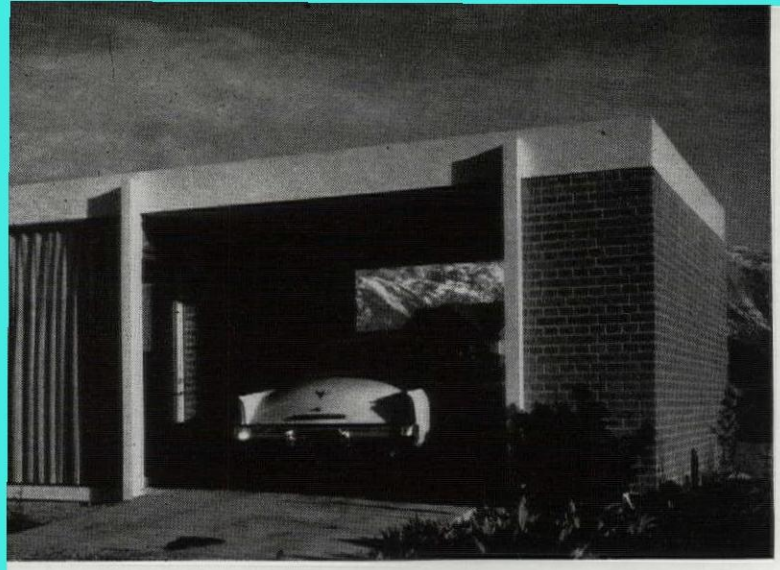
Associate Architect of the job was Georgius Y. Cannon; Structural Engineer, Arthur Monsey; Mechanical Engineer, G. W. Wright; Electrical Engineer, Blomquist & Brown; Contractor, Culp Construction Company.

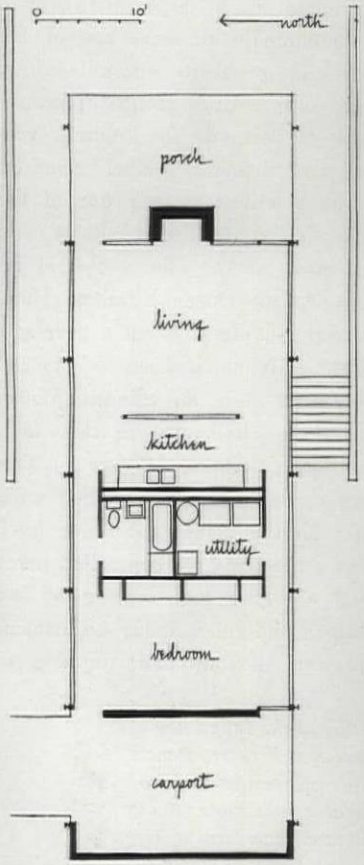
for the architect: no design dogma

"Architecture is the development of space into shelter," says Gustavson, and for this firm the process always begins with the definition of space in terms of the structural enclosure. In a house done with former associate Sugden for Mrs. John Sugden, interior space is defined by the welded steel frame, requiring no bearing walls and a minimum of partitioning. Exterior walls are brick; interior, oak plywood; floors, concrete; heating, perimeter system of forced warm air. Materials are natural wherever possible, to permit the client's free selection of furnishings and color.

"I hold no particular design dogma . . . ," says Gustavson; "we do not search for the unusual or extreme. This kind of thinking only gives away the designer's unsureness." Not at all unsure, he sets broad goals—"Architecture is not synthetic, but a real thing, to live in, work in, and enjoy. . . ." Nor is he afraid to face the ultimate test of architecture: "When all the words are spoken of systems, materials, etc. . . . , the building must arouse an emotional response in the viewer . . . the result must be beautiful . . . It is with this conviction that our work is done."



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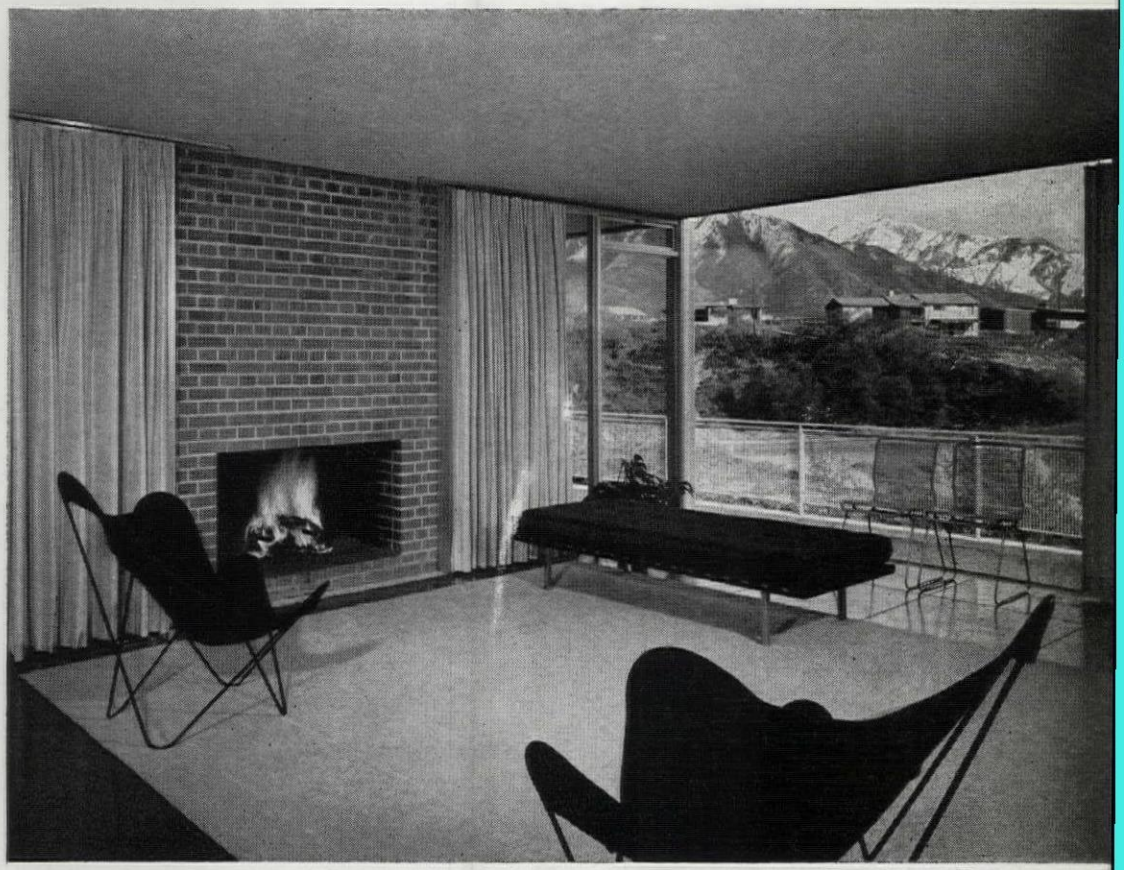


Increasingly, functions in buildings are being controlled automatically. As this automation becomes more complex, there is a trend toward centralizing the various controls in a common location. This article not only presents control centers that are installed and operated today, but also suggests future uses for this kind of equipment.

centralized operation of building equipment

by William J. McGuinness*

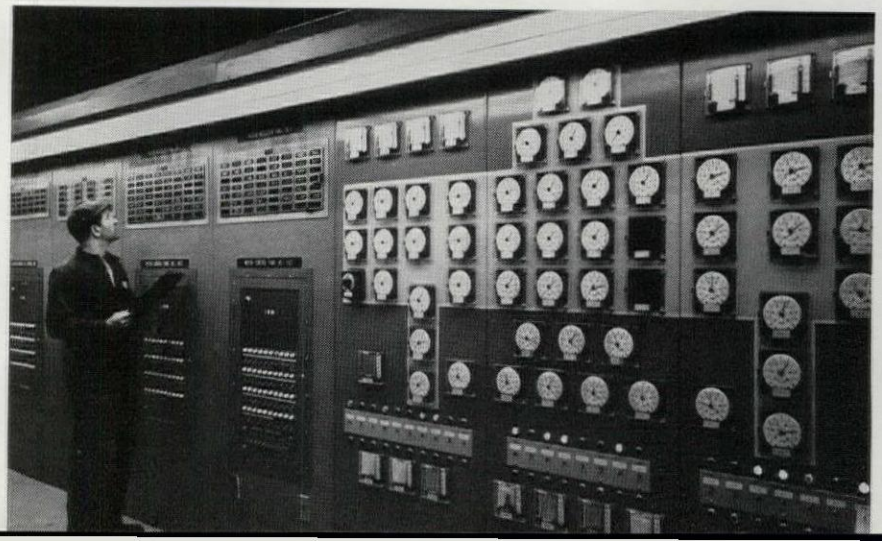
Just as an automobile, ship, or airplane is operated from a single location, so the operation and control of the large modern building tends to become centralized. The advantages are numerous. Responsibility is centered in one individual who can monitor the performance of all facilities in the building. Remote dials and gages, duplicated and assembled at one location, instantly reveal levels of temperature, fuel reserve, elevator traffic, etc. Such conditions as wasteful fuel use, lighting not switched off, accidental shut-downs, and potentially dangerous conditions are not the responsibility of a service assistant on a periodic tour or, worse still, reported by a tenant after some discomfort or inconvenience. Unlike the operation of a ship that entails the need for remote manual service and human response to signals originating at the bridge, the best building controls depend upon no one but the operators at the central station. This reduces the service staff and results, of course, in a great cost savings to the building owner. Staff is not completely eliminated. Routine service, emergency corrections, and alternate duty at the controls still demand a small, but enlightened, operating group. It is not necessary for the surveillant to sit with his hands on the controls. This was emphasized during a recent visit to the New York International Airport. There, the watch-engineer's control station—which guides the operation of area and sign lighting, motors, fans, pumps, air-handling units, thermostatic controls, and other facilities in this vast installation—was observed to operate unattended for long periods *(Figure 1)*. Instant controls and alarms would summon the engineer in case of any difficulty, and "fail safe" arrangements would prevent any snarling of technical sequences.

Central supervisory and control systems may be operated pneumatically, or by electricity and electronic devices. Many of the gages, thermometers, automatic controls, and manual reset arrangements are not new, but their centralization is quite recent. A measure of the speed that centralization is gaining in popularity is suggested by the number of installations made by two companies active in this field. The Johnson Service Company reports the completion of more than 300 control centers. Of these, 200 are equipped with graphic panels. More than 500 installations have been made by the Minneapolis-Honeywell Regulator Company. Among others now engaged in this work are Simplex Time Recorder Company (successors to T. E. Division of IBM), General Electric, Barber-Colman Company, and Powers Regulator Company.

Control of comfort conditions in the public rooms of a large metropolitan hotel, undoubtedly presents one of the most difficult problems encountered in buildings serving large groups of people. The sudden demands for cooling, ventilating, and humidity-control required for public meetings is only one of the many challenges to the adequacy and responsiveness of the climate-control installation. At the Queen Elizabeth Hotel in Montreal, completed about a year ago, an electronically operated supervisory and control center does an efficient job of meeting these challenges in this fully air-conditioned building *(Figure 2)*. One man can operate this glass-fronted walk-in center on the hotel's concourse level. Four main functions are controlled here; continual checking and logging of key temperature and other data; adjustment of controls; starting and stopping of

Figure 1—Automatic panels control operation of the International Arrival Building at New York's International Airport. Panels at right: Central circular dials indicate present temperatures of various rooms and of air leaving the local conditioners. Reset of the latter is possible at the dial. Square recorders at top register permanently these temperatures and those of domestic hot water. Panels at left: Motors are started by switches. Their operation is indicated by lights. Panels at left also control all lighting inside and outside of the building. A trouble alarm calls attention to possible difficulties. (Controls by Johnson Service Company and IBM's T. E. Division, recently acquired by Simplex Time Recorder Company.)

Photo: The Port of New York Authority



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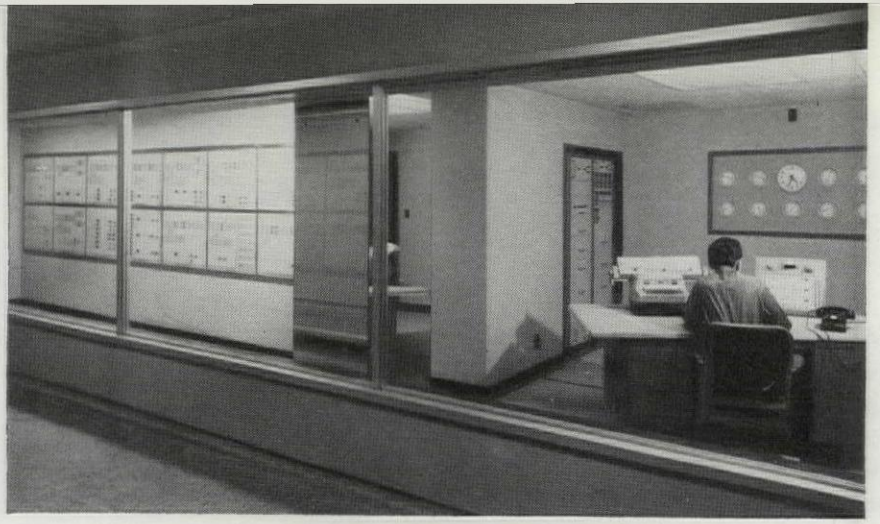


Figure 2—Linked to highly sensitive thermostats located throughout the building, this control center at the Queen Elizabeth Hotel, Montreal, enables one man—shown at control desk—to supervise and regulate the building's entire indoor climate.

Photo: Minneapolis-Honeywell Regulator Company

heating and cooling equipment; investigation and handling of complaints. Characteristic of this and most new control systems, the equipment, ducts, piping, and other circuits are shown graphically in permanent panels. Here, for instance, the panel module includes a complete schematic layout of the fan systems—showing dampers, heating and cooling coils, and fan motors. The heating module has heating coil and steam flow lines in red, cooling coil and chilled-water flow lines in blue, return water lines in green, with other suitable colors for background and lettering. Another module groups the exhaust-fan controls, push buttons, and pilot lights. On this same panel are start-stop buttons and pilot lights for 83 fans located throughout the building, and 34 remote-control point adjusters. Also included are remote temperature adjustments, remote fan start-stop push buttons stations, pilot lights indicating the operation of cooling tower fans, condensed water, and chilled-water pumps. Temperature points are identified graphically. The data-handling system records temperatures automatically, or on demand, on an electric typewriter. It summarizes a total of 97 main temperatures and eight flows, and provides separate totalizers for each flow. There is an audio and visual alarm which operates when temperatures go above or below predetermined limits. More than 8½ miles of thermocouple wire reach out to measure the temperatures in vital parts of the hotel and in this equipment. This kind of temperature-sensing network, confined in earlier days to research laboratories, now serves in permanent installations. Central control of remote equipment that can change these temperatures is also part of this center. It is a simple matter to find out what is happening and make any necessary adjustment. If one doesn't, however, bells ring, lights flash, and an automatic typewriter records the errors, switching over to red when things start to go wrong. In sharp contrast to this centralized control of conditions in public rooms, the climate in guest rooms is left strictly to the selection of the guest. His room is furnished with filtered, freshened, and tempered air which may be further warmed or cooled at the room under the guidance of a guest-operated thermostat.

The heat pump at the Miller Fluid Power Division, Flick-Reedy Corporation, Bensenville, Illinois, is a good example of a prime source of heating and cooling (warmed and chilled water) under the surveillance and control of an electronic supervisory control panel *(Figure 3)*. Sixteen decentralized air zones utilize chilled or warmed water pumped to all

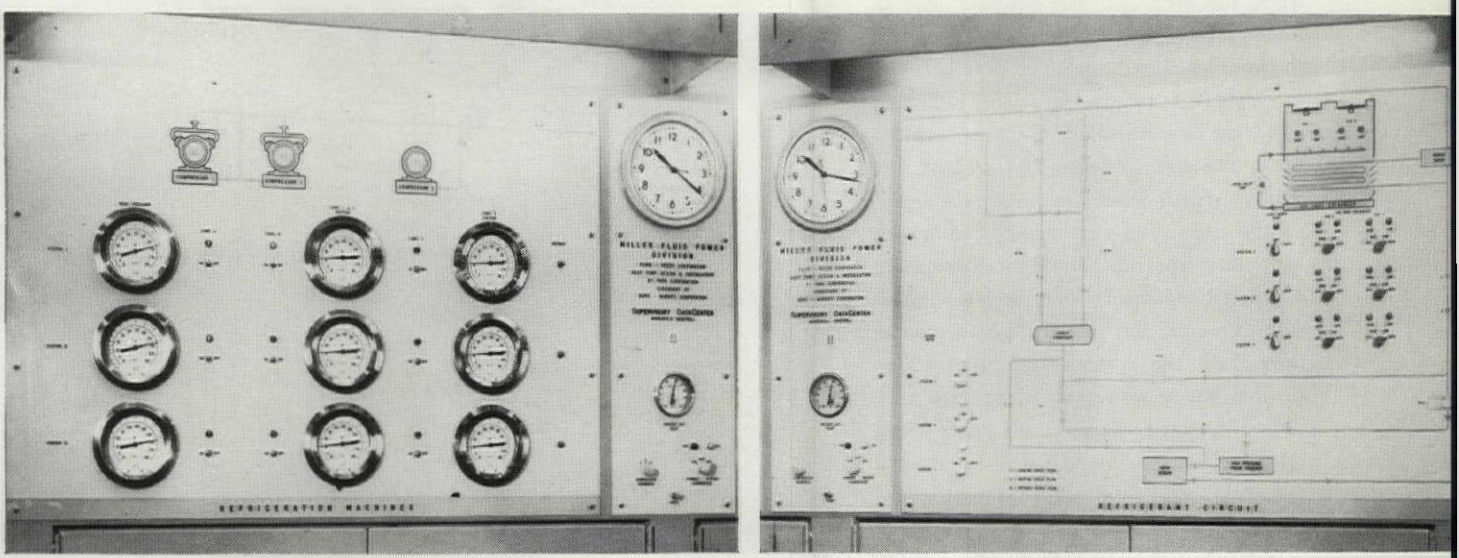


Figure 3—Control panels for Miller Fluid Power Division, Flick Reedy Corporation, Bensenville, Ill. Refrigerant circuits are identified on right panel; head and suction pressures for the three systems of refrigeration are indicated on dials at left.

Photo: Minneapolis-Honeywell Regulator Company

parts of this large manufacturing plant. Air-handling units respond to local thermostats in a manner similar to the equipment in the guest rooms at the Queen Elizabeth. It is unnecessary, therefore, to record and adjust space temperatures from the central panel. Here, the reversible heat-pump compression cycle device produces, in summer, 45 F (chilled) water. The heat extracted from it raises some outdoor air to 105 F. In winter it yields 105 F water by chilling some outdoor air to —30 F *(Figure 4)*. There are three systems of refrigeration that cut in as the demand increases. In each system there are three compressors—two in parallel and one in series. The latter one starts when winter outdoor temperature drops below 15 F. This is the multiple compression principle.[1]

Head and suction pressures for the three systems and for the several compressors are read on the dials of the left panel *(Figure 3)*. Outdoor temperature is shown on the dial below the clock. The control below shows the system to be on winter cycle. On the right control panel, the refrigerant circuits in this reversible system—for cooling, heating, and defrosting, which occurs automatically when ice forms on the outdoor coils at 30 F—are identified. Also on the right, the air heat exchanger is detailed and the operation of its fans are indicated and can be controlled. Switches are set to "automatic" position, and, indeed, the entire system operates automatically much of the time. The supervisory center collects data from an outside-air thermostat, a water-temperature thermostat, defrost control, and the refrigerant pressures throughout the system, and takes action in accordance with this information.

In Stamford, Connecticut, the Dorr-Oliver Company has just completed a structure to house an engineering department, executive offices, and managerial staff.[2] It is fully air conditioned, utilizing hot air, cold air and outdoor air as needed to produce all-year comfort conditions. When outside air temperatures are slightly above 55 F, outdoor air is used in the cold ducts rather than mechanically cooled air. Like many modern buildings with large glass areas, it often requires cooling on the sunny side and heating on the shady side simultaneously. Two fans blow air over the furnace and the cooling coils to create a hot deck and a cold deck. Fourteen master thermostats operate dampers to blend these air streams to suit local terminal conditions at specific locations. All are controlled from a central "console" *(Figure 5)*. An exception is made for thermostats which are key operated locally. Once set, there is little reason to change them. Everything else—fuel, combustion, heating, refrigeration, cooling-tower, pumping, fans—is controlled centrally. Operating temperatures, thermostat signals, and all other processes are observable at the board.

With the rapid elimination of indivi-

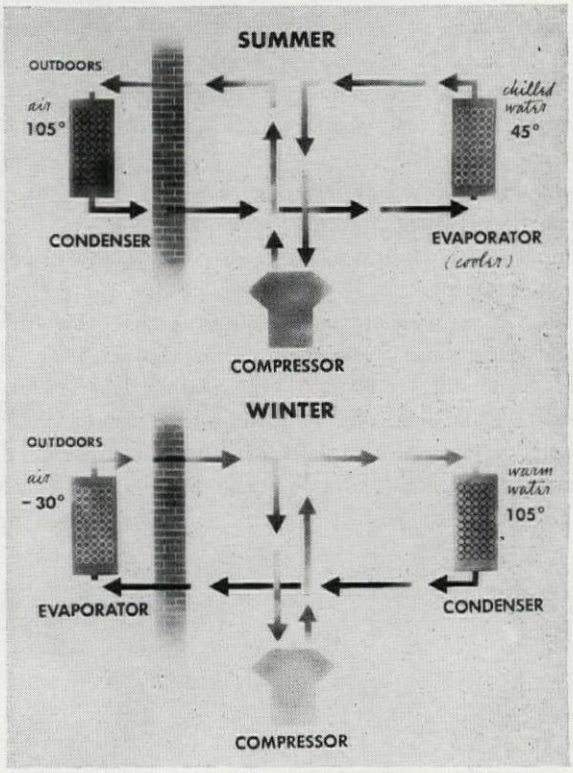


Figure 4—Heat-pump compression cycle at Flick Reedy Corporation.

[1] MECHANICAL ENGINEERING CRITIQUE, SEPTEMBER 1956 *and* JUNE 1958 P/A.
[2] JUNE 1959 P/A.

Figure 5—Pneumatically-operated center for supervision and control, Dorr-Oliver Building, Stamford, Conn. **1** *Exhaust-fan controls.* **2** *Pump controls.* **3** *Cooling-tower controls.* **4** Refrigerant circuit. **5** Compressors. **6** *Chilled-water circuit.* **7** *Fans (Nos. 1 and 2).* **8** *Furnace.* **9** *Hot air (hot "deck").* **10** *Cooling coils.* **11** *Cold air (cold "deck").* **12** *Air blending.* **13** *Fuel-oil system.* **14** *Fuel-oil gage.* **15** *Draft over the fire.* **16** *Flue temperature.* **17** *Automatic-damper controls.* **18** *Lights come on to indicate operation of major air zones.* **19** *Twenty dials (temperatures): outdoor air, recirculated air, hot air, cold air, chilled water, condensed water, etc.* **20** *Switches: winter-summer, day-night, clock operation.* **21** *Chilled-water temperature regulator.* **22** *Blower control.* **23** *Air compressor pilot lights.*

Photo: Johnson Service Corporation

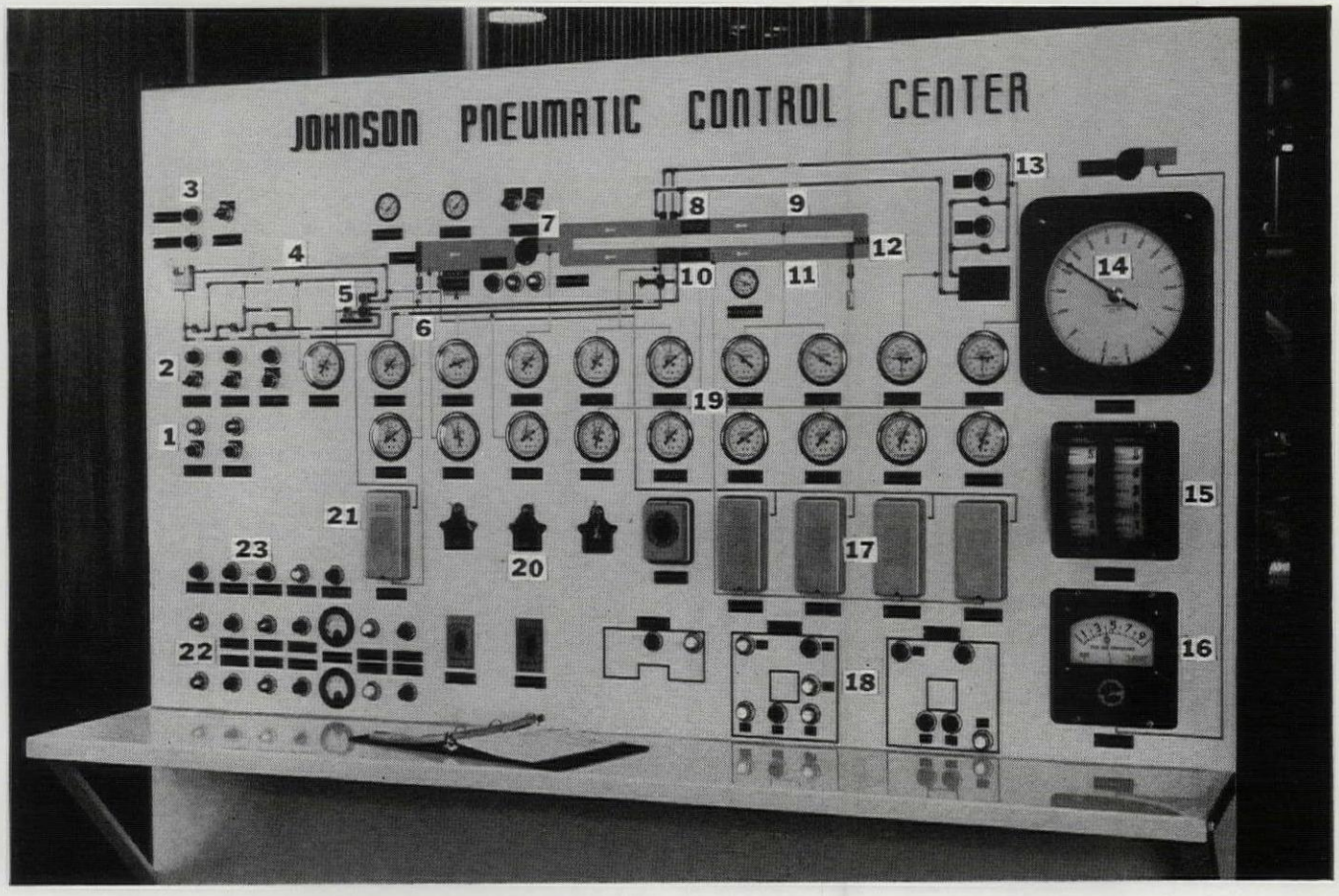
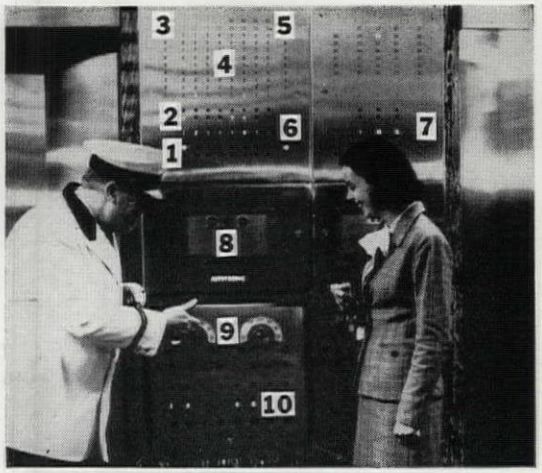


Figure 6—Automatic elevator indicator and control panel (above). **1** *Car dispatching lights.* **2** *Car travel direction.* **3** *Up-waiting passengers.* **4** *Car positions.* **5** *Down-waiting passengers.* **6** *Low-rise panel.* **7** *High-rise panel.* **8** *Intercom.* **9** *Automatic program selector.* **10** *Switches (key operated); service (group or independent); automatic-attendant; motor-generator parking.* Photo: Otis Elevator Company



dually operated elevators has come the need for visual panels that portray the automatic operation of all parts of the system. These are under the supervision of a lobby attendant who may control the automatic program-selector and make occasional adjustments in the service *(Figure 6)*. The conversion of many manually operated elevator systems to centralized automatic operation has produced economic comparisons that are highly favorable to the new method. For study, Otis Elevator Company has selected 26 such conversions from 119 replacements of attendant-operated to automatic elevatoring. They typify the savings made possible by the acceptance of automation in many phases of building operation. The savings, ranging between $4000 and $8000 per year for each car, are comprised principally of wages, uniforms, taxes, and insurance. Applying savings against the cost of installing the automatic, operatorless systems, it was found that the improvement could be paid for in an average period of 7.6 years. The shortest amortization was 3.2 years and the longest 14.7. Truly short periods in the life of a modern building.

For a large residence, an electronic control center can be very useful for the control of year-round air conditioning. Such a center for a 13-room house in Fort Worth, Texas, is shown *(Figure 7)*.

Now it becomes apparent that each of these control systems takes on a character set by the manufacturer. Placement of some of these principal control centers bears a relationship to the location of the services controlled. They are all, however, connected by nerves and sinews that would permit more remote locations, if this seemed desirable, with little additional expense. Consideration above has been given to a number of individual systems quite distinctive and reasonably novel: (1) a control center for airport lighting, ventilation, and thermostats, placed next to the major electric-service panel; (2) a hotel supervisory and regulatory panel, housed in a room visible to hotel guests; (3) a system to control a heat pump, placed adjacent to the equipment; (4) a panel to control heating, cooling, and ventilation in an office building, that adjoined the furnaces and the compressor; (5) an elevator control center, located in the lobby of the building. Yet, each of these buildings has other central-control systems—some nearby and some far away from the one described. The airport has a public address system to handle announcements, paging, and music. The Dorr-Oliver Building has a centralized-clock and time-programming installation for general signals, for starting and stopping work, and for the several lunch periods. A rather special control center in another building group is the fire-burglary-machinery failure alarm system in the Southdale Regional Shopping Center in Minneapolis *(Figure 8)*.

It would seem appropriate to suggest a unification of approach to be fostered by architects and consulting engineers. A similarity in appearance and operating characteristics of control equipment might

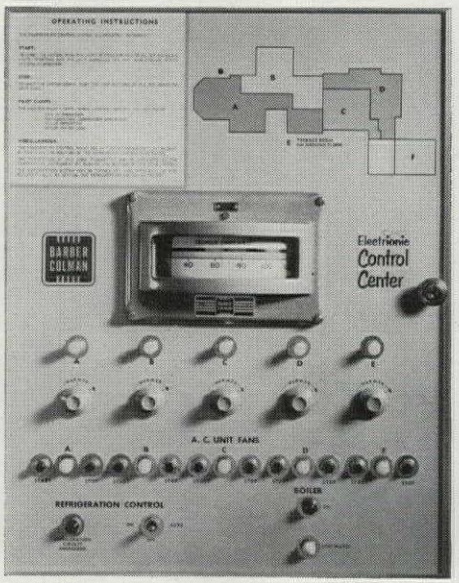


Figure 7—Electronic control center for large residence (below). *Temperature control point for any zone thermostat can be reset by changing position of appropriate control dial below.*
Photo: Barber Colman Company

easily promote a further possible interchange of duty on the part of operating personnel. A central, semi-public location is also suggested as a morale builder for attendants whose duty stations in the past have kept them far away from the main flow of human traffic. Might this not also facilitate better performance by staff and better supervision by the building supervisor, as well as by the owners and major tenants of the building? A suggested check list for central service and control facilities follows:

Air handling
Alarm systems
Burglary control
Clock control
Combustion
Damper and filter control
Electrical power control
Elevator control panel
Fire detection
Fire fighting
Fuel reserve
Intercommunication
Lighting programming
Mail and shipping rooms
Paging
Public address
Refrigeration
Security office
Space temperature control
Sprinkler control
Telephone apparatus
Telephone switchboard
Time signals
Watchman's control
Others

A move in this direction was seen at the recent 14th International Heating and Air-Conditioning Exposition at Philadelphia. There, Minneapolis-Honeywell exhibited assemblies of compact modular cabinets—4′x4′, 2′x4′ set vertically, and 2′x4′ set horizontally in an upper layer. They were set up to operate and control refrigeration, heating, air handling, fire alarms, and lighting. Recording as well as indicating equipment was exhibited. Assemblies were shown of devices that indicated and tabulated rates such as Btu per hr and cumulative totals of Btu's delivered—all valuable for processes such as charging tenants for actual heating or cooling delivered.

It is quite obvious that the central accumulation of many building controls might get bulky. A typical air-handling system similar to those shown in the foregoing illustrations and etched or painted on permanent panels would take up considerable space if 20 or 30 of them appeared on a visual panel. The 2′x4′ image-screen *(Figure 9)* will show a projected slide image of similar (or varied) systems throughout the building. Co-ordinated with the appearance of the slide, identified buttons activate dials to measure remote conditions and to correct them from a sitting position. Conditions throughout a large building may be examined and adjusted in a short time and from an efficiently small station.

Remote control of mechanical services has been used for many years in industry—distant control of pumps on major pipe lines, for example. It appears now that by careful monitoring of building services, owners of large buildings will benefit by considerable savings in personnel, fuel, and power. To the architect it may constitute a new centralized design feature, and to the operating engineer a tool by which he may more capably perform his job.

Figure 8—Southdale Shopping Center, Minneapolis, has around-the-clock protection against fire, burglary, and machinery failure made possible by extensive detection network. Photo: Scam Instrument Corporation

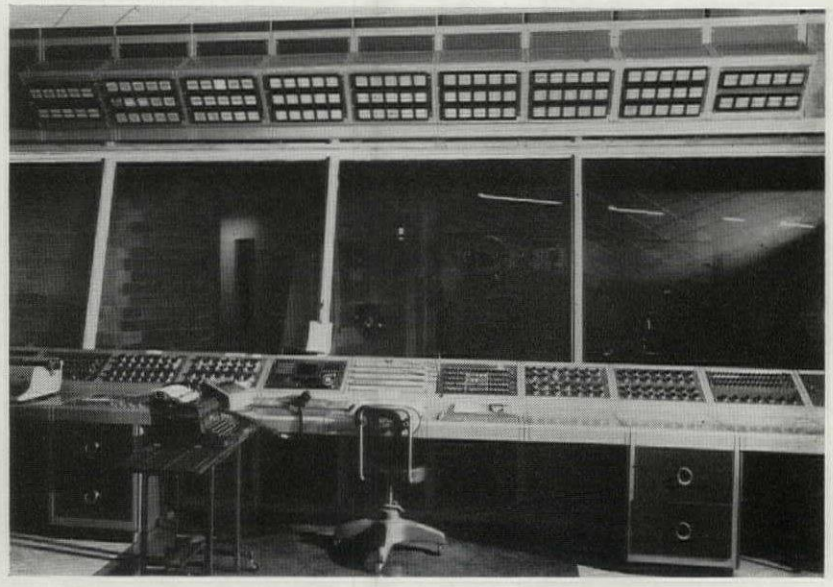


Figure 9—Two pushbutton consoles similar to one shown (below) *will control 60 floors of new Chase Manhattan Bank Building, New York. Diagrams of heating and air-conditioning systems for each floor can be projected on screen.* Photo: Minneapolis-Honeywell Regulator Company

Among the more recent plastics found in construction are the epoxies. These coal derivatives—noted for adhesion, stability, resistance to chemicals, toughness, and longevity—are especially valuable in building as adhesives, coatings and primers, surfacing materials, and for structural purposes. Here, their properties, uses, application, and future are discussed.

epoxy plastics in architecture

by Guy G. Rothenstein*

In the past decade, excellent uses have been found for several types of plastics as building materials.[1] More recently, epoxy, a younger member of the plastics family, has become known in the building field, and a comprehensive study of the extraordinary properties and possible uses of this material is in order.

In our era, as technology in all fields of human endeavor becomes more complex, specialists in a given field cannot have extended knowledge in many other fields. Therefore, it is difficult to co-ordinate needs and discoveries. Co-ordination and exchange of knowledge between architecture and chemistry are particularly poor. Architects do not fully realize what chemistry can do to solve building problems, if the needs are properly stated, and most of the giant chemical companies as yet do not fully realize that the making of a successful architectural material has its logical beginning with the architect. Fortunately, there is more understanding of the needs of the building industry among the smaller chemical companies, specializing in formluations made of basic materials. This condition, generally, has brought about the exciting new epoxy formulations described in this paper.

what are epoxies?

Epoxies were discovered and developed simultaneously in the late 1930's and early 1940's in the United States and in Switzerland. Today, a Swiss and a U. S. chemical company hold the basic patents for epoxy resins. Most of the large U. S. chemical companies are licensed to produce epoxies and the supply is plentiful.

Epoxies are polyethers resulting from a condensation process of epichlorhydrin (a relative of glycerine) and bisphenol (a relative of carbolic acid). Like most plastics, epoxies are derivatives of coal. They exist in solid or liquid form, the latter weighing approximately 10 lb per gal. By adding a certain proportion of catalyst, either of an amine or a polyamide (a group reaction of amine and fatty acid) crosslinking of molecules takes place. The result is an infusible, insoluble thermosetting hard plastic.

properties of epoxies[2]

1 *Phenomenal adhesion.* Dry materials can be laminated and the cohesive strength of the obtained bond is generally greater than the molecular cohesive properties of the materials proper. A certain formulation even permits the bonding of a "wet" material to a dry material. Generally, epoxy adhesives withstand the action of moisture, water, and many chemicals. The adhesive properties make epoxies ideally suitable for practically all bonding or laminating applications, as well as for coatings and primers—even for "wet" materials.

2 *Dimensional stability.* The epoxy formulations consist of 100 percent solids—even when in liquid form. They show no shrinking during the setting-up or curing process which is a normal occurrence in materials containing solvents.

3 *Exceptional resistance* to most chemicals, corrosion, bacteria, and fungi.

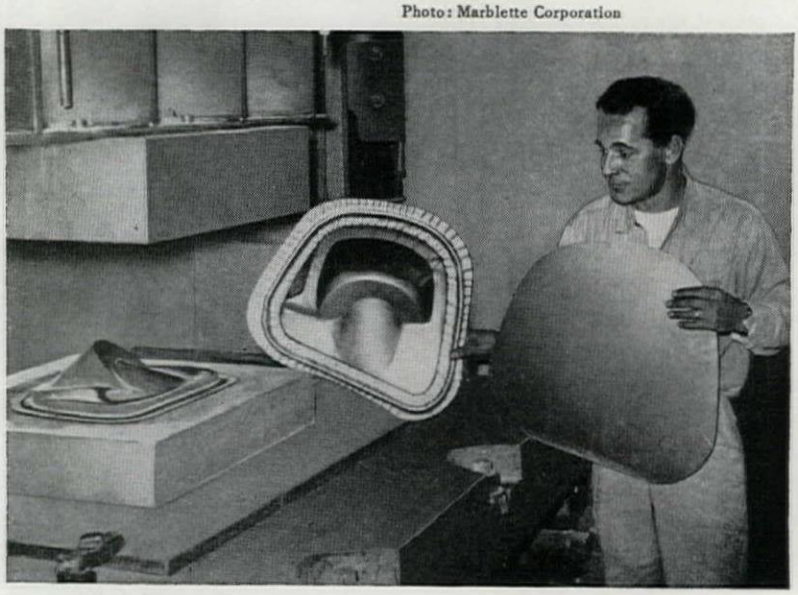
4 *Toughness.* Epoxies, fully cured, have an extremely tough structure. They become so hard and shock resistant that castings can be used as dies to deep draw or stamp large heavy-gage metal parts (*Figure* 1).

5 *Longevity.* When normally cured, epoxy-based products do not show any detrimental effect due to aging.

[2] *See Table of properties for complete test data.*

Figure 1—Workman for automobile manufacturer employs a developmental die made from long-wearing and abrasion-resistant epoxy resin for drawing complex-contour parts on blanks of .033 cold-rolled steel.

Photo: Marblette Corporation



* *Associate, Frederic P. Wiedersum Associates.* *The author acknowledges the co-operation of The Permagile Corporation of America in helping to assemble the essential data used in this article. Photos, unless otherwise noted, were also supplied by this company.*

[1] *"Sprayed-on-Vinyl-plastic Sheeting," Guy G. Rothenstein, JULY 1952 P/A. Since this pilot article appeared, this material has become well accepted in architecture.*

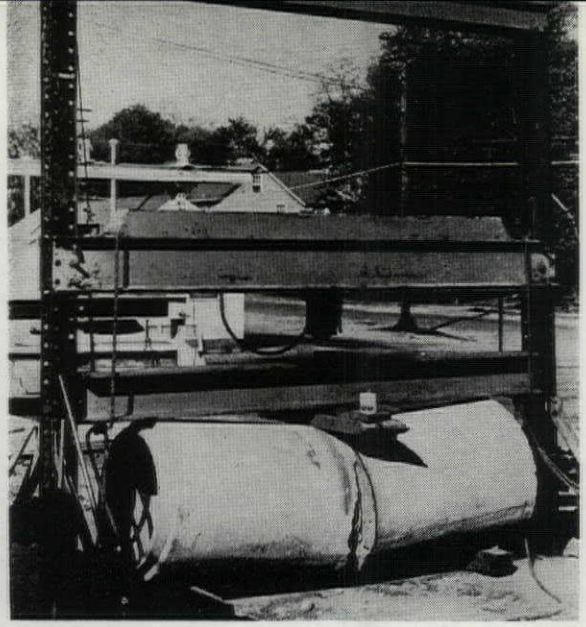
applications

1 *Adhesives.* Since materials can be permanently and integrally joined (*Figure* 2), bonded, or laminated, the original formulator of these adhesives actually refers to the process as "welding." Besides masonry welding in building maintenance, excellent uses of these properties are made in precast-concrete construction. For example, a 5000 sq ft factory roof was built by cementing concrete planks to subpurlins, eliminating all metal clips.[3] Adhesives are capable of replacing nailing for almost any fastening problem; i.e., subflooring bonded to flooring, paneling to walls or ceilings, etc. In all these instances an epoxy bonding material is superior to nails, because it has greater holding power, better appearance, is noncorrosive, and has both insulating and waterproofing properties.

Other significant applications of epoxy adhesives are for fastening marble or tile to wall surfaces. Practically any suitable material can be laminated to cinder or concrete blocks at the point of manufacture, so that the block set in place provides a finished interior or exterior wall surface (*Figure* 3). In panel curtain-wall construction, several fabricators are using epoxy adhesives in their assemblies.

In all of these applications, epoxies remain unaffected by age and resist moisture temperature changes as well as almost all chemical reactions. One of the latest accomplishments in the adhesive field is the formulation of an epoxy-nylon type "alloy," which permits the bonding of "wet" concrete to a cured concrete, forming a permanent joint, plus a water and vapor barrier at the same time. The epoxy-nylon type resin formulation eliminates all possibilities for failure, since it literally welds the entire contact area without interlocking. Tension, compression, shear, and impact tests show that the bond between new and old concrete is many times stronger and tougher than fully hardened concrete. This is obtained because the material cures with the "wet" concrete, and is thermosetting rather than thermoplastic—meaning that the curing process is irreversible and permanent (*Figure* 4).

[3] *Lamination as means of fastening was recently recommended in a talk concerning new methods in building given by Prof. James Lendrum, Researcher of University of Florida. He stressed the point that other industries are more advanced than the building industry in new construction techniques. For example, in aircraft construction lamination is commonly used instead of riveting or other fastening means.*



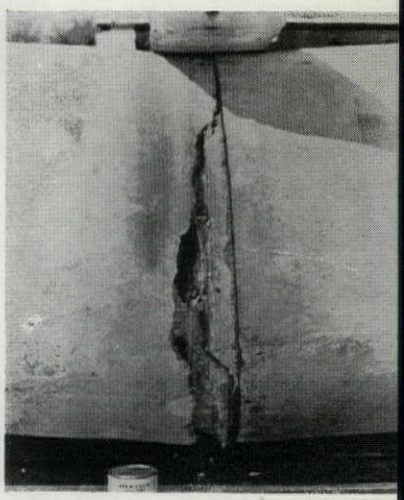


Figure 2—Two sections of 40" diam. reinforced-concrete pipe, joined with epoxy adhesive, subjected to load test (above). *Break occurred at approximately 34,000 lb. Close-up view* (right) *shows break to be outside of weld.*

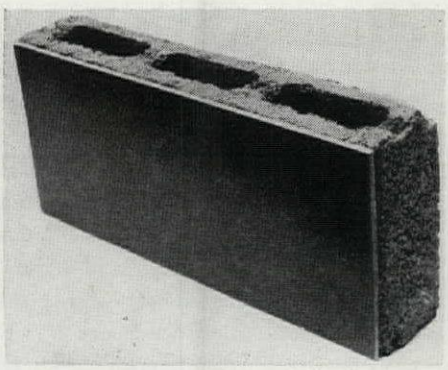
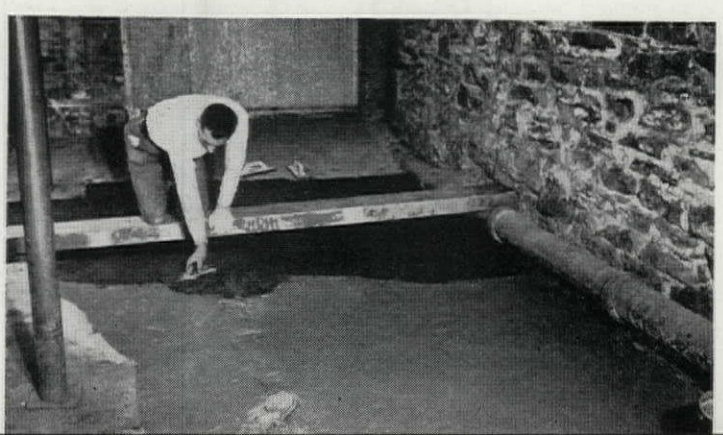


Figure 3—Cincrete block with surfacing material, laminated at point of manufacture, provides finished interior or exterior wall surface.
Photo: Cincrete Corporation

Figure 4—As soon as adhesive (alloy of epoxy- and nylon-type synthetic resins) becomes tacky, approximately 15 minutes after application, fresh concrete is applied. Workman (below) *fills in hole. Note thinness of new concrete layer over less damaged area.*



Bonding of fresh concrete to cured concrete will be an important improvement to pouring and gunniteing techniques in concrete construction, as well as in the assembly of precast units and in building and maintenance. Other equally important uses of this new adhesive are bonding gypsum plaster to concrete without lath or mechanical keying, and the application of sprayed-cement asbestos insulation to concrete or steel.

2 *Coatings and primers.* Epoxy resins form excellent coatings and primers because of their outstanding properties of adhesion, dimensional stability, and chemical resistance. Catalyzed formulations are especially suitable for heavy-duty performance. Some formulations are thixotropic permitting application of heavy films or sheetings on vertical surfaces without running or sagging. They form water-resistant films withstanding hydrostatic pressure up to 40 lb.

The molecular structure of epoxies accounts for the extraordinary chemical resistance of these coatings as well as their flexibility. Applied to steel a panel under a repeated flexing test, the steel panel will break without the epoxy film showing any sign of cracking, peeling, or loss of adhesion. Some epoxy coatings also have excellent abrasion-resistant qualities; therefore, they may be used for walked-on surfaces and areas exposed to frequent scrubbings.

Because of these many factors, epoxy coatings will find increased use in the following areas:

a Masonry coatings on brick or block walls, or over cementatious materials such as cold-glazed cement finishes.

b Coating of structural concrete—walls, roofs, soffits, etc.—as well as concrete pipes, culverts, etc.

c Sanitary finishes of buildings subjected to frequent washing (*Figure* 5).

d Corrosion protection of metals, such as tank lining in corrosive atmosphere where ordinary paints do not stand up.

The appliance industry is now using epoxy-based primers with increased frequency, as well as bake-on formulations for refrigerator, washing machine, dryer, etc., finishes. Another appropriate application of epoxy coating is as a vehicle for bronze or aluminum metallic finishes. Coatings can be applied by brush, roller, spraying, or dipping.

3 *Surfacing materials (epoxies with fillers).* Since epoxies are compatible with most inorganic materials without losing their essential properties, different mixtures can be formulated so that the combined properties of each ingredient performs a specific task. One such mixture of properties is epoxy and kiln-dried salt-free sand, 30-50 mesh, plus suitable pigments to give integral color. This mixture forms a compound of troweling consistency, and can be applied as a surfacing and finishing material in thicknesses varying from 1/16″ to ¼″. It will adhere to practically any dry, vertical, or horizontal surface and can be feather-edged. Used on walls, it forms a tough finish with tremendous adhesion and excellent abrasion impact, plus chemical and water resistance. Its appearance is that of a fine stucco or keen cement finish. The foregoing properties also make this mixture suitable as a nonslip flooring material. Since it will set up and develop all of its properties within a few hours, this surfacing is well suited for maintenance work in occupied buildings, as well as for restoration work in general.[2]

Many mixtures with decorative qualities can be obtained by use of marble chips, glass beads, crushed tile, etc. These compositions are well suited for site application work as well as for factory-applied finishes of concrete block. One of the latest developments in this direction is an epoxy-terrazzo which is presently undergoing tests.

4 *Structural uses.* The most common structural use of epoxies is in the form of panels reinforced with glass fibers. Such panels are essentially similar to polyester glass-fiber laminates, except that epoxy panels have greater dimensional stability and higher chemical resistance. They also have very high strength, because the epoxy resin adheres tenaciously to the reinforcing glass fibers even under conditions of continuous stress. Therefore, these panels are suited for assemblies where high strength and close tolerances are required, or where exposed to corrosive conditions.

Another possible structural use is for castings, in combination with different types of fillers and pigments to add decorative qualities. These castings are suitable for door knobs and other hardware items presently made of metal or other plastics.

application

Epoxy-based materials are generally two-part systems: the resin-base mixture and the catalyst. Formulators familiar with building conditions and procedures have simplified mixing so that two equal parts (by volume) are simply poured together and stirred prior to use. Once this is done, the material is ready for use and it must be applied within the given pot life—varying from one to six hours depending on the specific formulation. The limited working time makes it necessary to mix the material in batches, and use each batch before curing sets in. Depending on the consistency of the specific formulation, the application is made either with brush, roller, spray gun, or trowel, by the different trades using these tools.

Considering the many variations of epoxy-based formulations, it is recommended that the proper formulation for each specific use and application be investigated. The actual amount of epoxy resins in any particular formulation is basically important. Equally essential is the correct combination of other alloying elements plus the proper choice and adequate utilization of other chemical ingredients which form an appropriate material for its intended use. In this respect the reputation and standing of the manufacturer of these products is of importance.

cost

Since epoxies appear in many different forms and formulations, it is very difficult to give definite cost figures. On the basis of cost per lb of resin, the price is about two and one-half times that of vinyl. However, the cost of an actual applied formulation is very often in line with the cost of other materials. If all performance factors, including maintenance, are considered, there are many possibilities for savings. For example, use of an epoxy-nylon type resin adhesive to apply plaster directly to concrete, may cost five cents per sq ft against the cost of approximately 15 cents for metal lath, the conventional method of securing plaster to concrete.

future

This paper lists only some of the current architectural uses of epoxies. It is anticipated, however, that knowledge of the properties will widen the range of uses considerably, so that the building industry as a whole may make better use of technology based on today's chemistry.

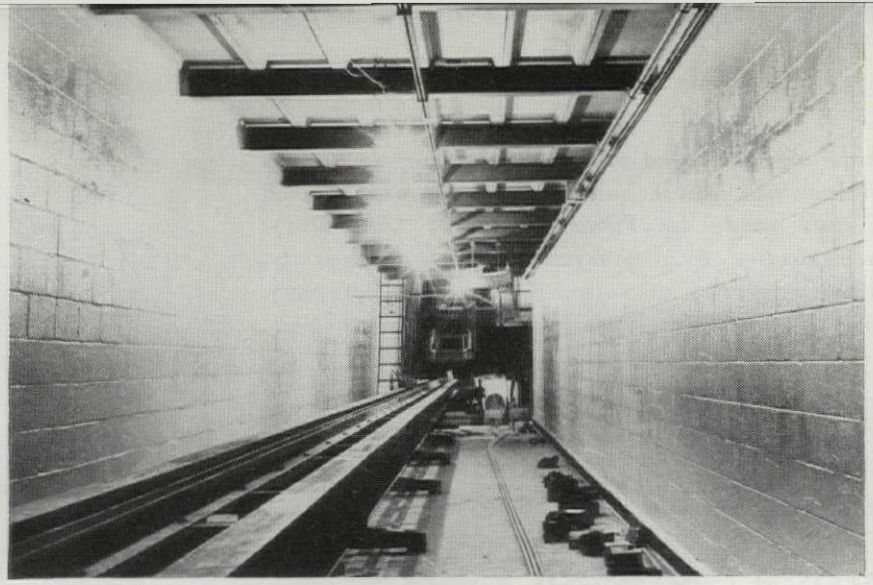


Figure 5—Epoxy coatings provide sanitary finishes for walls subjected to frequent washing. Illustrated (left) *is hog-kill section of meat-packing plant.*

TABLE OF PROPERTIES

	Unsupported epoxy films	Epoxy surfacing compound (sand mixture)
Adhesion to steel		990 psi
Tensile strength		
ASTM-ASTA-D-638-49-T	8000-9000 psi	
ASTM-D651-48		1710 psi
Elongation	20%	
Flexibility at 77 F, ASTM-D-79D-49-T		
Flexural Strength	14,000-15,000 psi	22,400 psi, ¼" thick
Modulus of elasticity in tension, ASTM-D-638-40-D	0.45x10^6 psi	3.57x10^6 psi
Deflection at break		0.381 in.
Abrasion, Taber test (1 mil thick, wear factor)	17 using 10 wheel at 500 jr	0.0050 in. per 1500 c
Impact resistance (1 mil thick)	160 in. lb	at 32 F, 12.6 lb at 75 F, 12.2 lb
Fire resistance, ASTM-D-635-44	0.34 in./min	
Rockwell hardness		M-82
Shrinkage		0.0008 in./in.
Compressive strength		
3 days		3520 psi
7 days		6850 psi
128 days		8330 psi
Temperature range	—20 to plus 300 F	
Accelerated weathering	400 hours—some chalking—loss of gloss	Unaffected 2000 hr
Washability	Excellent—chalk may be easily removed	
Light fastness		
Clear or light pigments	Yellows under ultraviolet light	
Dark colors	No noticeable affect	
Salt-spray resistance		Unaffected 500 hr
Bacteriostatic and fungistatic resistance U.S. Army Test Spec. No. 60-977-2-Jan-L-76 Resistant to growth after 4 months exp.	Aspergillus niger Aspergillus flavor Penincillium citrinum Paeililomyles varioti Stachybotrys atra Chaltomium gluybsom Penincillium BRBVi-compactum	
Chemical resistance acids		
Nitric	Unaffected 10%	Unaffected 50% 2 months
Sulfuric	Unaffected 20%	Unaffected 50% 2 months
Hydrochloric	Unaffected 30%	Unaffected 50% 2 months
Citric		Unaffected 50% 2 months
Phosphoric		Unaffected 85%
Lactic		
Chromic	Unaffected 50%	Unaffected 10% but discolored
Battery		
Vinegar	Unaffected 50%	
Acetic	Unaffected 50%	
Glacial		50% badly etched Destroyed in 24 hr
Alkalies		
Sodium hydroxide		Unaffected 50% 2 months
Hydrocarbons		
Toluene		Unaffected 2 months
Xylene		Unaffected 2 months
Mineral spirits		Unaffected 2 months
Gasoline		Unaffected 2 months
Fuel oil		Unaffected 2 months
Miscellaneous		
Orange-peel oil		Unaffected 2 months
Hydraulic fluid		Unaffected 2 months

New specifications have been released for insulating roof-deck slabs by Insulation Board Institute. These have been based on research that includes load tests made by Forest Products Laboratory, climatic performance studies by Pennsylvania State University, and diaphragm tests by Converse Foundation Engineering Company. An interpretation of the basic specifications is presented here.

insulating roof-deck slabs

by Robert A. LaCosse*

Cost savings can be achieved by the use of insulating roof-deck slabs since, in a single product, a structural roof deck, efficient insulation, and interior finish are provided in one application. Now, newly developed specifications allow additional savings as (1) asphalt strip shingles can be applied over insulating roof-deck slabs and (2) steeper roofs are permitted allowing the slabs to be specified for a wider variety of roof designs.

Insulating roof-deck slab is a structural insulating-board product designed for use in open-beam ceiling roof construction in houses, motels as well as other small commercial structures, and institutional buildings such as schools and churches. It can be applied to flat, pitched, or mono-sloped roofs.

An insulating slab is composed of multiple layers of structural insulating board laminated together with a water-resistant adhesive. Standard size of the slab is 2′x8′ in surface area, and it is available in these nominal thicknesses: 1½″ (C = 0.24); 2″ (C = 0.18); and 3″ (C = 0.12). The long edges of the slab are fabricated to form interlocking joints when applied; the underside is beveled to form an exposed V-joint; and the short edges are either interlocking or square.

General specifications for insulating-board slab caution against its use in any area of the structure where it would be exposed for prolonged periods (during the heating season) to interior relative humidities exceeding 50 percent. Proper condensation control measures also are recommended in all climatic areas where indoor heating is provided during periods of protracted low outdoor temperatures.

For use in all such areas—and specifically where the normal January temperature is colder than 40 F—the manufacturers recommend 2″ and/or 3″ thick slabs with condensation control features built into the product at the factory.

Like all other boardlike building materials, insulating roof-deck slab must be kept dry and protected from damage during storage and application.

Slabs can be cut with power saws or a fine-toothed handsaw. Care should be taken not to damage the finished surface. Builders have found it desirable to insist that workmen supplying the slab use talcum powder on their hands, or wear white gloves. This minor precautionary measure, it has been found, protects the exposed surface of the slab, and can result in considerable savings in time and money if the exposed surface doesn't have to be touched up after application.

Before the slab is applied, the entire job should be planned to keep cutting to a minimum, thus preventing any discontinuity of joints in the ceiling surface and not detracting from the final appearance of the ceiling.

The specifications also stress that roof framing members should not be less than 3″ nominal width. Maximum spacing of the framing members is 16 times the slab thickness, or 24″, 32″, or 48″ for 1½″, 2″, or 3″ nominal thicknesses respectively. Nailing supports, nominal 2″ widths, should be provided at all edges at the perimeter of the roof and at cut edges around openings.

Insulating roof-deck slab is applied with the long dimensions at right angles to the framing members, starting at the eaves. All end joints should fall over framing members. Allow 1/16″ to ⅛″ space between end joints. Interlocking edges should be brought together tightly with the use of a driving block. End joints of alternate courses should be staggered. Slab units should not be slid over framing members, since the practice may damage interior surface.

Nailing specifications call for large-headed galvanized or bright nails of sufficient length to penetrate the framing at least 1½″. This requires that 3″ (10d) nails be used for the 1½″ thick slab; 3½″ (16d) nails for the 2″ slab; and 4½″ (30d) nails for the 3″ slab. The nails are spaced approximately 4½″ on center. The slab is nailed to intermediate beams first, and nails are kept from ¾″ to 1″ from edge of slab. All edges are nailed at ridges, eaves, and around openings, the nails being spaced approximately 8″ apart.

Roof-deck slabs should be covered as soon as possible with roofing or felt. Planks must be laid strategically as runways for wheelbarrows or other equipment, and care should be taken not to drop heavy objects on the deck. If rain falls before roof cover is applied, allow the roof deck surface to dry thoroughly before proceeding with the work.

Built-up, composition-roll roofing or other combinations of built-up roofing should be applied as recommended by roofing manufacturers. Flat or moderately pitched roofs —that is, slopes up to 3″ per foot—may be covered with coal-tar pitch or asphalt built-up roofing, applied according to

* *Technical Director, Insulation Board Institute.*

manufacturer's specifications. Where pitch is used, the joints should be calked or covered with dry strips of felt to prevent drippage. On steeper slopes, 19″ selvage mineral-surfaced roll roofing can be used.

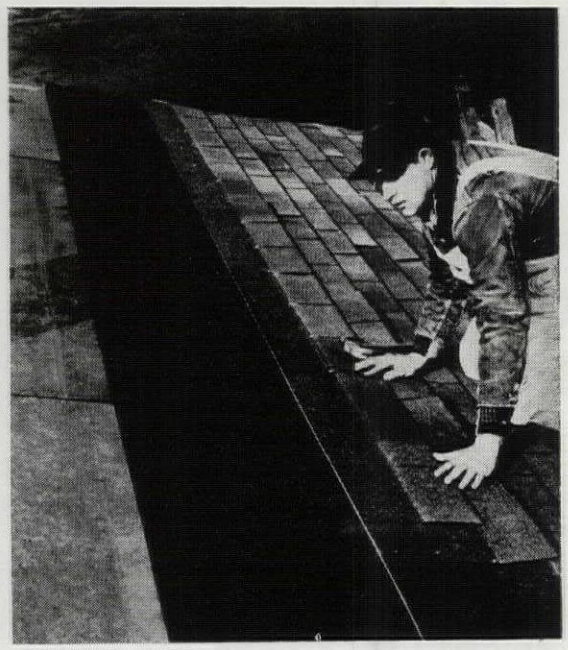
Various types of rigid shingles may be laid where the slope is 4″ or more. They are applied to wood stripping nailed into the underlying framing, as recommended by the manufacturer. A layer of 15 lb felt or waterproofing membrane is applied prior to wood stripping.

Asphalt-strip shingles can be applied to 2″ or 3″ thick insulating roof-deck slab (as the manufacturer recommends) using galvanized or aluminum 1½″ annular ring nails (minimum 12 gage) with minimum ⅜″ heads, or other fasteners having comparable withdrawal resistance. Where the roof slope is from 2″ to 4″, special recommendations (if any) of the roofing manufacturer should be followed.

Proper flashing must be used at all openings, edges, parapets, and vertical surfaces; suitable wood-nailing members must be provided for attaching metal gravel stops and flashings.

And, finally, the underside of the insulating roof-deck slab, if exposed at overhangs or soffits, should be painted with an oil paint, and exposed edges should be additionally protected with roofing felts and fascia boards. Calking should be used where necessary to insure a good seal. If insulating roof-deck slab is used over spaces where excessive moisture conditions prevail, such as bathrooms, kitchens, and laundries, the ceiling surface of the slab should be finished with at least two coats of oil-base paint, enamel, or other coating with equal vapor-barrier efficiency.

Insulating roof-deck slab is nailed directly to beams (right). *Built-up roof or asphalt-strip shingles can be applied over roof-deck slab. If latter is used, 2″ or 3″ thick roof-deck slab is recommended. After felt and tar are applied to slab, shingle application begins with installation of starter strip. Then, first course of asphalt-strip shingles is nailed down* (below). *Open-beam ceiling* (top) *has exposed under sides of insulating roof-deck slabs.*



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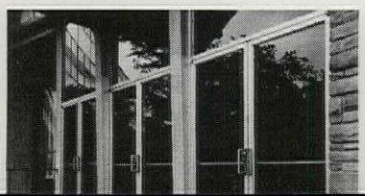
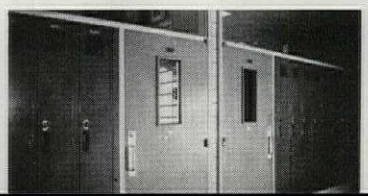
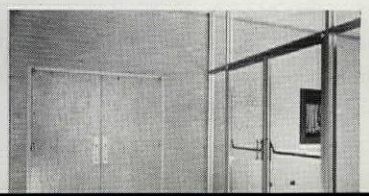
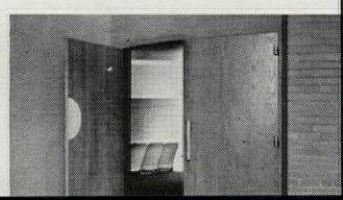
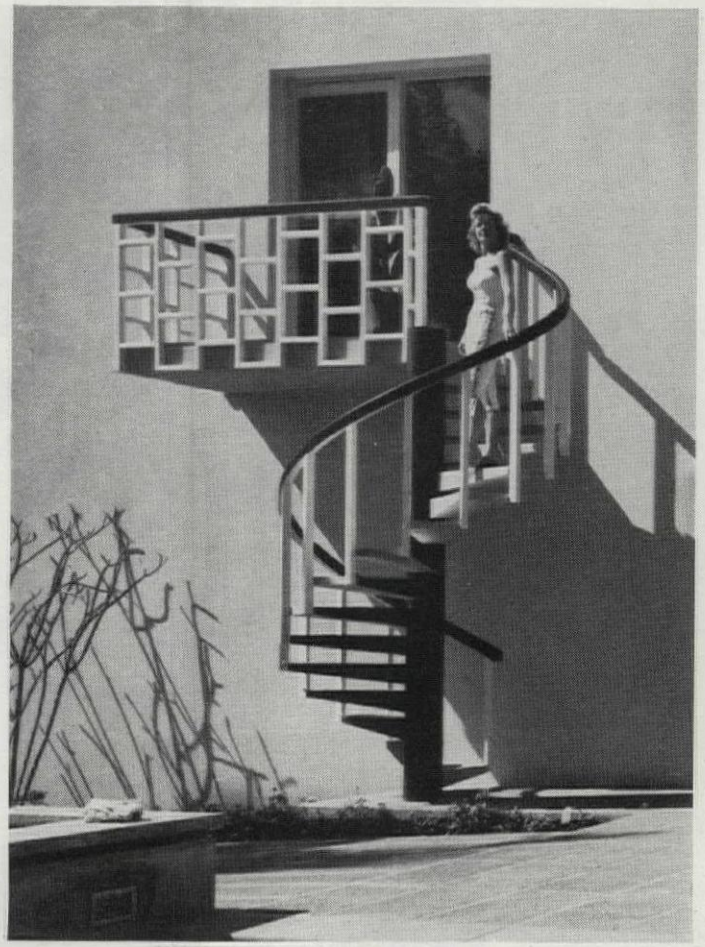




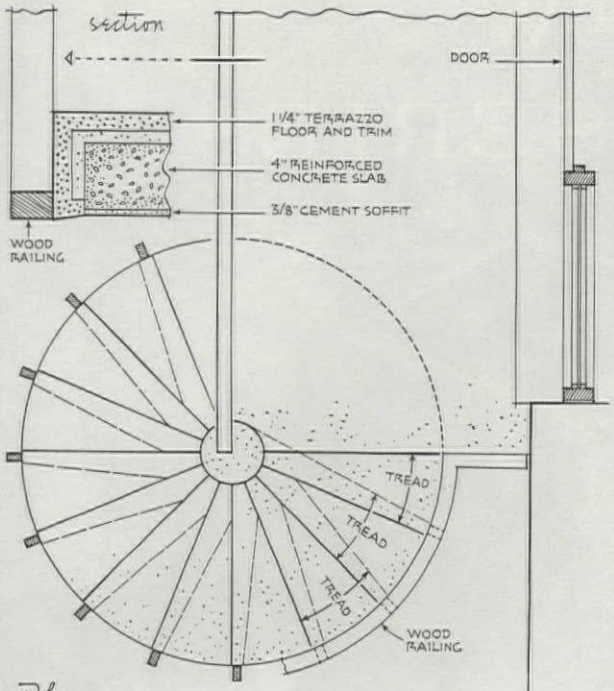




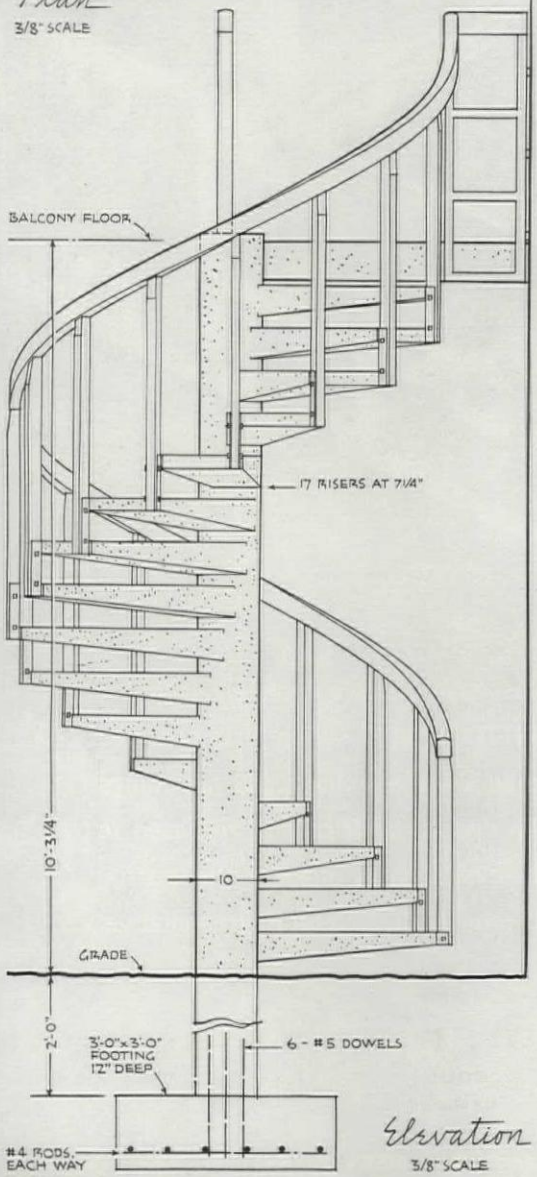
spiral stair



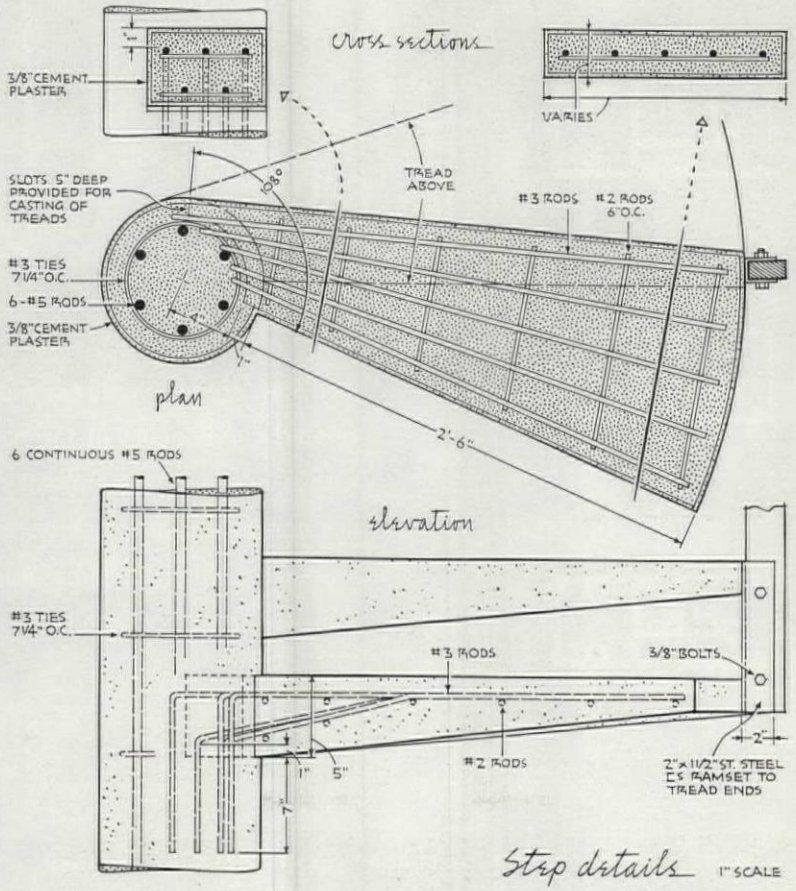
ALEXANDRE GEORGES



Plan
3/8" SCALE



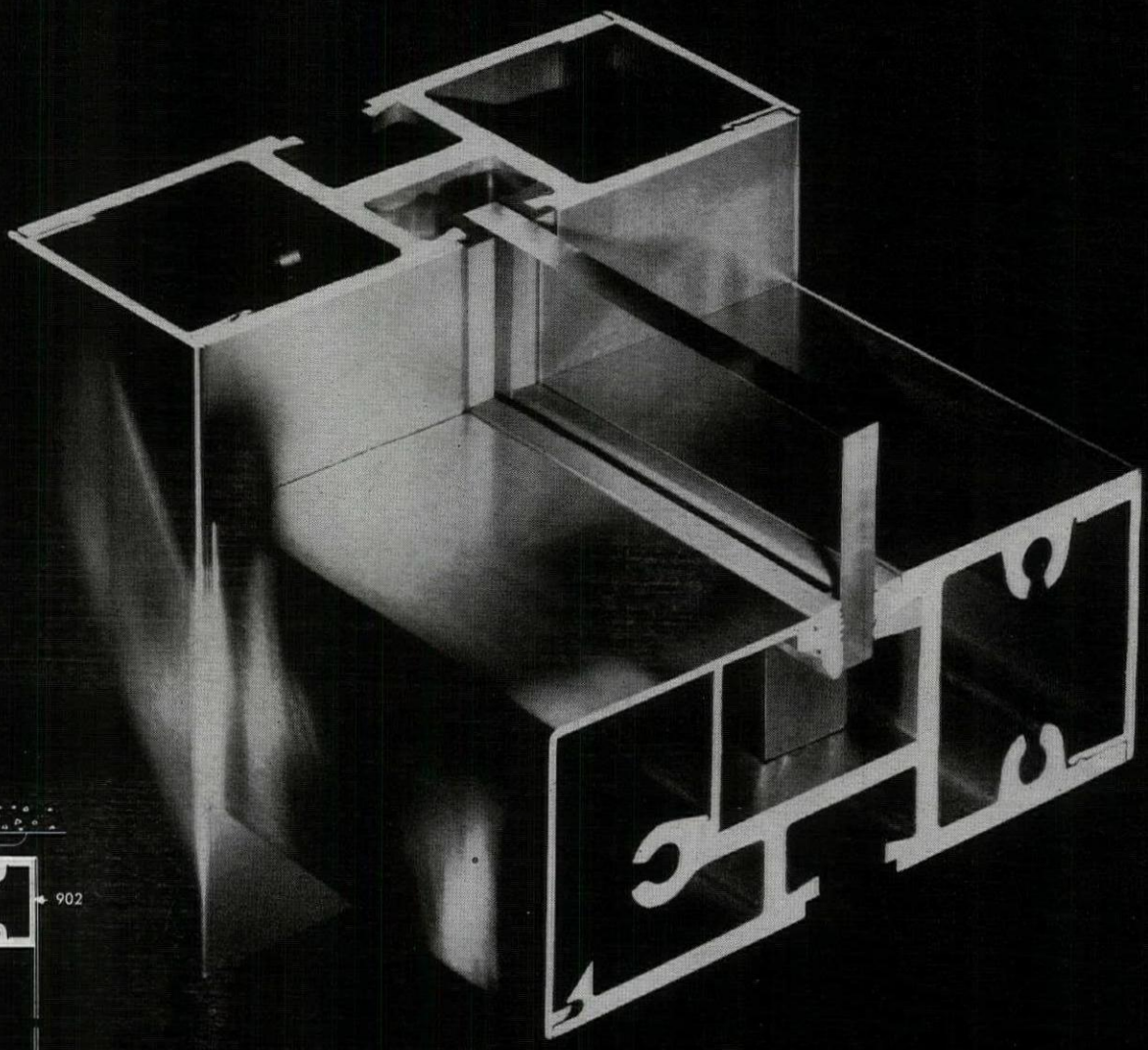
Elevation
3/8" SCALE

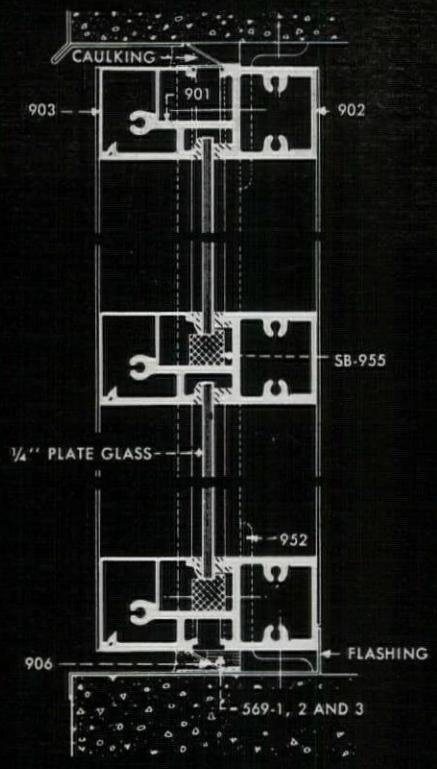


Step details 1" SCALE

RESORT HOTEL, Puerto Rico
Goldstone & Dearborn, Architects

THE NEW PITTCO® "900" SERIES





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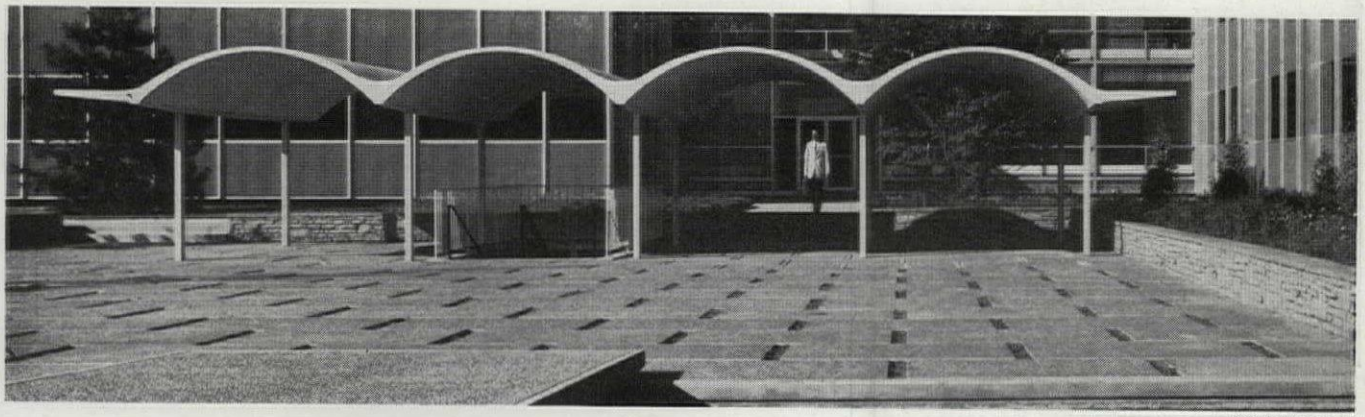
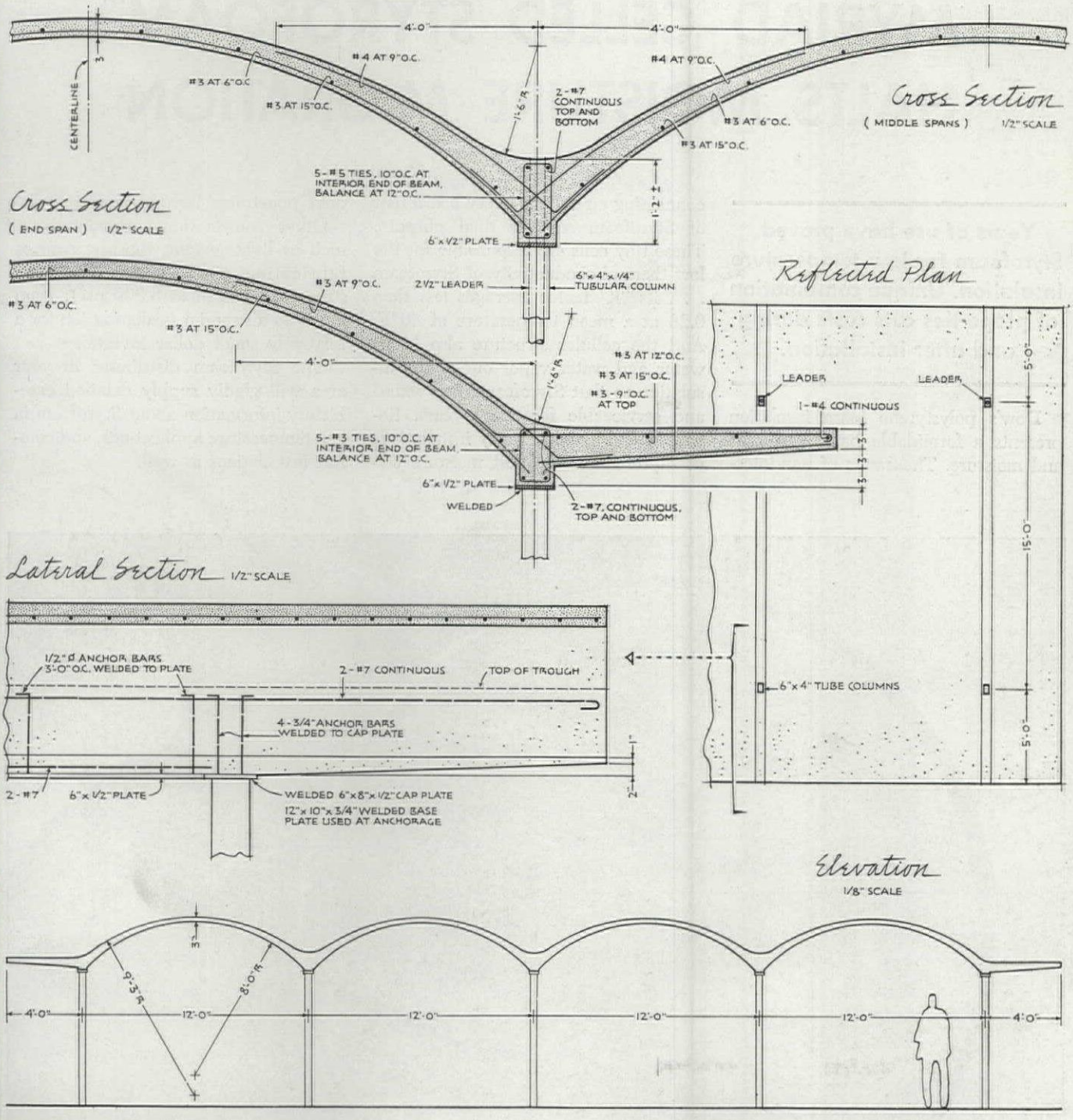
canopy



HEDRICH-BLESSING



OFFICE HEADQUARTERS, St. Louis, Missouri
Vincent G. Kling, Architect

DOW | **NEW MATERIALS — *a boon to building***

Each chemically engineered material in the extensive line of Dow Building Products offers a special set of benefits. One bends to conform to any shape, another snaps off to the right size. All of them save money on installation costs because they're easier to fabricate, fit and apply. And they save money for the building owner because they're designed to deliver a long service life with a minimum of maintenance. One, for example, has met with enthusiastic acceptance in the low-temperature insulation field . . .

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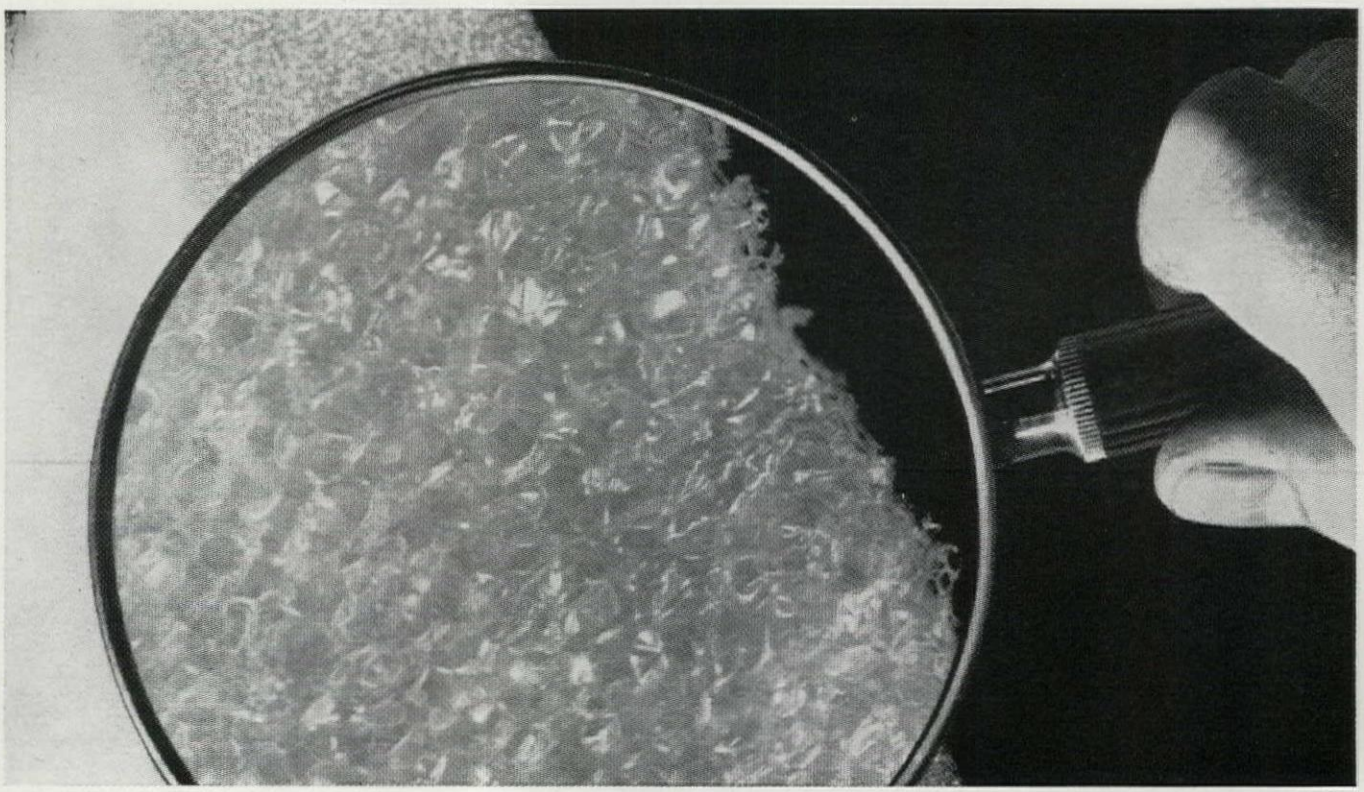

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← protects new bank

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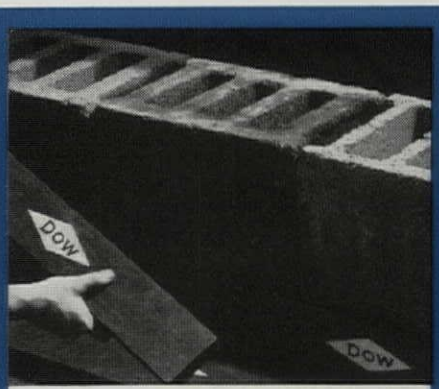
*TRADEMARK

ARCHITECT: ALBERT KAHN, ASSOCIATED ARCHITECTS & ENGINEERS, INC., DETROIT



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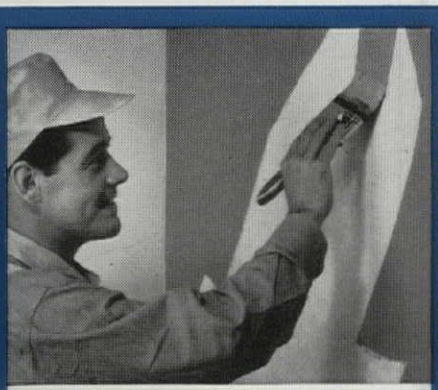

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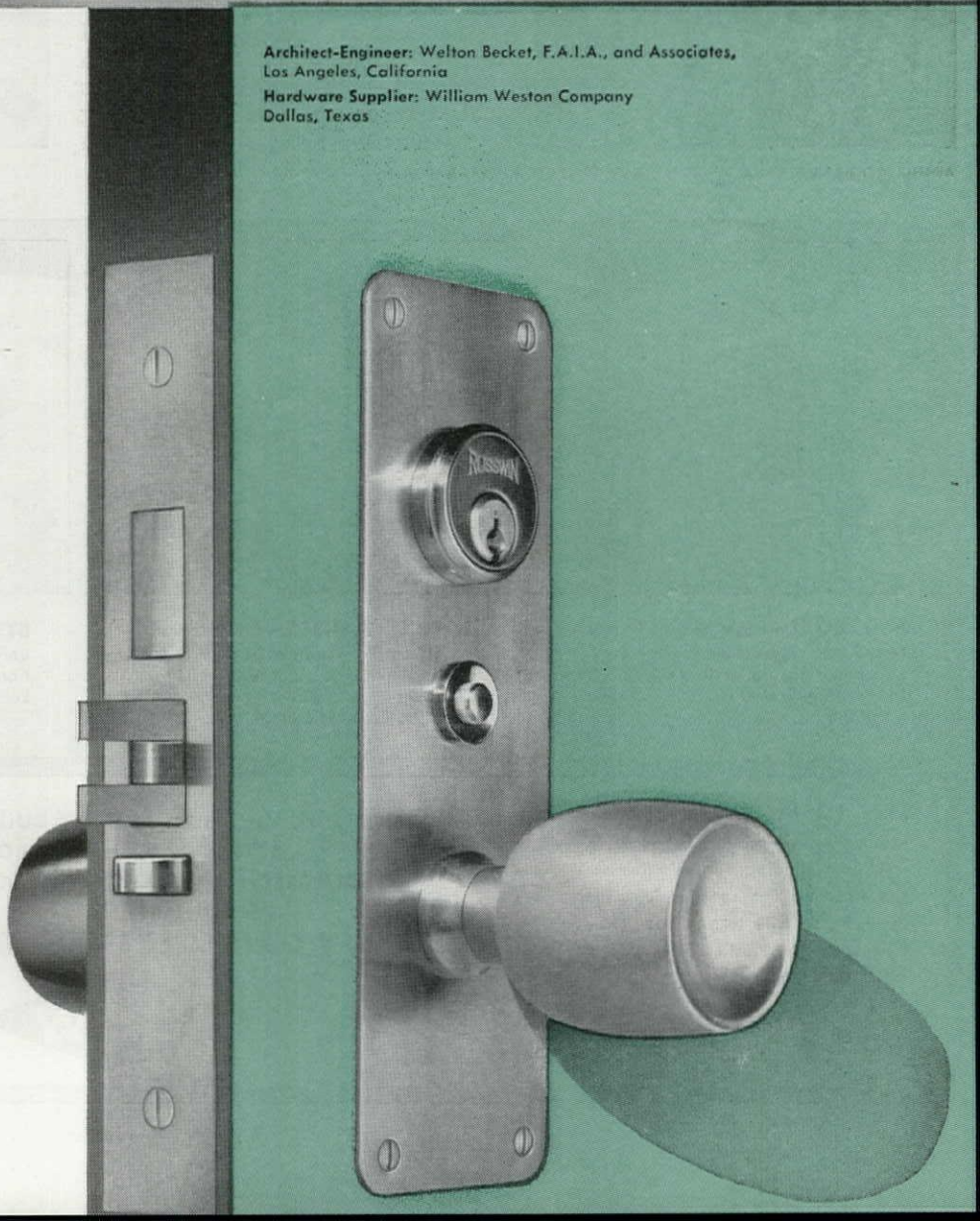

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Barbara J. Melnick

exhibitions

The installations we present were evolved as solutions to quite different exhibition problems: the requirements posed by the kind and amount of material to be shown, by budget limitations, by traveling.

In contrast to the interior that is a fixed environment, a setting for living or working—the exhibition, a temporary construction, is designed to encourage changing groups of spectators to move into and through it. Like the showroom, retail store, and museum, its primary function is to *display*, as clearly and favorably as possible. Beyond this, however, the truly successful exhibition installation must arouse the spectator's interest, captivate his attention, encourage him to observe and examine. The installation structure can create corridors, intimate spots, or expansive areas which, while persuading the viewer to progress, to pause, to contemplate, will become, in total, an exciting and various spatial experience.

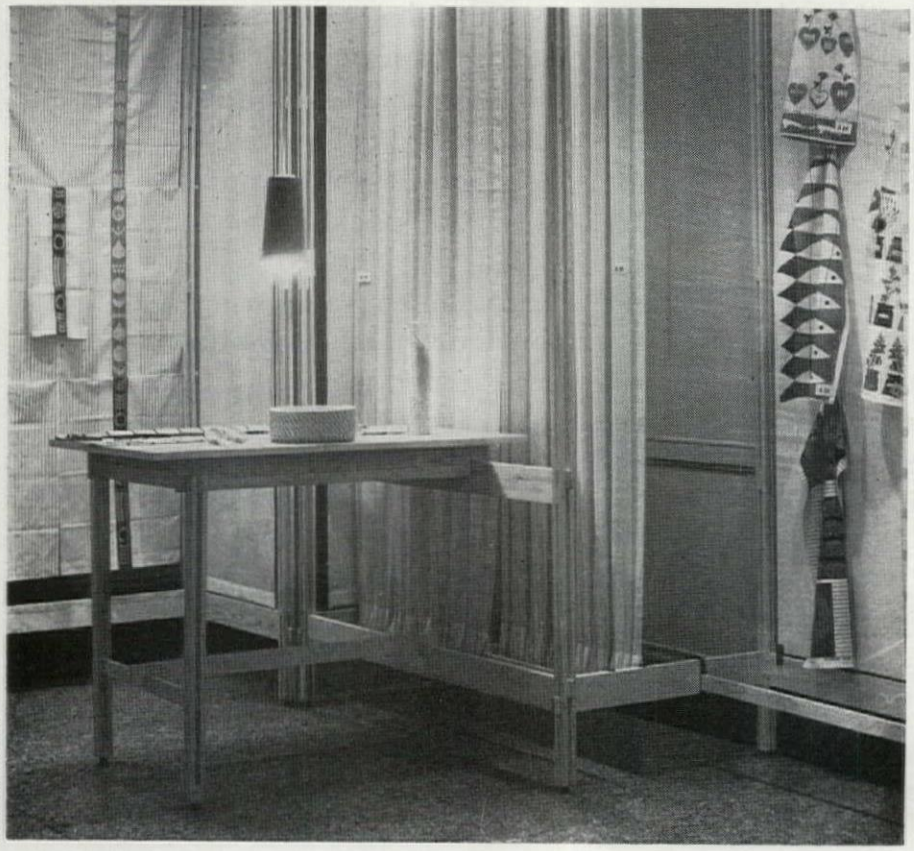
Architect Susanne Wasson-Tucker for the exhibition, Swedish Textiles Today, which has been touring the United States under auspices of Smithsonian Institution, designed a superbly flexible and lucid installation consisting of three display elements to show three kinds of fabrics as they would function in an interior: vertical screens for hanging curtains and draperies, low podiums for carpets and upholstery fabrics (on pillows), and tables for table linen. The system is highly adaptable: the basic screen unit with its lighting element may flexibly show one or several fabrics, illuminated to highlight texture or backlighted for an effect of transparency. The units, uprights linked by connecting rods, may be variously assembled and arranged to suit different exhibition rooms. Made of lightweight Swedish fir, the system is easily assembled—two men can set up a double-screen unit in less than ten minutes—and as easily dismounted. It can be packed and shipped flat.

Designer Jaap Penraat has devised simple and efficient temporary installations with great economy. Display stands are constructed of steel pipes used in scaffolding, inexpensively rented from builders. Painted white and fastened by clamps, steel structure supports shelves and display cases of painted composition board. The same steel pipe is inventively combined with plate-steel cylinders and plastic domes to create unusual display structures in the designer's Banking and Money Pavilion.

George Nelson & Company designed the installation and selected displays for the American National Exhibition in Moscow, under construction as we go to press, and for the small, elegant Chairs From Machines exhibition, now touring Herman Miller Furniture Company showrooms in the United States. Detailed drawings of the structures employed—the Moscow exhibition's modular steel cage and the silk pavilion—are shown on the last pages of this section.

exhibitions

exhibition | Swedish Textiles Today
location | traveling: United States
architect | Susanne Wasson-Tucker



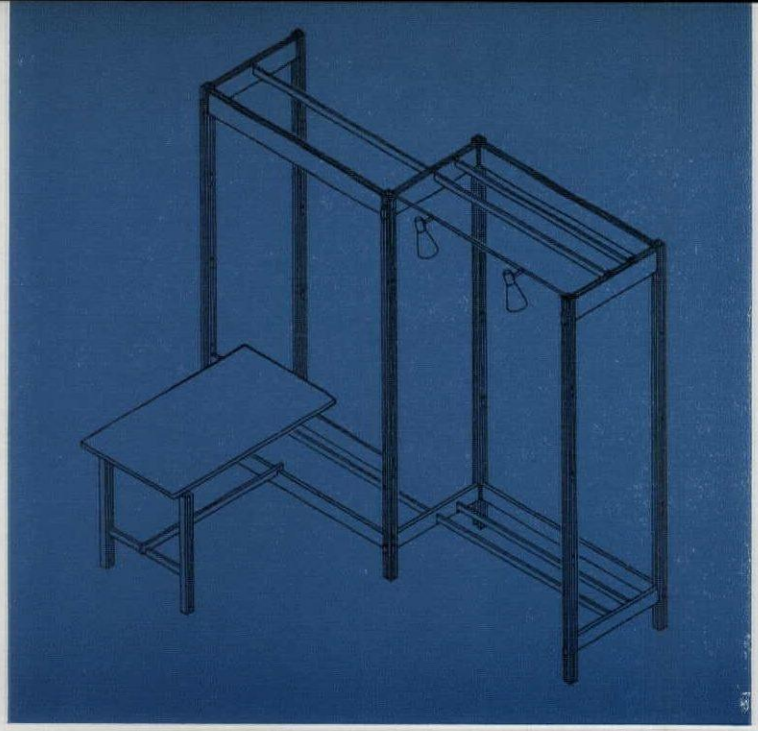
Monica Bohman

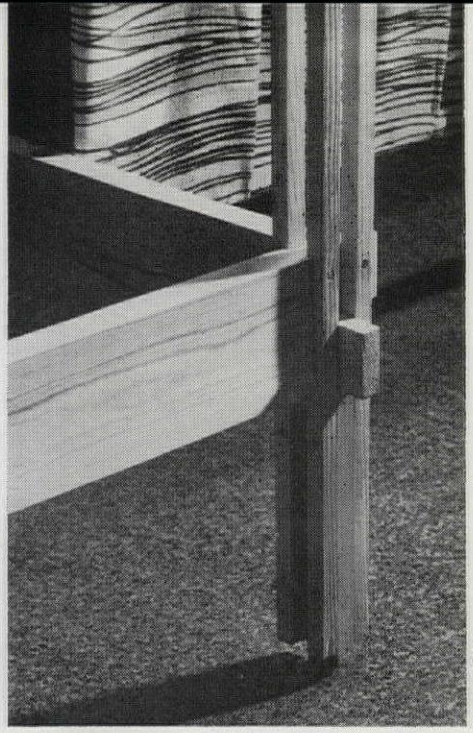
Design Theory: Consisting simply of three basic elements to display textiles—screens for hanging fabrics, podiums for carpets (acrosspage), tables for table linen (above left)—this installation is easily demountable, packed and shipped flat. Materials are lightweight Swedish fir protected with a slight lacquer finish; beech dowels; and black iron U-shaped bandirons for hooking the textile rods into the groove on the side frames (see isometric drawing). Screen displays are lighted by a unit, two spotlights on a metal rod, which also hooks onto side frames.

Screens are assembled in either single U shapes or double S shapes by using two or three 5-ft-long connecting rails at top and bottom of the 9'-0"x2'-6" side frame. Corner detail of assembled side frame shows bottom connecting rails fixed to uprights by beech dowels. Textile and lighting rods hook to top and bottom of side frame. Textiles stretched between top and bottom rods (or hanging free from top rod) may be flexibly positioned, shown singly and front- or back-lighted; or two, three, or four textiles may be shown with the lighting rod anywhere between.

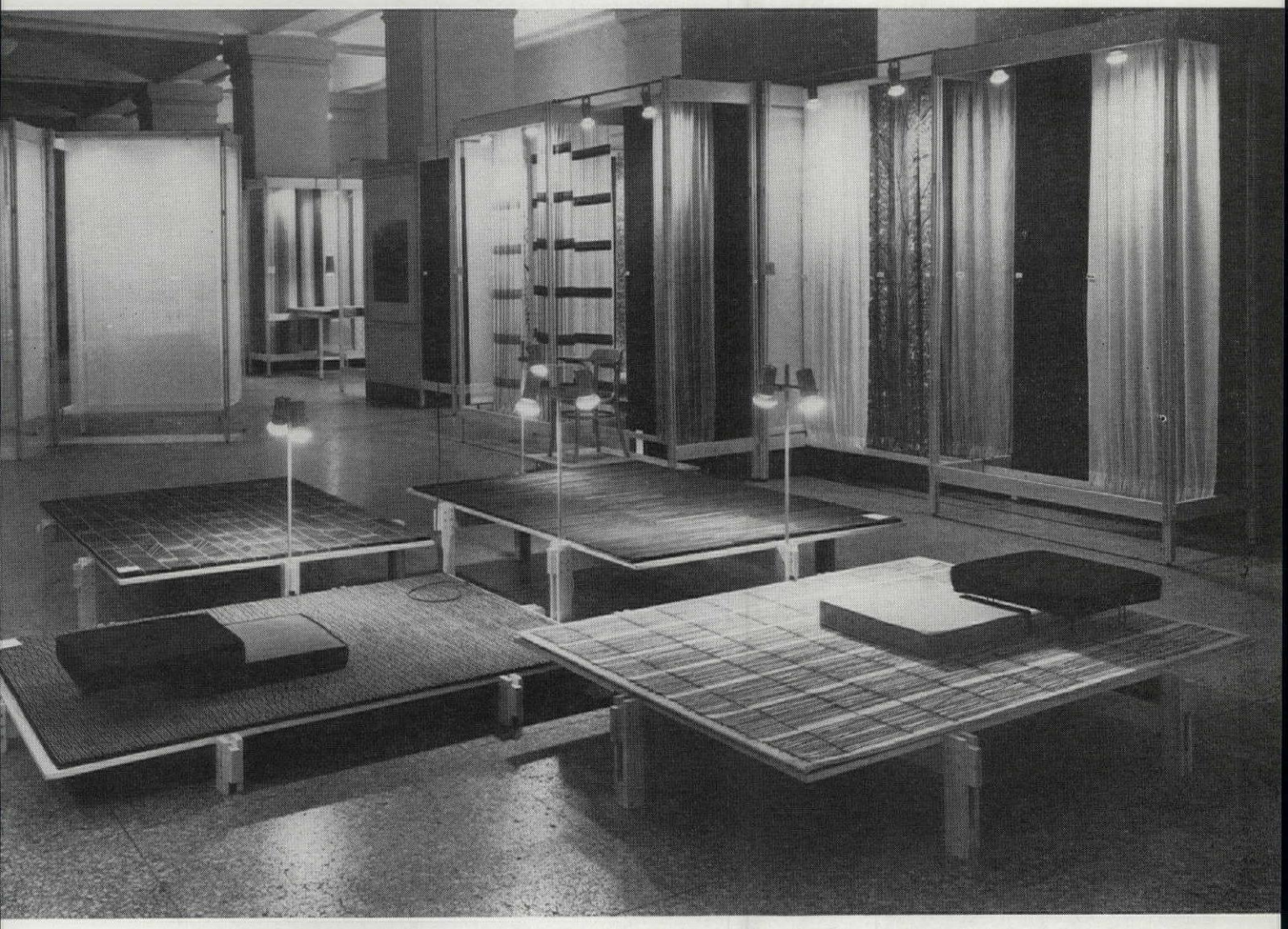
Table consists of a loose top and front legs hitched to the bottom connector and a special connector which rests loose on an intermediate block in the upright.

Podium for display of carpet and upholstery fabrics consists of a loose top resting on an intersecting base which is 6", 12", or 18" high. Lighting fixtures are set into the podium bases.





Lennart Olson

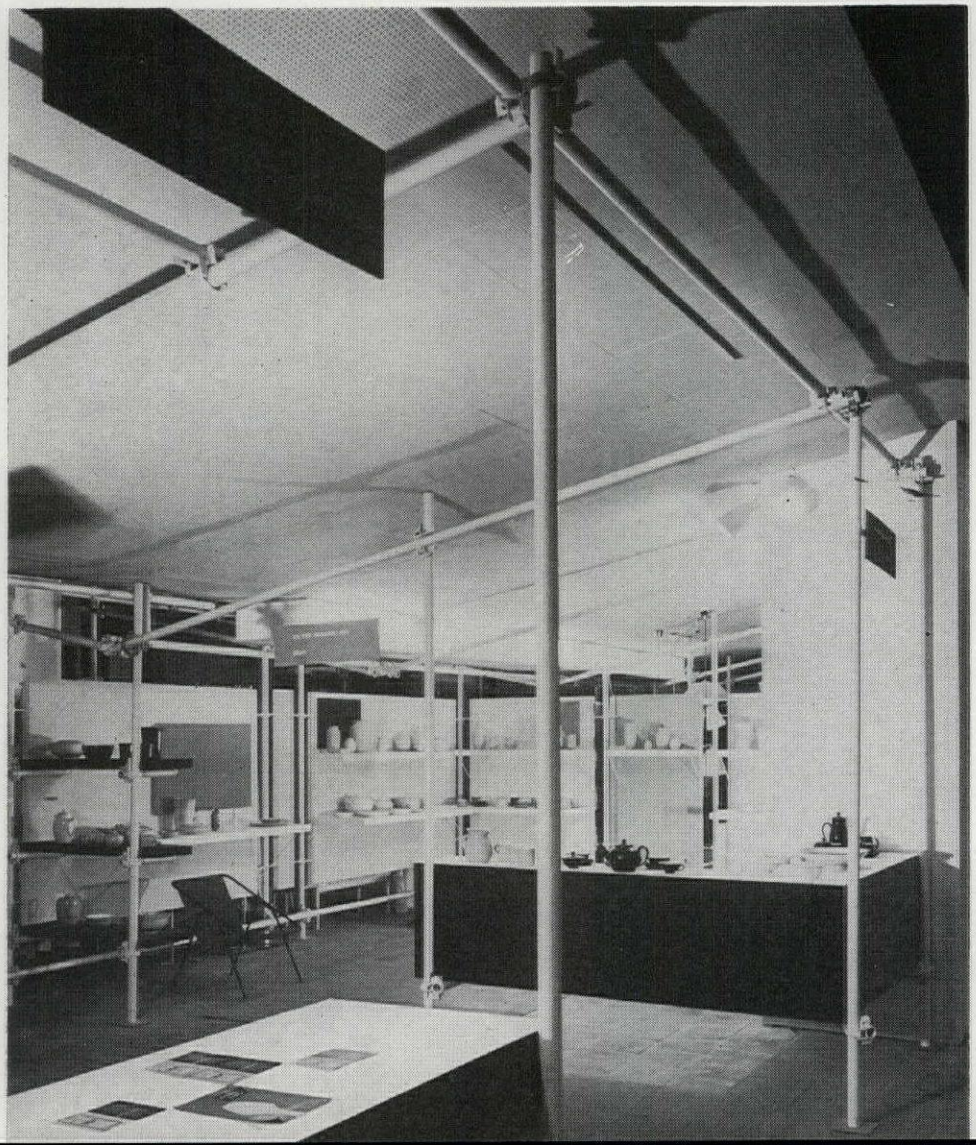


exhibitions

Ad Winnig

paper-industry display stand, Amsterdam 1955

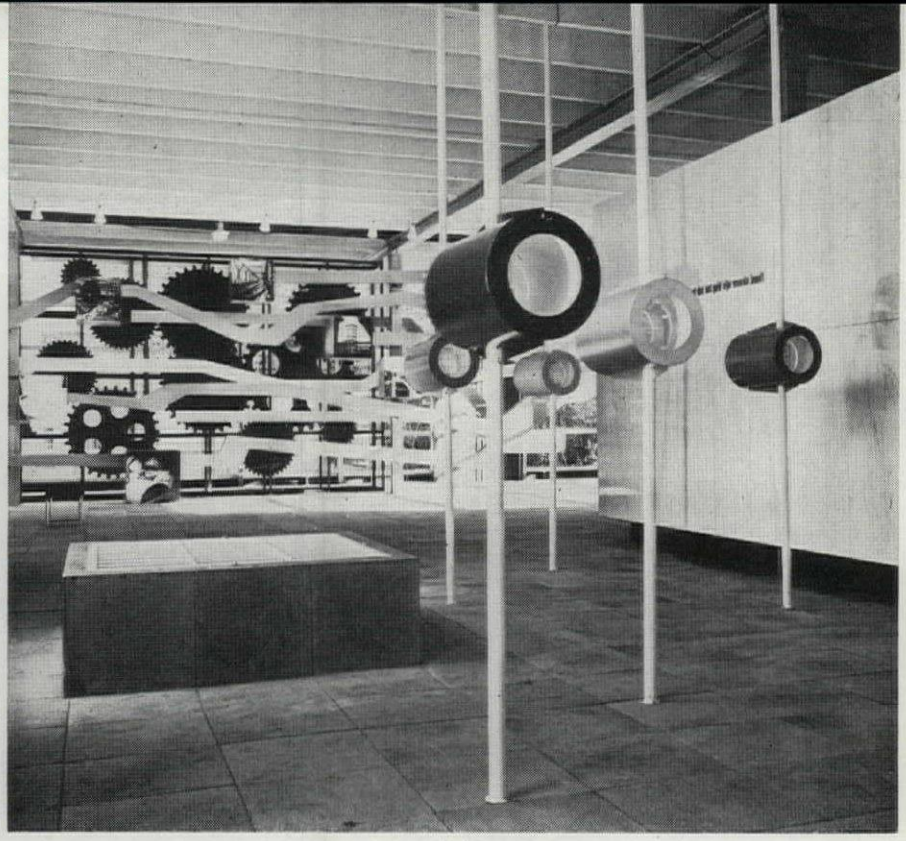
exhibition	Trade Fairs
location	Holland
designer	Jaap Penraat



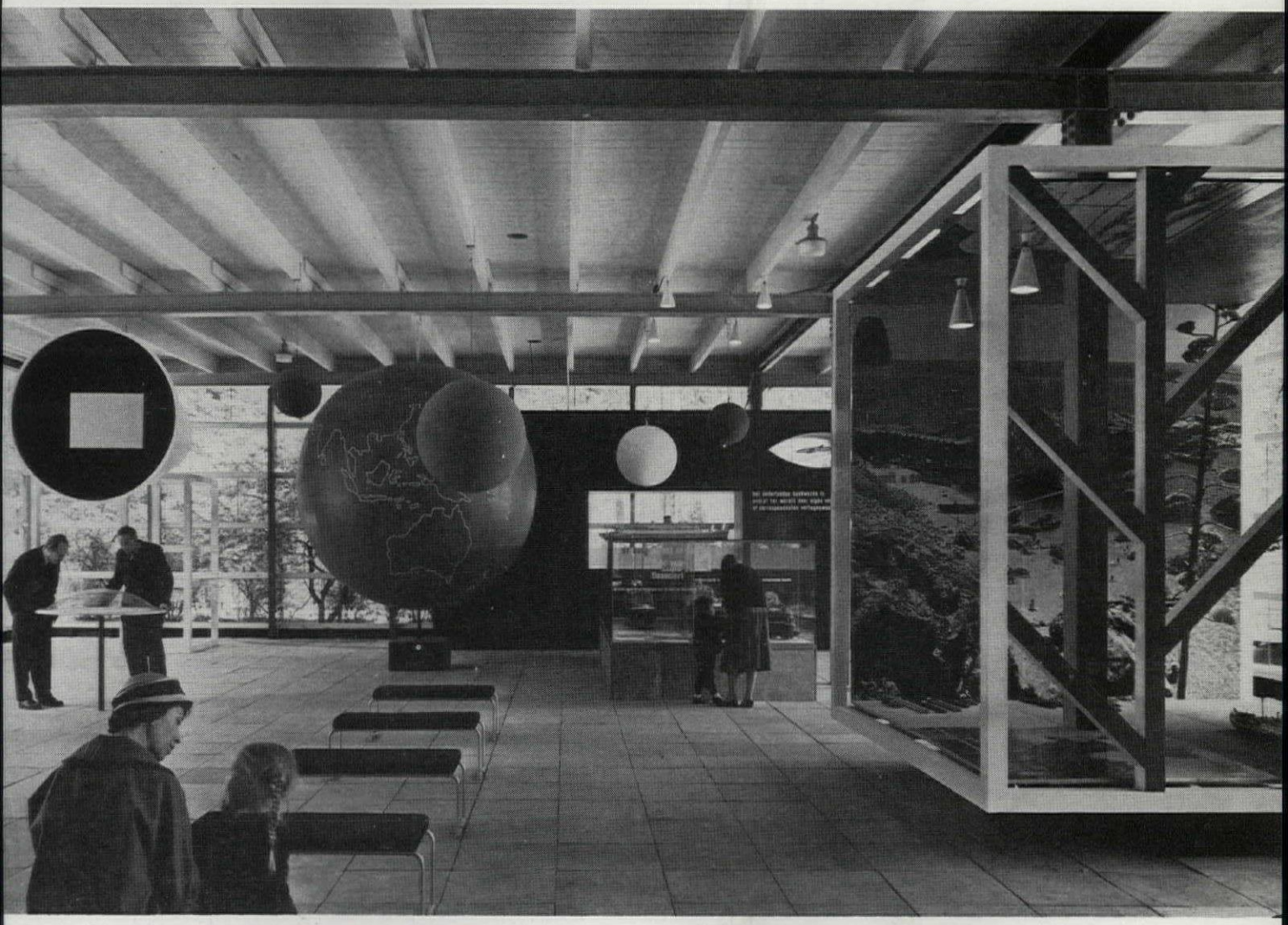
Design Theory: The system shown on this page uses materials inexpensively rented from builders. For Proost Papier (above), a wall backdrop hides ugly surroundings. Two levels give client double space for his rental fee; with the exhibit below, the upper level, furnished with chairs, serves as a salesman-customer conference room. Rented structure is white-painted steel rods clamped together; steel beams supporting upper level are snapped in, also returned. Close-up (left) of system at another exhibit shows clamps joining steel rods; display shelves, storage cases are inexpensive, painted composition board.

Another temporary structure, the Banking and Money Pavilion (photos acrosspage) was built of standardized materials—glass walls used in nearby hothouses; dark-gray steel beams riveted, not welded; white wood ceilings; dark-gray cut-stone flooring—later used for school construction. Highlights of the installation cases include: plastic-domed, circular, wood platforms on black-painted steel pipes (top left); painted plate-steel cylinders, fluorescent lighted from within, viewed from either side, and suspended at various eye levels on white-painted steel pipes (top right); ceiling-hung spheres of gypsum skin over steel-wire frame, and wooden cages for photographic display (right).

pottery-and-textile display stand, Utrecht 1953

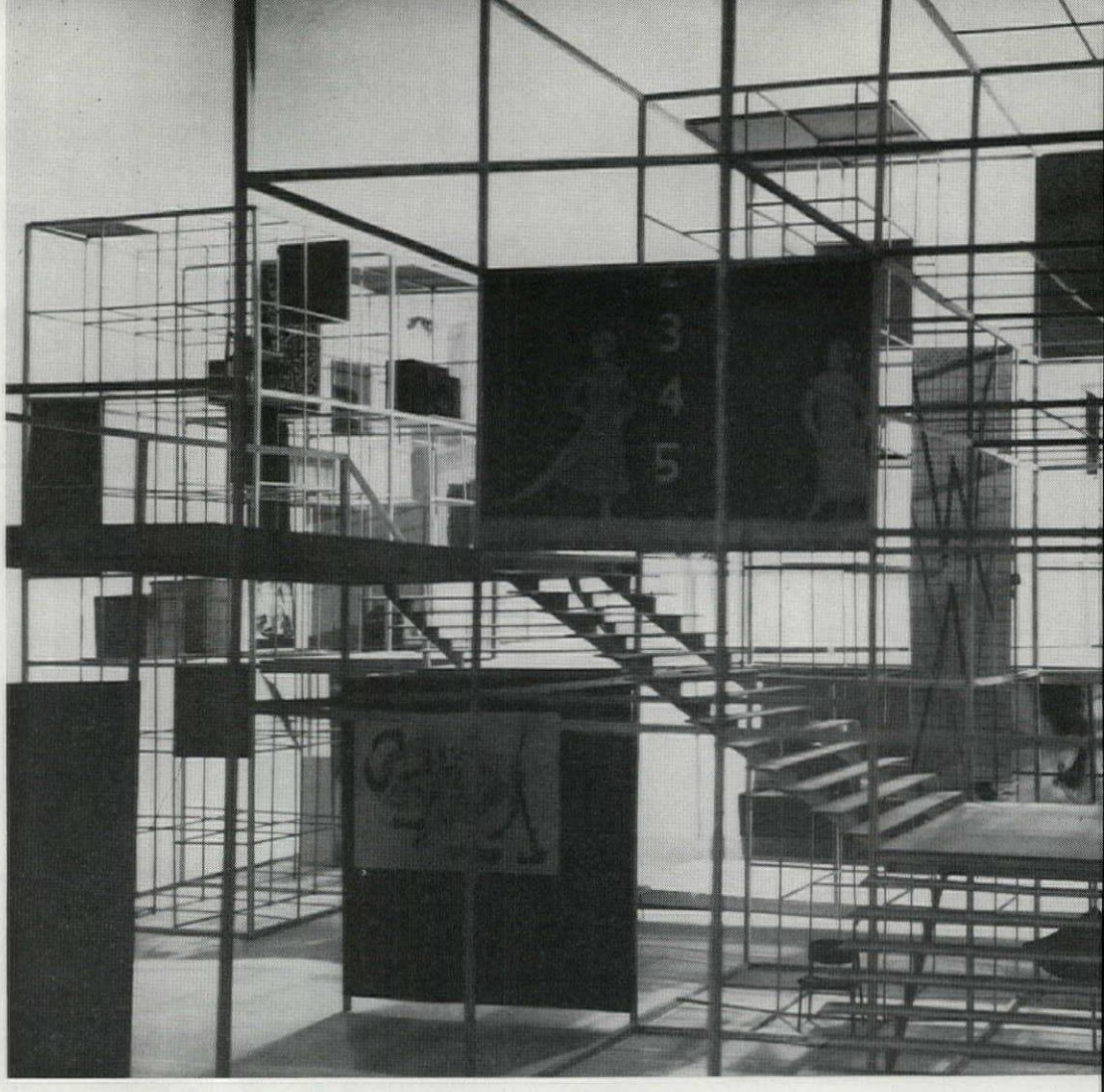


Photos (except as noted): Jan Vermeï



banking-and-money pavilion, Rotterdam 1955

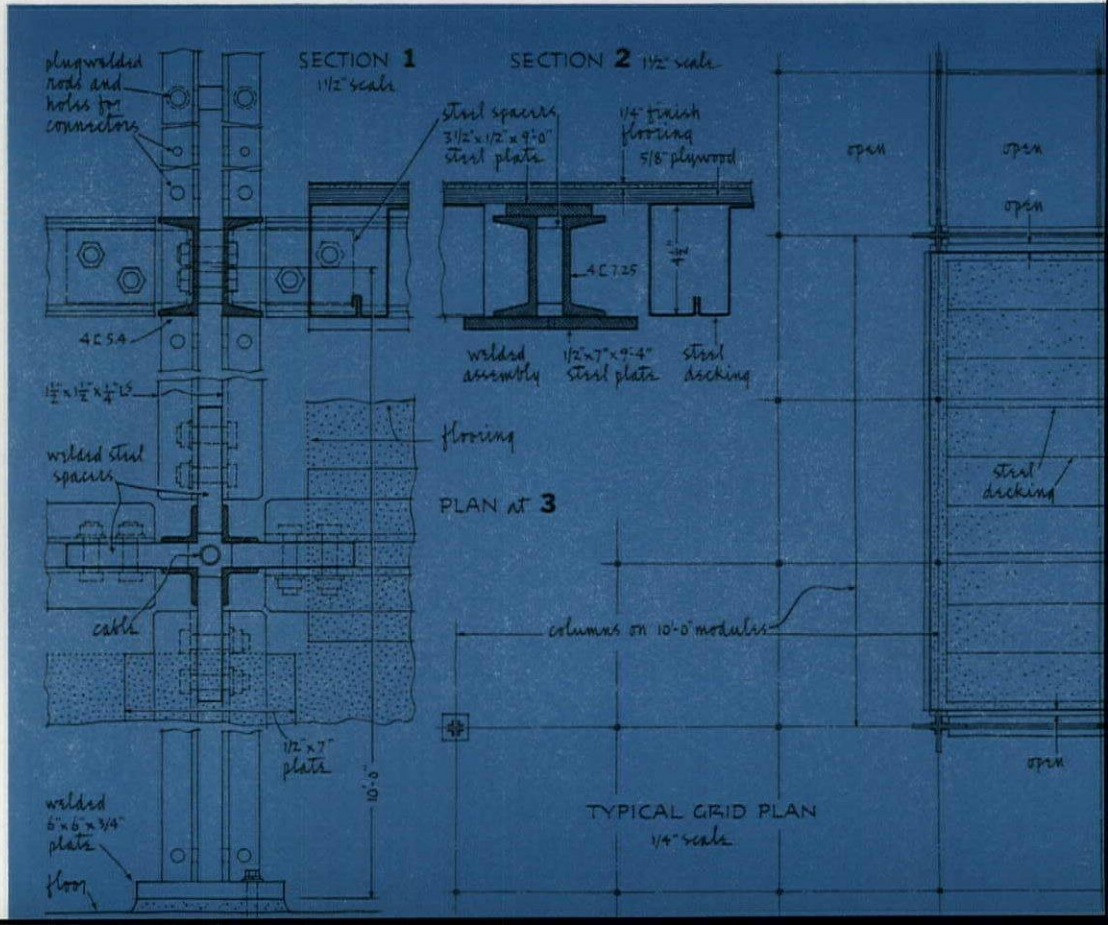
exhibitions

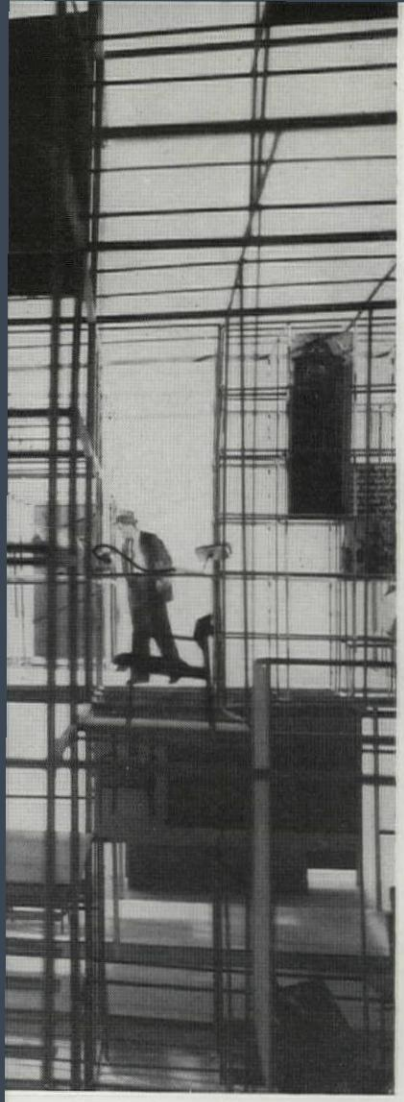


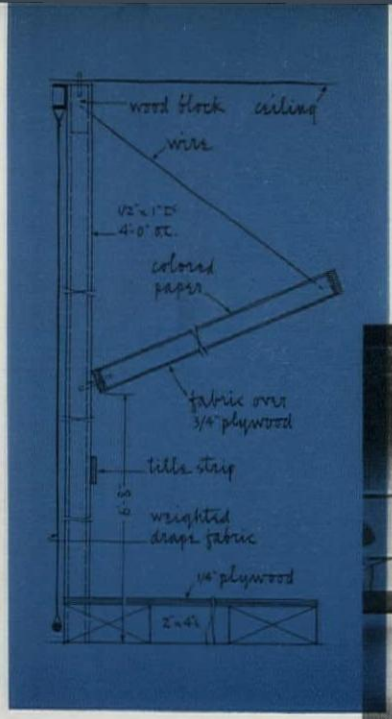
exhibition	American National Exhibition
location	Moscow, U.S.S.R.
designer	George Nelson & Co., Inc.

Design Theory: A staggering exhibition program—to demonstrate the abundance and conveniences of American life—called for the display of an enormous variety of objects (cultural achievements: books, paintings, sculpture; business machines; developments in plastics, aluminum; products for life and leisure: textiles, clothing, toys, Hi-Fi, radio, TV, musical instruments, sports equipment, home furnishings, appliances) as well as demonstration areas (color TV studio, miracle kitchen, model apartment, food demonstration center).

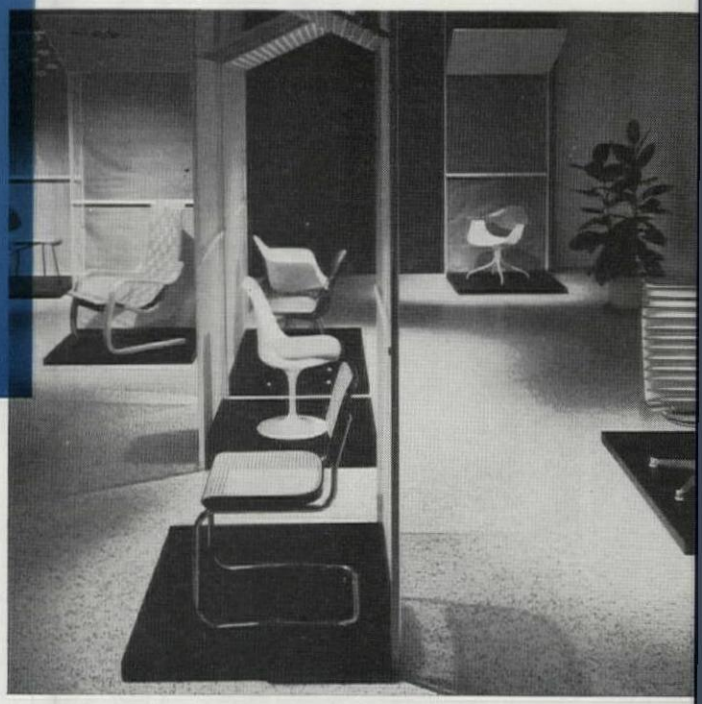
A 10-foot-square structural-steel cage stacked on two levels was designed for maximum use of display space. The 10-ft steel module is divided by an aluminum (minor) module at 3'-4" intervals to provide a geometric frame within which objects and explanatory rext panels may be variously arranged and organized. This system offers not only the advantages of utilizing the total volume of available space and of providing a rigid ordering frame for a multiplicity of items but also that of allowing the visitor to view the exhibit from several levels—his own, from above, and from below.





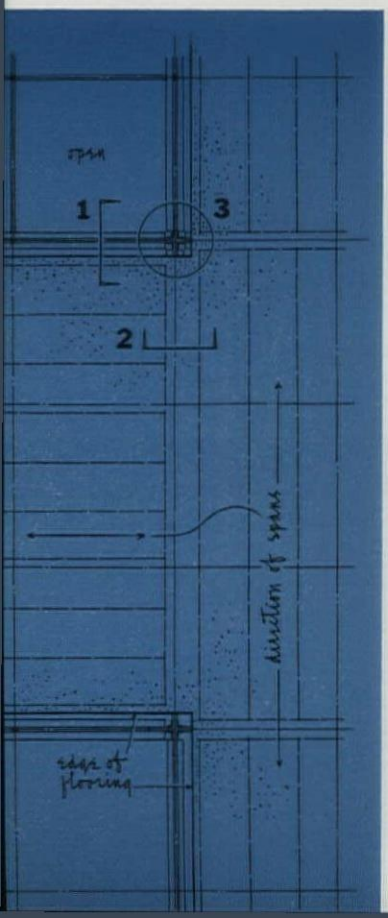


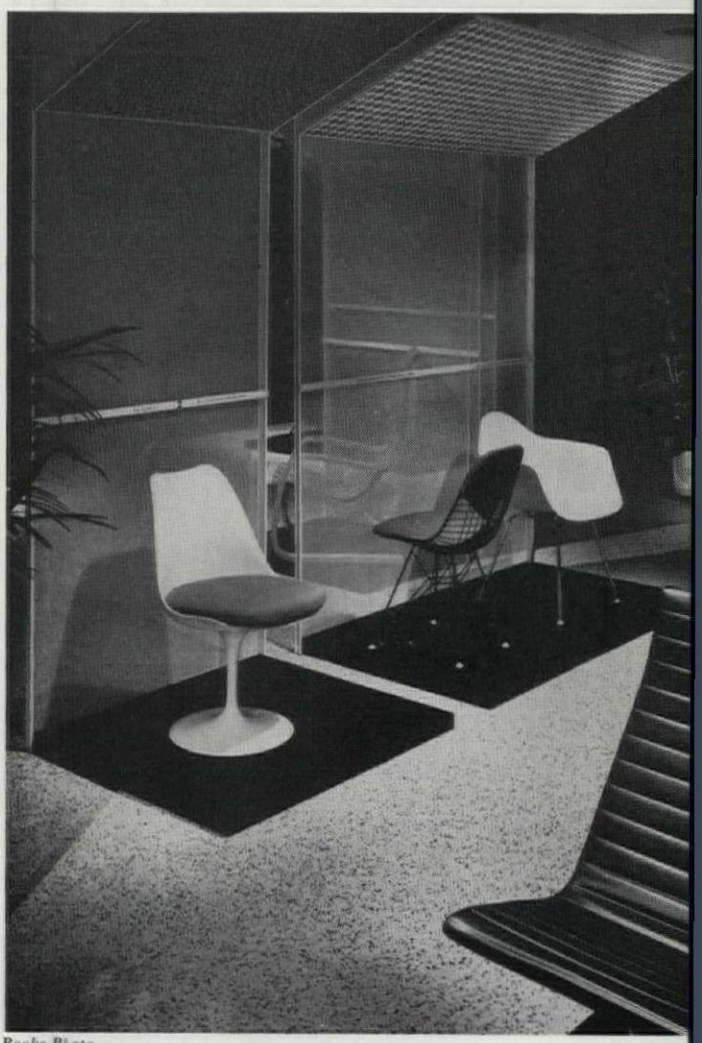
exhibition | Chairs From Machines
location | traveling: United States
designer | George Nelson & Co., Inc.



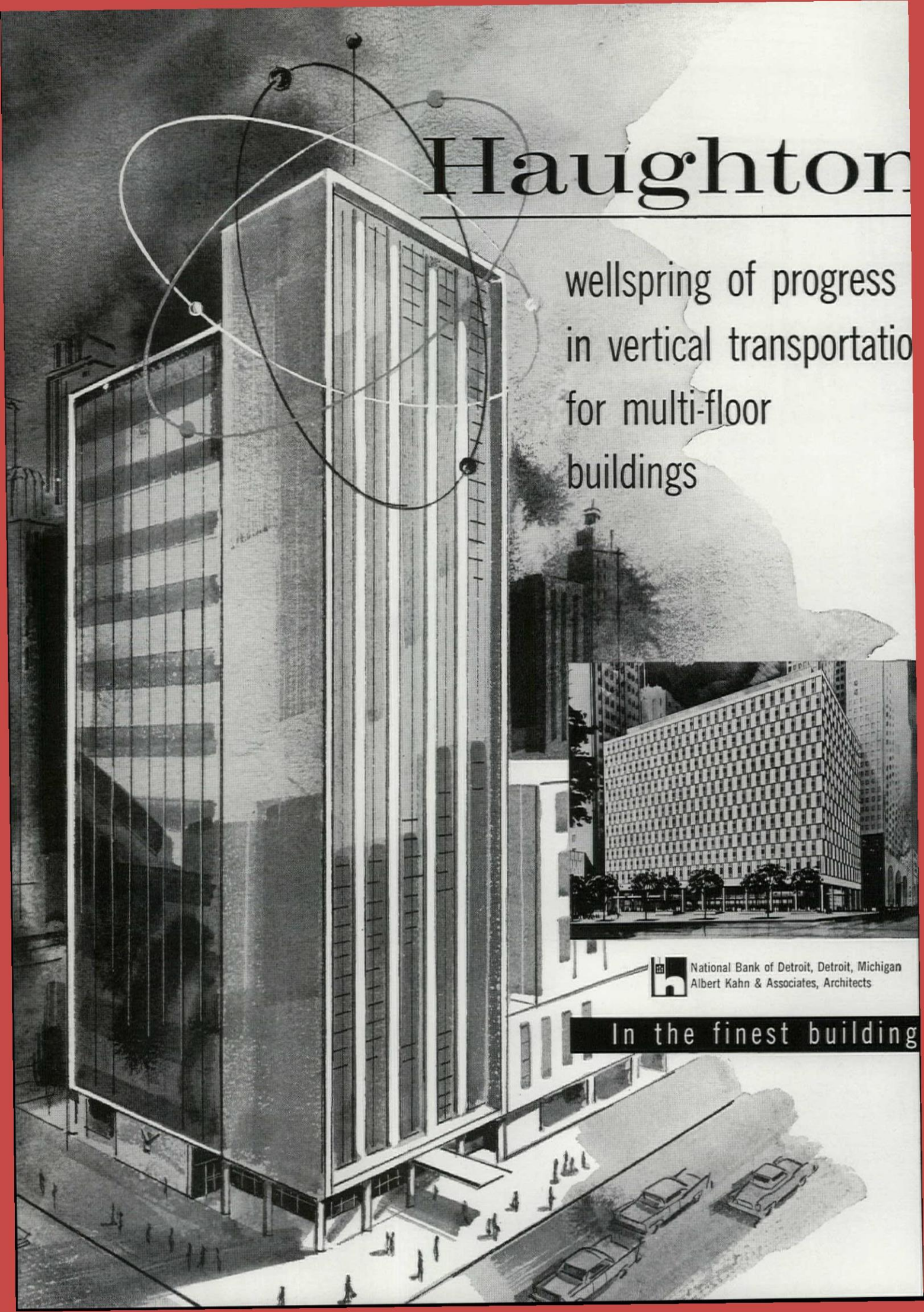
Design Theory: A simple silk pavilion was devised to display each of the eleven chairs (designed by Thonet, Marcel Breuer, Alvar Aalto, Charles Eames, Eero Saarinen, George Nelson) chosen to illustrate significant technological advances in modern seating design. Sponsored by the Herman Miller Furniture Company, the show has been touring their showrooms.

The pavilions, arranged to create a spacious maze-like construction, provide a monochromatic background of natural color silk for the exhibit. Brilliant colors and patterns of fabrics designed by Alexander Girard are confined to overhead canopies. Pavilion is constructed of white-painted ½"x1" steel channels attached to ceiling by wire pin inserted in perforated tile and bolted to black-lacquered platform of ¼" plywood on a frame of 2"x4"s. Fabric-covered canopy, backed with colored paper, is ¾" plywood bolted to channel and suspended from it by black wire. Silk drape, weighted at the bottom, hangs flat from steel channel attached by C clamps to vertical channels.





Rooks Photo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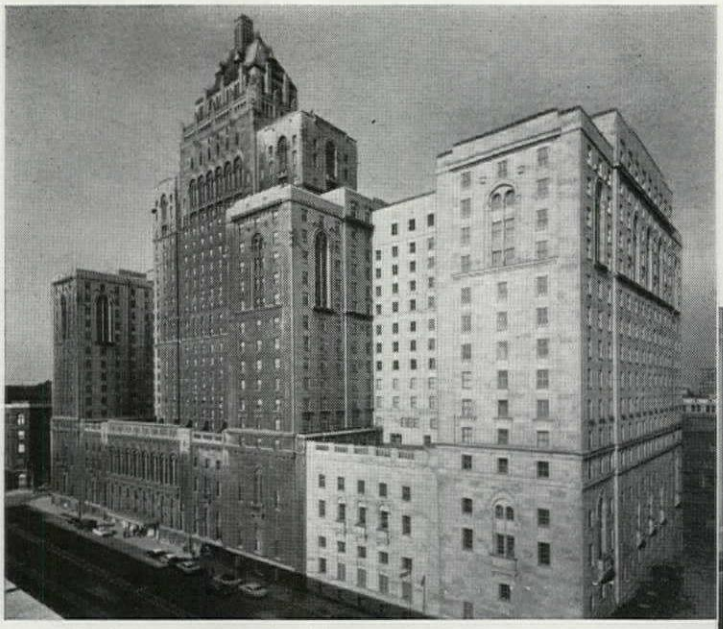

OWNER: *Canadian Pacific Railway*
CONSULTING ENGINEER: *J. P. Keith & Associates*
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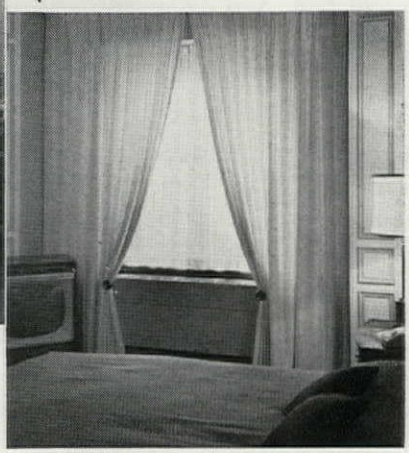
Carrier Modular Weathermaster under-window units furnish individual control of indoor climate in guest rooms. Quiet in operation, they are available in types and sizes to meet the requirements of every hotel room.



Canada's Royal York adds $14,000,000 wing with 400 Carrier air conditioned rooms!

Largest hotel in the British Commonwealth, the Royal York recently completed a 17-story, 400-room addition. Typical of the modern conveniences provided for the comfort of its guests is a custom-tailored Carrier air conditioning system. Perfect year-round climate is the result—in every room, every hour of the day or night.

While comfort was a big factor in the decision to air condition, the hotel's management was also influenced by other important advantages. Besides assuring occupancies, air conditioning insures against obsolescence. It attracts better employees. It substantially reduces the annual cost of cleaning and redecorating.

In the new wing, the custom-tailored Carrier climate starts with three Hermetic Centrifugal Refrigerating Machines, which chill water for the system. Outdoor air is cooled and dehumidified or heated, then distributed to Modular Weathermaster* units in each room. Each unit provides individual control, so occupants may dial the temperature they desire—regardless of temperatures dialed in adjacent rooms.

Whether you're planning air conditioning for a new or old hotel, a Carrier system can be tailored to meet your client's needs most efficiently and economically. For complete information, call your nearby Carrier office. Or write Carrier Corporation, Syracuse 1, New York.

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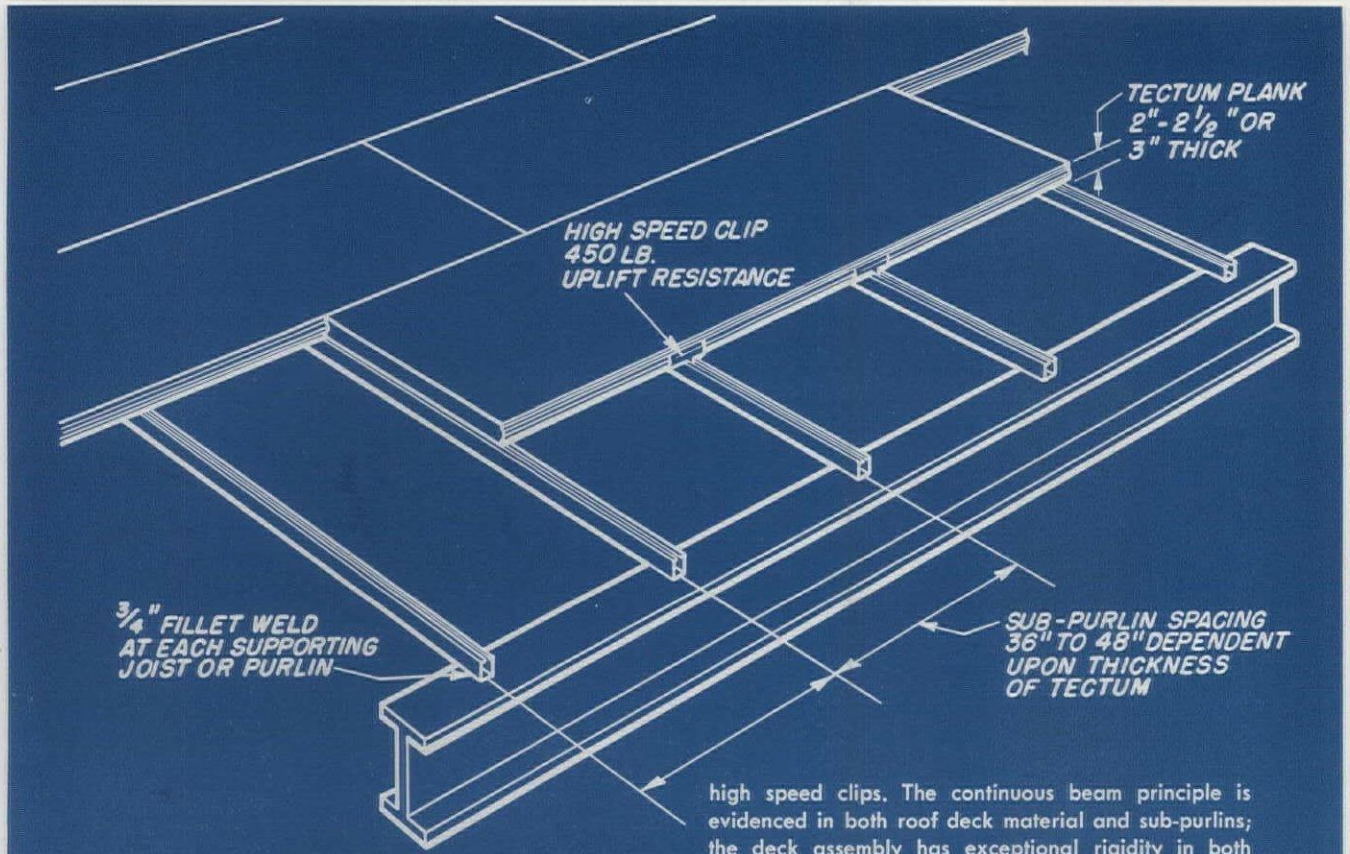

New Tectum box section sub-purlins, available in lengths up to 34', are roll formed of galvanized steel. Tectum plank is anchored at right angles with special high speed clips. The continuous beam principle is evidenced in both roof deck material and sub-purlins; the deck assembly has exceptional rigidity in both directions. The box sections span at least 3 joist spaces; Tectum plank spans 3 sub-purlin spaces. The new assembly has high resistance to uplift pressures.

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The new sub-purlins weigh about half as much as conventional bulb-tees. The box section is priced considerably lower than comparable sub-purlin members and spacing between sub-purlins can be widened. Important savings are realized through lower sub-purlin costs, wider spacing, reduced weight and faster erection time.

For complete catalog information write Tectum Corporation, Newark, Ohio, or contact your Tectum Regional Office: Atlanta, Philadelphia, Columbus, Chicago, Dallas, Beverly Hills, Seattle and Toronto, Canada.

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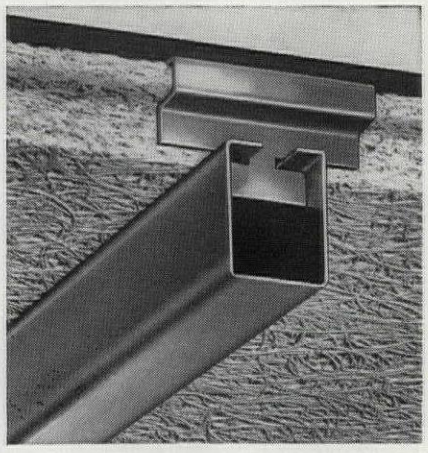
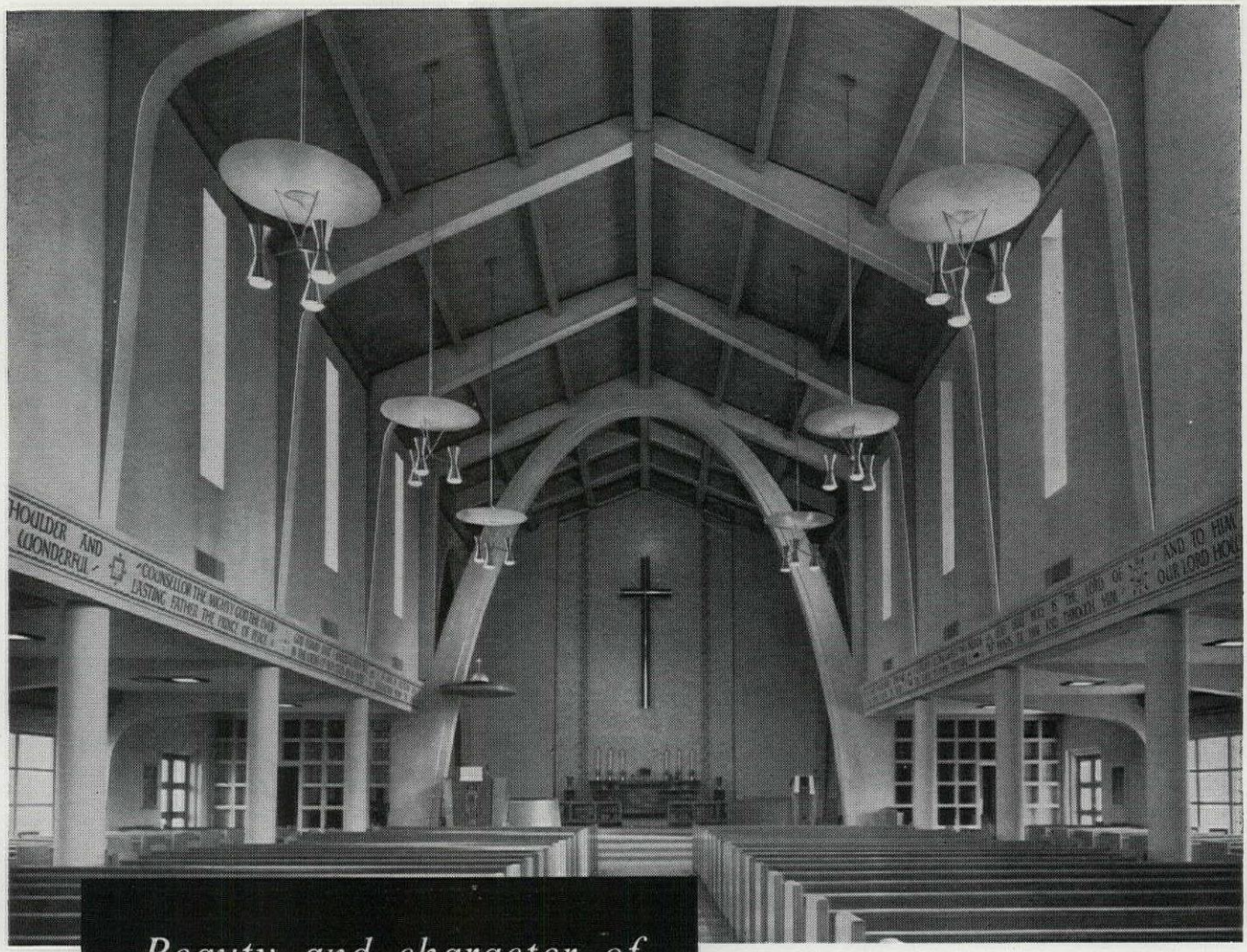


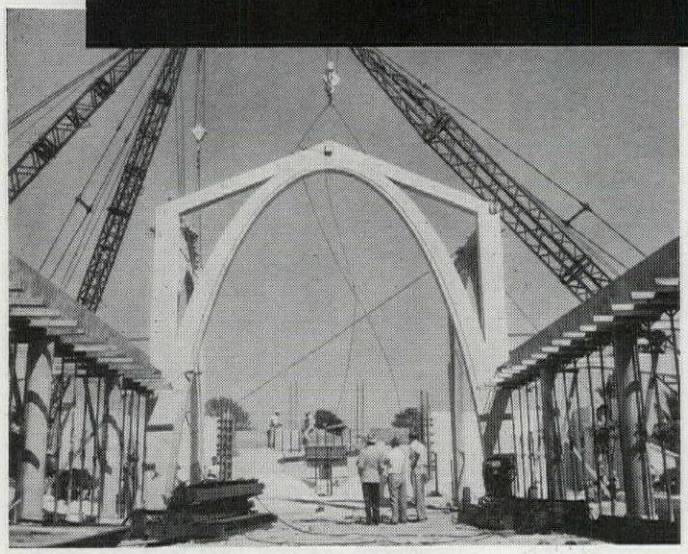
Standard high speed T-clips lock quickly into slotted box sections. Resistance to uplift pressures at the clip have been tested in excess of 450# at the clip, or 60 psf, meeting hurricane wind uplift ratings. Vertical load tests are certified by Pittsburgh Testing Laboratories and Ohio State University Engineering Experimental Station. Clips are completely enclosed at the plank joints — reducing thermal transfer through the roof deck.



Beauty and character of new church owe much to

PRECAST CONCRETE

This church exemplifies the adaptability and beauty of modern precast concrete construction. Precast units serve both structurally and decoratively, and include 28 arches of varying sizes, 2 spire grills, 4 ornamental grills, and 42 precast window frames and sills. The largest arch is 32′ high.



Soaring arches, ornamental grills, window frames and sills—all precast concrete—lend enduring beauty and character to the new St. Peters Lutheran Church, Miami, Fla.

In precasting this wide variety of concrete units, Lewis Manufacturing Company used Lehigh Early Strength Cement for maximum production efficiency and economy.

"Our entire operation," writes Mr. Lewis, "has always been geared to the use of Lehigh Early Strength Cement and live steam curing. This fast production method enables us to give our customers better service, at lower cost."

This is typical of the advantages of Lehigh Early Strength Cement in modern concrete construction.

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Scott B. Arnold Assoc., Miami, Fla.
Contractor: Thompson-Polizzi Construction Co., Coral Gables, Fla.
Precast Units Supplied by: Lewis Manufacturing Co., Miami, Fla.

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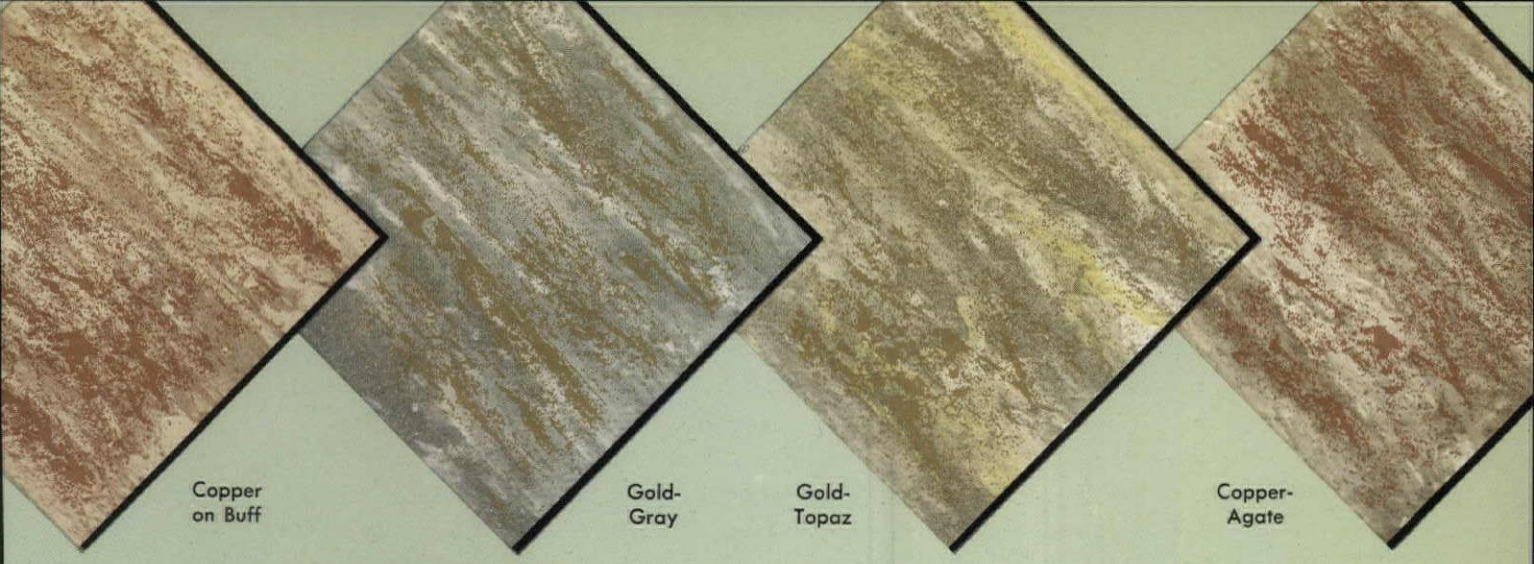

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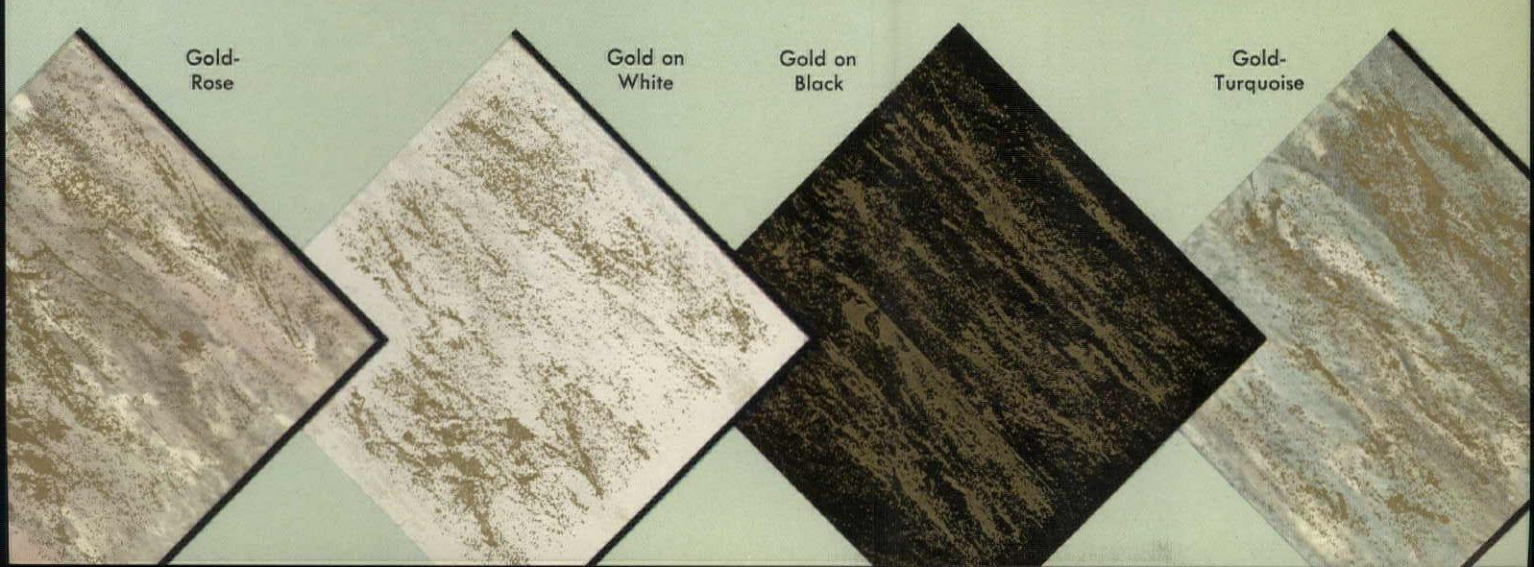

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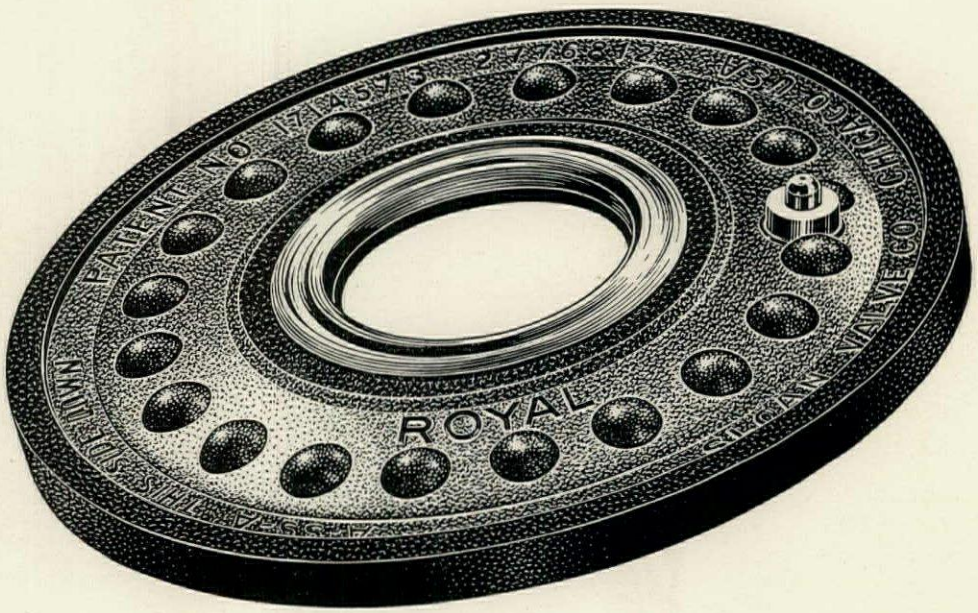

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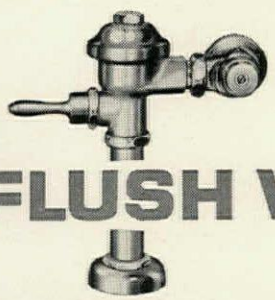

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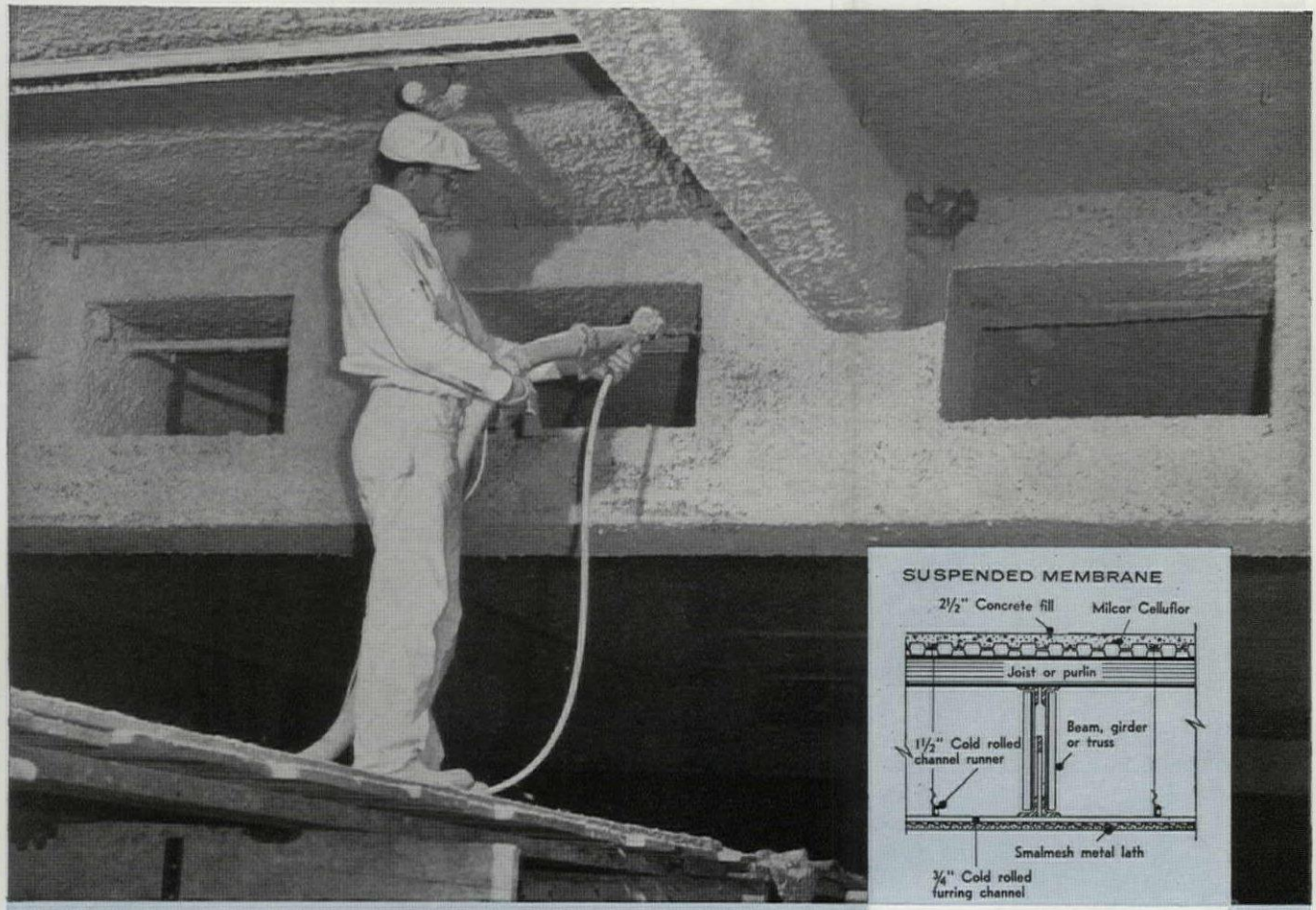

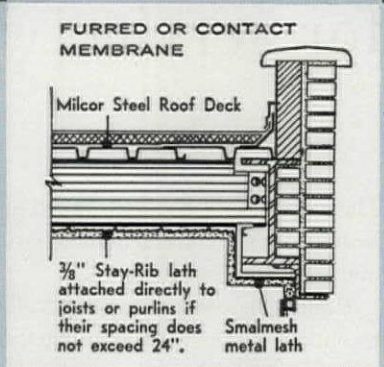

Membrane fireproofing protects beams, girders, and columns as effectively as concrete encasement, yet weighs considerably less.

In fireproofing columns, for example, architects have reduced weight per lineal foot by as much as 86%. They have specified 1¾" lightweight aggregate plaster on Milcor Furlath (self-furring metal lath), instead of 3" concrete with coarse aggregate fill.

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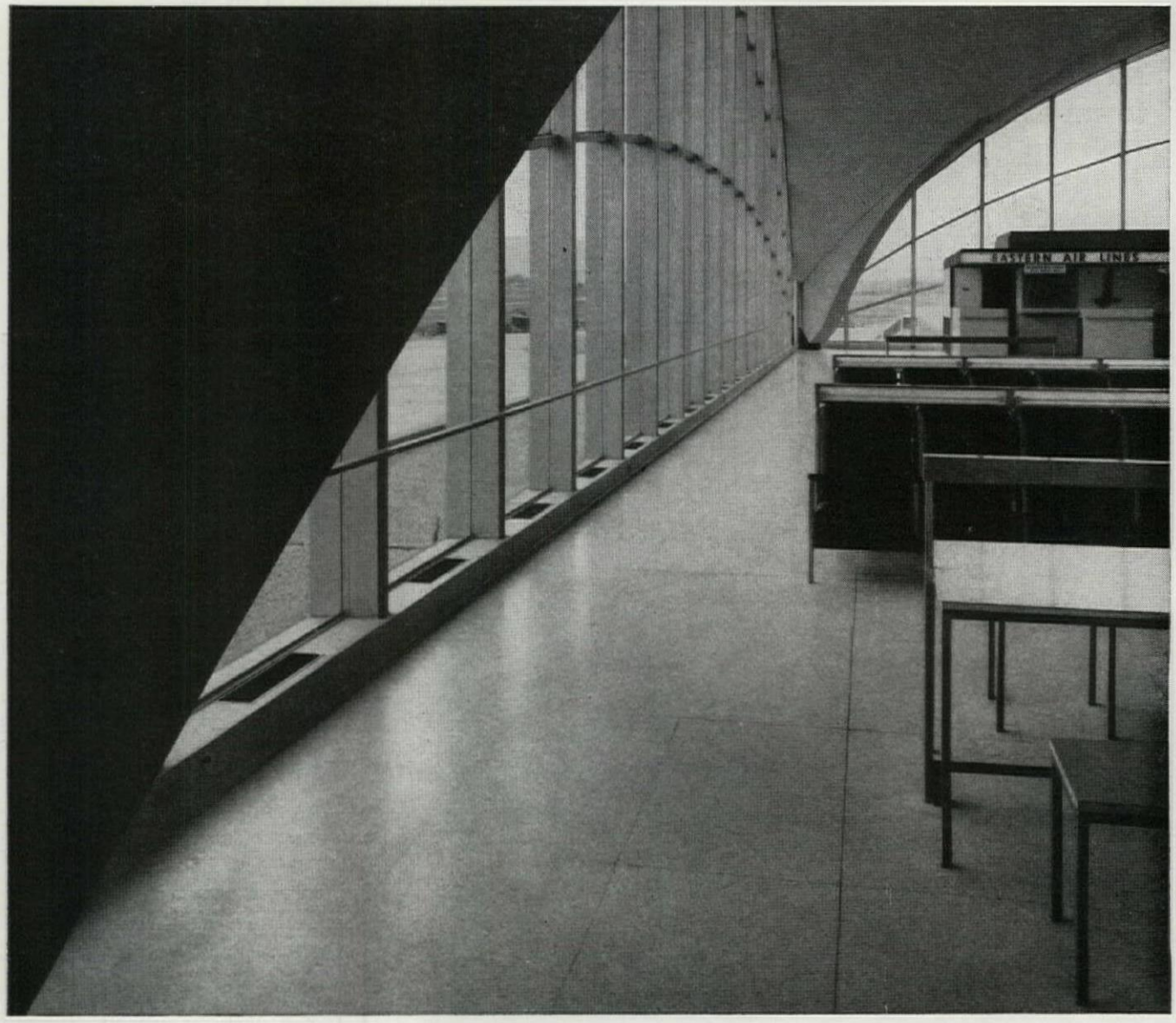

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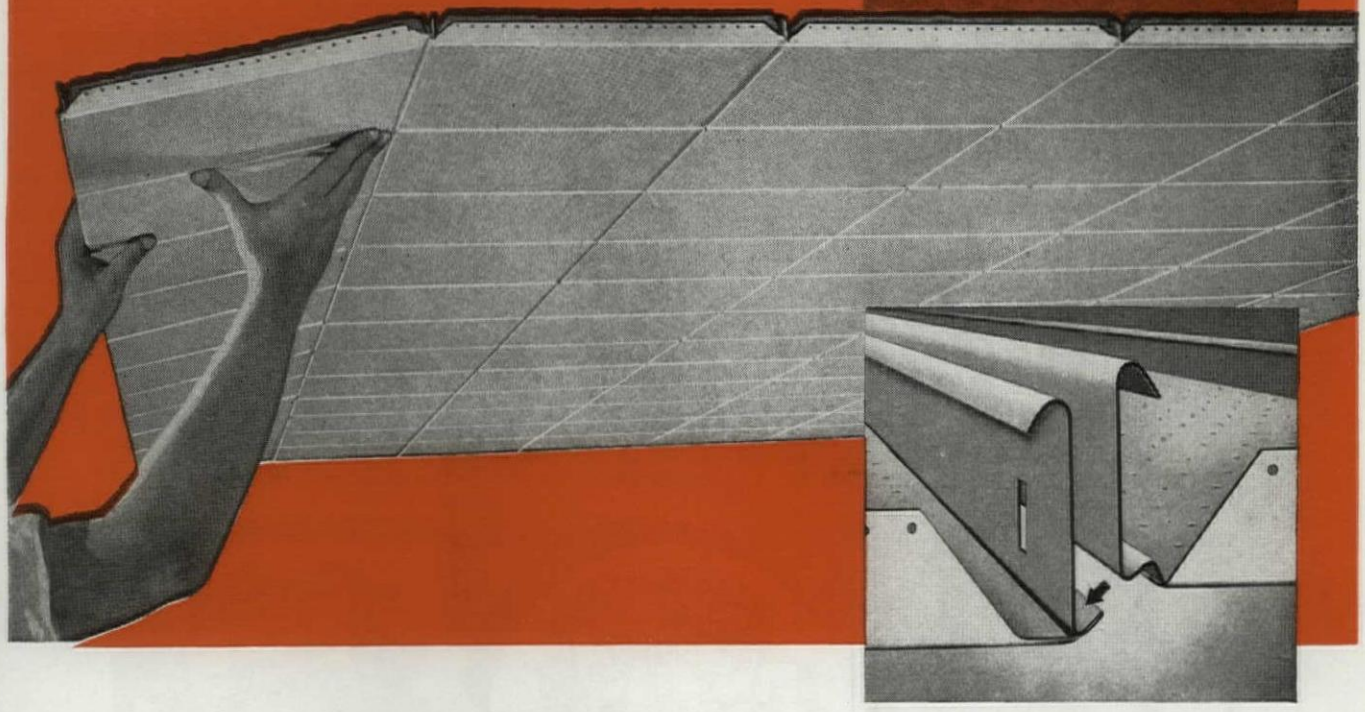

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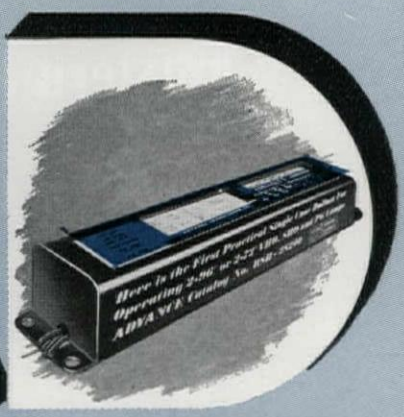

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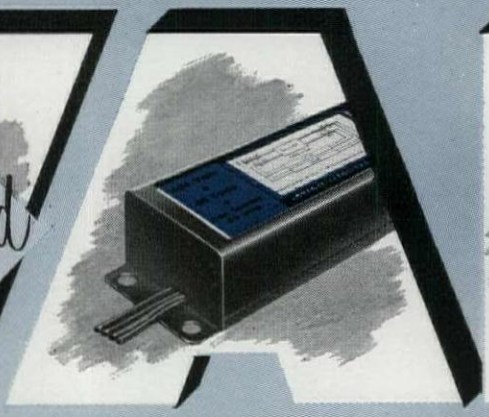

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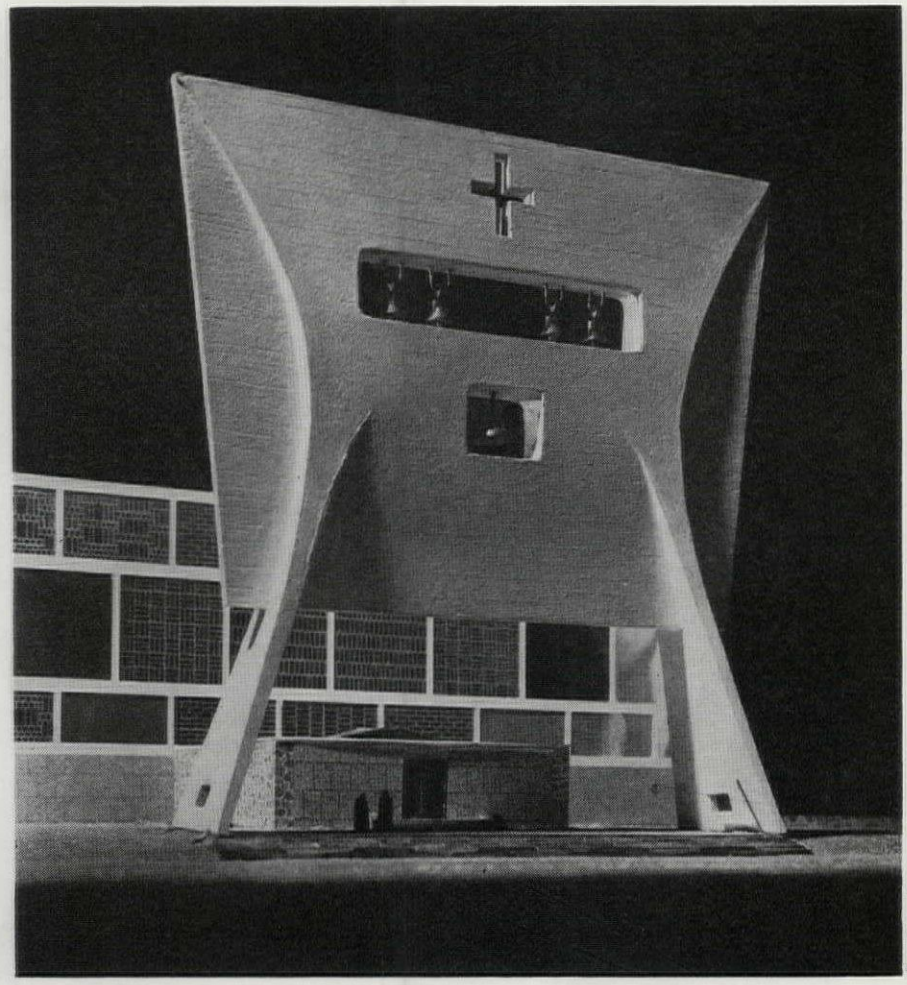
The New Grand Tour?

by Stephen A. Kliment*

Architecture USA. *Ian McCallum. Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y., 1959. 216 pp., illus. $13.50*

The student of architecture is going to see in *Architecture USA* a propitious record of accomplishment on the part of his elders. The American architect will find an admirable picture book, but will not, unless he has been neglecting his professional magazines, find anything startlingly new beyond a foreign visitor's assessment of this country's architecture. The American layman will see the book and then wonder, as he stands on Main Street and looks about him, why, when there are so many fine bakeries around making cake, he, for one, has to eat stale bread. And those beyond the Atlantic and Pacific Oceans will—or if they don't, they should—stare admiringly at what McCallum has shown them. The author, an Englishman, has expressed this attitude in the most flattering terms in his Preface. "For the young European architect," he says, "an American Grand Tour is becoming as important as the Italian was to the 18th Century English gentleman."

Presenting *Architecture USA* in 216 pages must have seemed a bewildering task at first. Anything much shorter becomes a catalogue: concise, but sacrificing pictures to text or text to pictures, being critical by inclusion or omission of examples rather than explicitly. Anything much longer, even though more comprehensive, becomes bulky and expensive. *Architecture USA* is neither concise nor entirely comprehensive, and one cannot object to the author's selectivity without objecting to his method of selection, which was biographical. By presenting the best known architects, one does not necessarily present all the best buildings; whereas by reversing the process, one covers the best buildings and as a rule obtains the best architects into the bargain.



Ben Schnall

St. John's Abbey, Collegeville, Minn., looking past the free-standing reinforced-concrete belfry to the glazed end-wall of the church.

Ian McCallum has given us American architecture as designed by 33 architects (22 born in the U.S.A., six born abroad and trained abroad, and five born abroad but trained in the U.S.A.). Each of the 33 has a note on his life, followed by anything up to a dozen pages of photographs, drawings, and explanatory text. This roster fails to cover the field, omitting as it does such men as Percival Goodman, Craig Ellwood, Harwell Hamilton Harris, Curtis & Davis, Aalto, and Chermayeff, as well as early modern structures of some formal significance, such as the E. J. Kahn 1930 Municipal Asphalt Works in Manhattan. Other omissions are noted in a prefatory note by William Wilson Atkin.

The author has drawn a line—so let us take the line where he has drawn it. What we have is a large collection of photographs of the first order and a text notable for clarity of style, imagery of expression, and acuity of observation of the American scene. He refers to the "pathetic irrelevance" of Sullivan in the face of the 1893 Chicago Exhibition, the "umbrella organization" of the modern architectural office, the "spacemanship" of Frank Lloyd Wright, and the "autumnal bronze" of the Seagram Building. He has observed in the U.S.A. the three conditions of great architecture—a prosperous and lively building industry, creative freedom, and conspicuous ex-

(Continued on page 170)

* *Designer, Skidmore, Owings & Merrill, New York, N. Y.*

(Continued from page 169)

penditure—but has also recognized the two cardinal problems facing American architecture today: the Downtown Area and Form. Our formal freedom, "lacking discipline and a rigorously controlled imagination . . . could lead to form-making for its own sake—an unbridled mud-pie architecture."

He is aware that what he has shown in his book is "a cross-section of the best," and that there is some pretty bad, dishonest stuff around; for instance, prairie houses" . . . frequently to be found far removed from any accessible prairie," and also the builder's house, ". . . often dressed in a regional costume quite unsuited to its climate and the company it keeps." The problem these days is not only one of formal discipline at the top but, to an even greater degree, one of raising the quality of the average product.

For the rest, McCallum's text is uninterrupted (glory be!) by references to photographs, which appear mostly on the same page as the text they illustrate, and which have very good descriptive captions of their own. The biographies are preceded by a 31-page historical section, which largely reflects the standard authors on modern architecture listed in the bibliography.

Most remarkable about the book are the excellent quality of its photographs and the lavish manner in which it was assembled. There are some views of the UN Secretariat and Mies van der Rohe's Chicago apartment buildings which will cause the most hard-boiled picture-book devotee to sit up.

Architecture USA cannot take the place of the new Grand Tour but it is an alluring substitute.

age of enlightenment

A Diderot Pictorial Encyclopedia of Trades and Industry, Denis Diderot.

Edited by Charles Coulston Gillispie. Dover Publications, Inc., 180 Varick St., New York, N. Y., 1959. Two vol. set, 485 plates. $18.50

Ever since the beginning of critical writing about the modern movement, historians have been interested in the impact of technology on architecture. As historical research has advanced during the last two or three decades our understanding of the background of contemporary technology has deepened, and we now see that the industrial revolution of the 18th and 19th Centuries was not a sudden explosion but rather the culmination of a lengthy historical process. In this development the French nation played a conspicuous role, and now the Dover Press has done us a great service by reprinting a magnificent selection of plates from Denis Direrot's famous *Encyclopedia*. The illustrations show a fascinating cross-section of the various technologies used in 18th Century France, and the work has been ably edited by Charles Coulston Gillispie, of Princeton University. These volumes should be a welcome addition to college and university libraries all over the country; because of the price tag, they are not likely to find their way into many private collections.

The original *Encyclopedia* was one of

(Continued on page 176)

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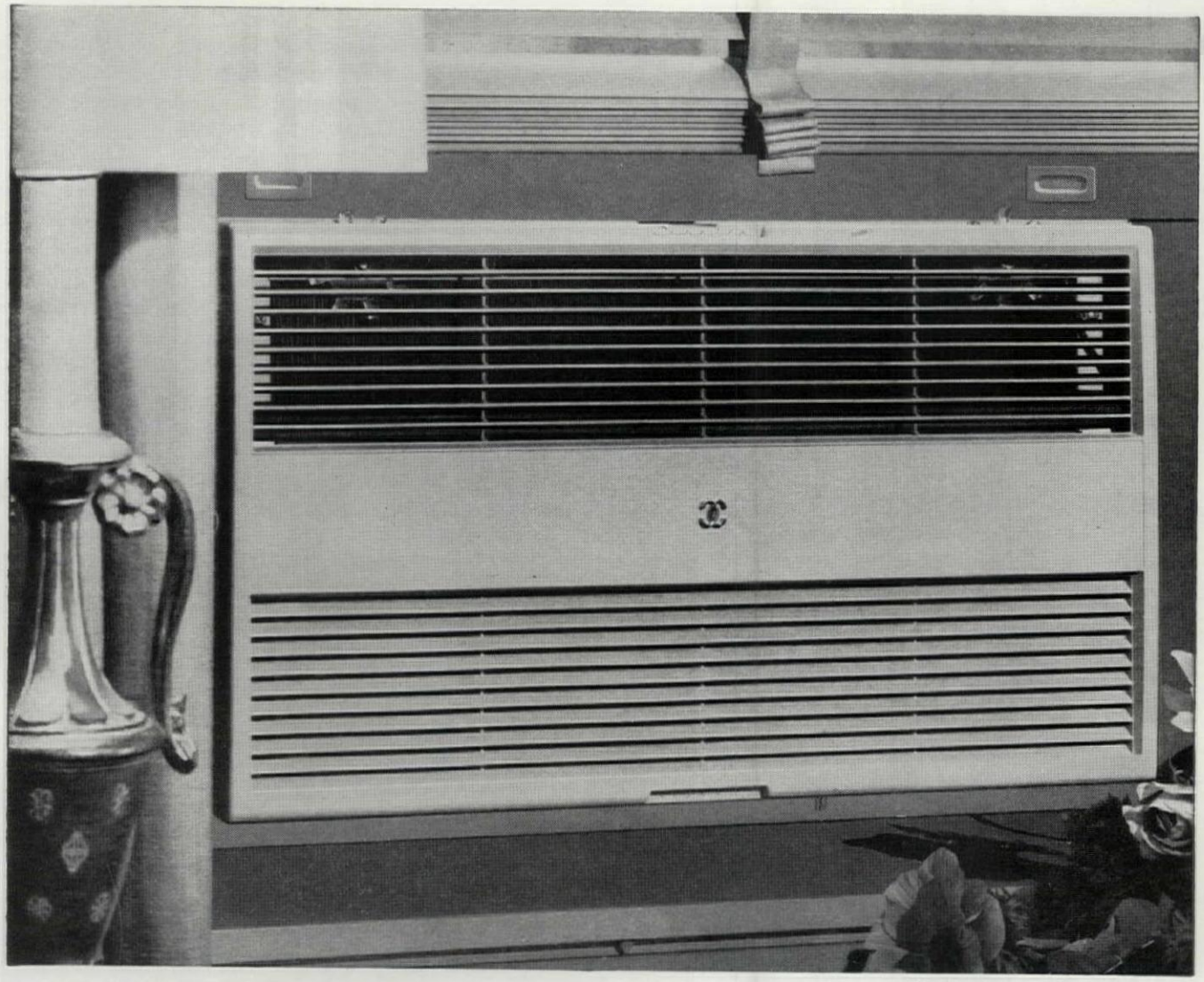

Carrier puts the chill on fuel costs...with coal

Air conditioner manufacturer uses coal for low-cost steam

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(Continued from page 170)

the great literary monuments of the Enlightenment. Classified as extremely subversive in its day, the work struck powerful blows on behalf of the ideals of liberty and progress which ultimately found expression in the French Revolution. A reactionary church and a decadent monarchy excoriated the encyclopedists because they stressed the idea of the gradual betterment of man's material condition through education, and (ever importantly) through technology. There was as yet no thought that our control over technology might become so absolute that we could encompass our own destruction, nor was there any suggestion that technology might advance so far that the creative use of leisure time would become a problem for society. On the contrary, the problem was to release technology from the grasp of superstition, of the medieval-craft tradition, and of an idle nobility.

It was thus entirely appropriate for Diderot to devote large portions of his *Encyclopedia* to descriptions of contemporary technology in every field of human endeavor. Frequently these descriptions are "loaded" to suggest the desirability of social and political reform, but this bias in no way lessens their intrinsic validity. In fact, it sheds much light on the minds of the leaders of the French Enlightenment. We err, if we think of the *philosophes* as being exclusively concerned with witty conversation in sparkling salons. Many were incorrigible gadgeteers and avid students of the newest developments in science and technology. When Benjamin Franklin went to France, the French were as much interested in his contributions to the theory of electricity as they were in his political doctrines or his deceptively rustic manners. The *Encyclopedia* summed up not only the philosophy but also the technology of this immensely productive age.

The architect will be most attracted to the illustrations of those industrial processes which affect the art of building and these he will find abundantly portrayed. There is a fascinating series of plates on the mining, smelting, and forging of iron, and one thinks immediately of the large quantities of this material used so beautifully by Heré de Corny in his splendid series of squares at Nancy. Except for the difference in scale, the processes of production were evidently much the same in principle as they are now. Similar, too, were the processes for the production of glass. Here, as in the case of iron, the emphasis was on craftsmanship and quality rather than quantity, an emphasis which French industry has retained, often to its own detriment, up to the present day. It was characteristic of the period that the French were the great chemists and metallurgists while the English were the great inventors and the first to develop methods of quantity production.

Perhaps most interesting of all are the sections on carpentry and masonry. The encyclopedists, says the editor, were irritated with these trades because of their technological backwardness. In their stubborn adherence to guild systems and trade secrets, the carpenters and masons were at odds with that spirit of progress which Diderot and his colleagues were trying to promote.

Indeed, timber-framing systems shown very much resemble those of the great medieval barns, to which historians are

(Continued on page 178)

MODERN DOOR CONTROL BY *LCN* · CLOSERS CONCEALED IN DOOR

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LCN CLOSERS, INC., PRINCETON, ILLINOIS
Construction Details on Opposite Page

Harbeson Hough Livingston & Larson, *Architects*

(Continued from page 176)

now giving increasing attention. Conventional masonry construction is still, of course, widely used in France, and this preference is one reason that the French building industry is perhaps the most backward in Europe. At the same time, the French are an individualistic race, much given to experimentation, and no one should be surprised to find in the *Encyclopedia* an illustration of a prefabricated bridge, not different in principle from the Bailey bridges of World War II.

A word should be said about the editing and the quality of the reproductions. Rarely, if ever, has the reviewer encountered a finer editorial job. In a short but brilliant introduction, Gillispie sets the original *Encyclopedia* in its historical context, and then, in almost every section, makes perceptive comments about the various industrial processes shown. His technical knowledge is obviously immense, and his scholarly insights are invariably enlightening. Especially striking is his comparison between Vauban and Le Notre —two personalities superficially dissimilar but bound together by a common devotion to abstract geometrical form. In spite of the complicated subject matter, the editor manages to maintain a lively style; as a former infantryman, I could not help smiling wryly at his comment in the section on artillery that the possibility of a mortar's blowing up is still something ". . . which no experienced mortar-man dismisses from his mind." In short, Gillispie wears his learning as lightly as an 18th Century *philosophe*.

The plates are generally of an exceptionally good quality. A few are a bit fuzzy around the edges, but most would do credit to the original *Encyclopedia*, itself. In this connection it is well to remember that Diderot utilized a number of earlier works on technology. Many of the plates on mining are from Agricola's *De Re Metallica*, the classic 16th Century description of the extractive industries. Much of the graphic work was therefore not commissioned for the *Encyclopedia* but is nonetheless of a very high standard. For the rapidly growing body of historians of science and technology these volumes will be a mine of information; for architects they will throw much light on a neglected phase in the development of the building art.

LEONARD K. EATON
Ann Arbor, Michigan

attention, all citizens!

The Human Side of Urban Renewal. *Martin Millspaugh and Gurney Breckenfeld. Edited by Miles L. Colean. Fight Blight, Inc., 32 South St., Baltimore 2, Md., 1958. 242 pp., illus. $3.50*

A praiseworthy addition to the growing body of knowledge on what we can and must do to stop the urban decay that afflicts our cities, this book contains six case studies in neighborhood rehabilitation. Its emphasis is on what was actually achieved in a half dozen instances, primarily in terms of the effect on the lives of the human beings who resided in the neighborhoods.

The six areas whose renewal programs are analyzed are (1) the "Pilot Area" of

(Continued on page 180)

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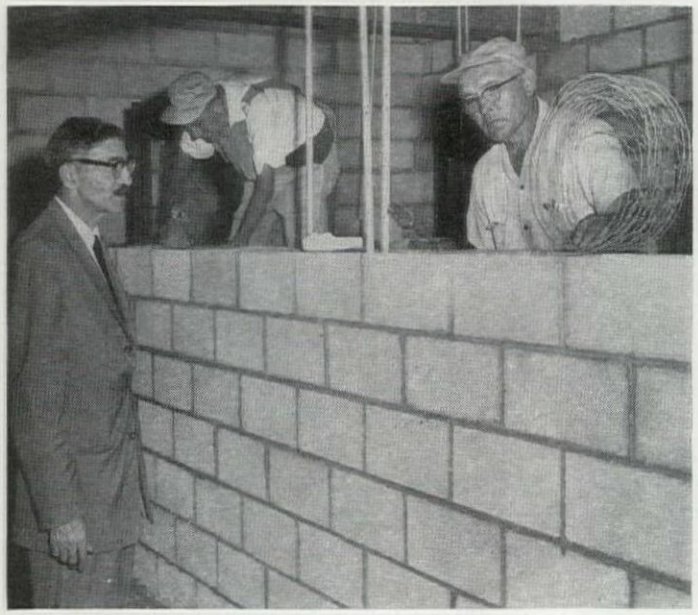

Mr. Rubin (standing) notes how easily Keywall is handled on one of his current jobs, the Hyde Park Shopping Center on Chicago's south side. Hyde Park Project Contractor: Webb & Knapp Inc., Chicago. Architects: I. M. Pei & Associates, New York; Harry Weese & Associates, Chicago. General Contractor for Shopping Center: Inland Construction Co., Chicago.

"You just can't beat Keywall," says Al Rubin, presi of Arco Construction Company, Chicago, Illinois. " the easiest-to-handle joint reinforcement I know . . . men really like to work with it. And I get the results I w That's why I always urge the use of Keywall wher joint reinforcement is specified."

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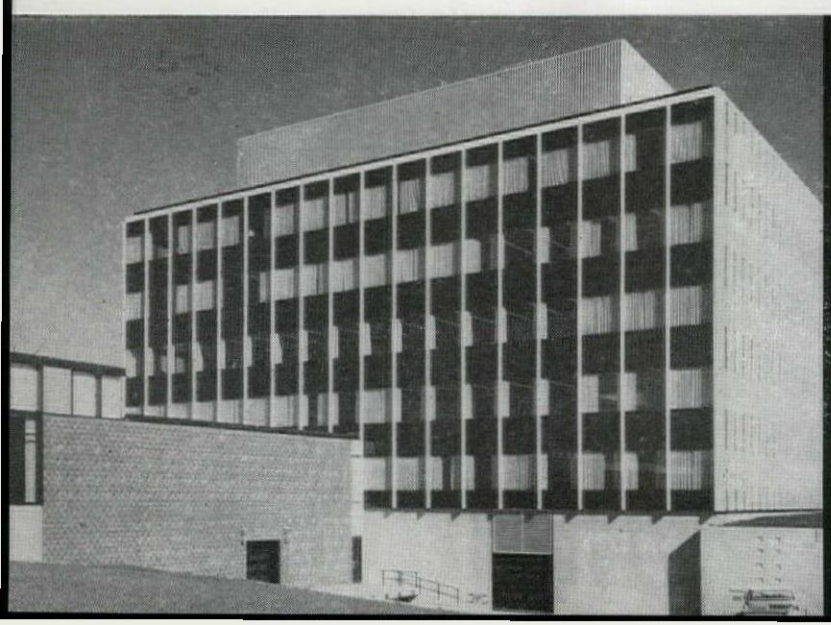
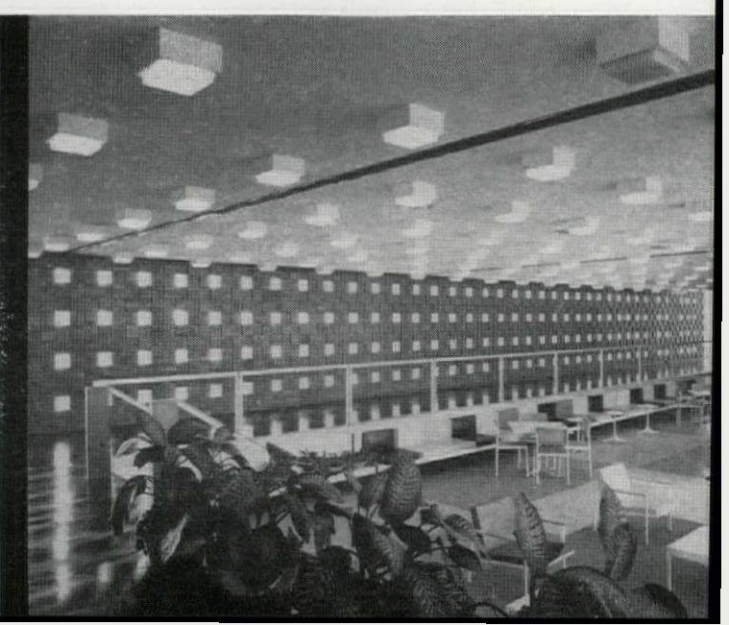
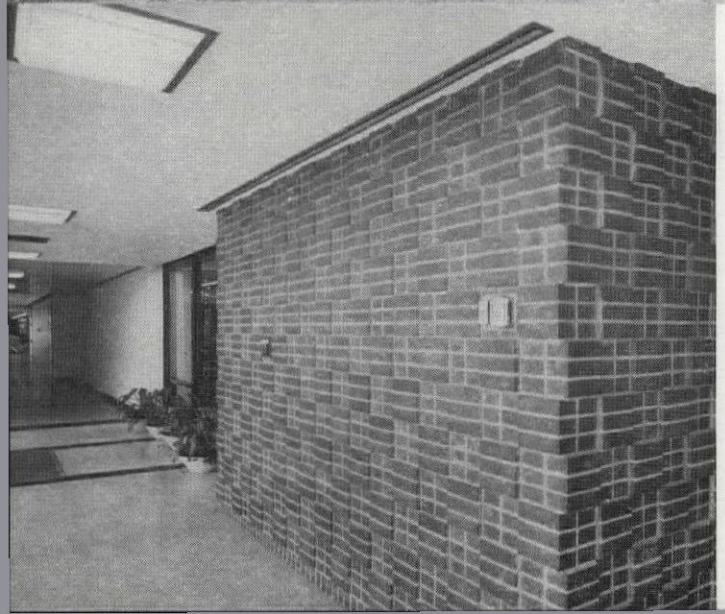




These two Lake Meadows units on Chicago's south side are a prime example of Rubin's fine masonry work. Keywall was used throughout. Architect: Skidmore, Owens & Merrill, Chicago. General Contractor: Turner Construction Co., Chicago.



Rubin used Keywall on the International Minerals & Chemicals Company office building in suburban Skokie. Photographs (left) show interior and exterior masonry construction of this attractive building. Architect: Perkins & Will, Chicago. General Contractor: Turner Construction Co., Chicago.

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reviews

(Continued from page 180)

pected to be provided by resident owners and landlords, aided by loans where possible. This is certainly the type of urban renewal which is both most difficult to achieve and about which we need to know most. The massive application of subsidy funds—the total demolition and replacement of structures and neighborhoods epitomized by renewal programs in most American cities—has given little promise of wide-scale success within the stringent limits of the financial resources that are available. *Unless we can solve the problem posed in this book, the rehabilitation and conservation of the vast portions of the city for which we lack subsidy funds, our shining new construction projects will remain islands in a sea of blight.*

While generalization from a small number of instances is dangerous (especially since experience in some of the study areas appears to contradict that in others), the following are some of the findings of the authors:

1. *Concentrated rehabilitation efforts can change local attitudes toward blight from weary acceptance to a willingness to fight back.* However, this willingness appears to be far stronger among home owners than among tenants and landlords (for whom it can hardly be said to exist at all). The more directly people are concerned, the more they are interested in neighborhood improvement, and the more effort they will devote to it.

2. *With the best will in the world, rehabilitation cannot succeed unless the underlying causes of blight are removed.* These, as described by the authors, include the profitability of slums to landlords in addition to the obstacles represented by outmoded and obsolete structures and street plans.

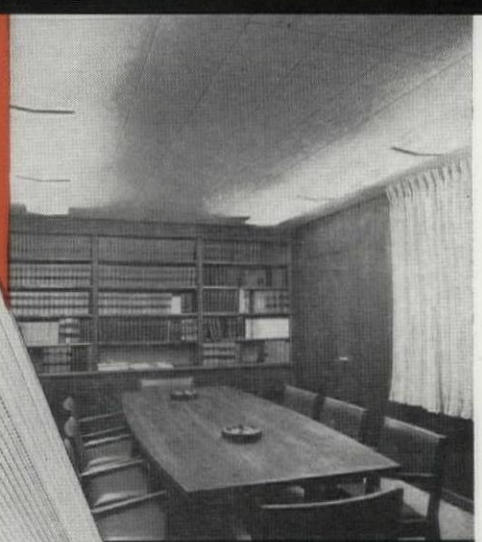
3. *Rapid population changes, accompanied as they are in most cases by differing ideas, living standards, and income levels between the old residents and the immigrants, may defeat the best-designed rehabilitation program.* The authors emphasize that racial tensions, especially those arising where Negroes are moving into areas which have been wholly white, must be faced in urban renewal. The fact that Negroes constitute a large proportion of

(Continued on page 188)

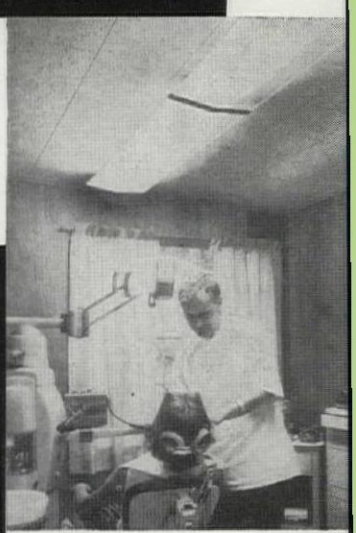
Distinctive Lighting at Modest Cost . . . for Interiors of All Types

SABRE* by miller

General Office Area



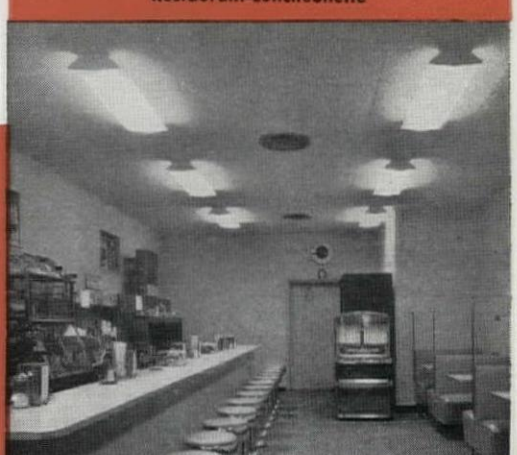
Legal Conference Room



Dental Office

Furniture Store

Restaurant-Luncheonette



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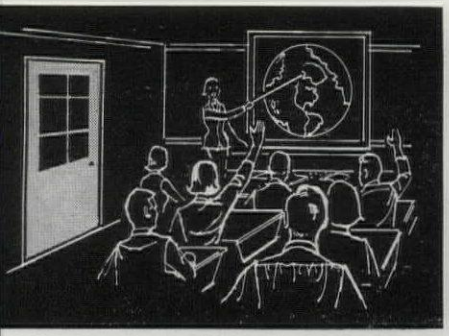

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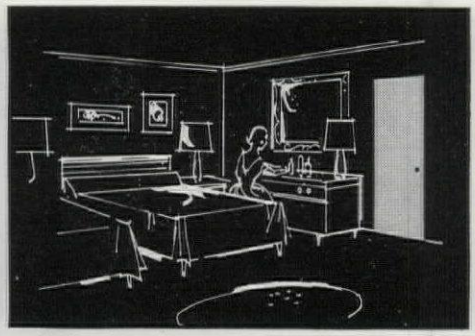

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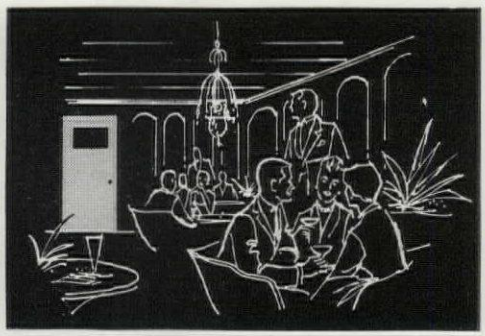

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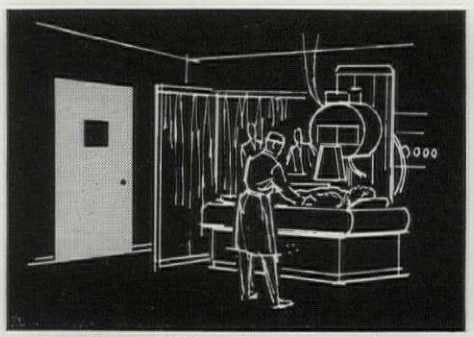

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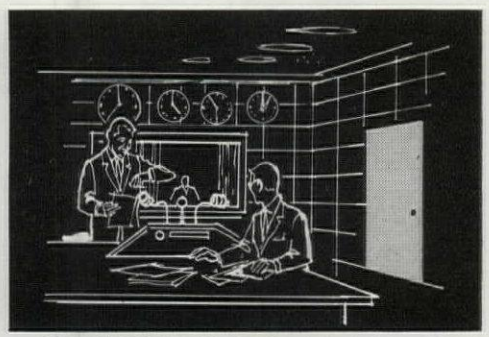

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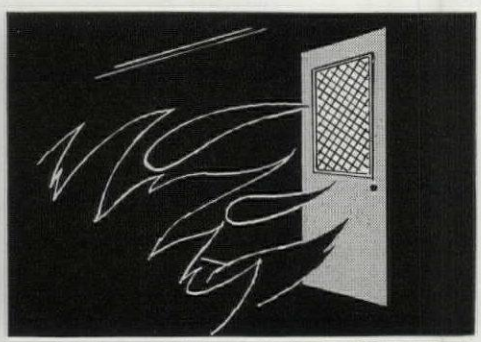

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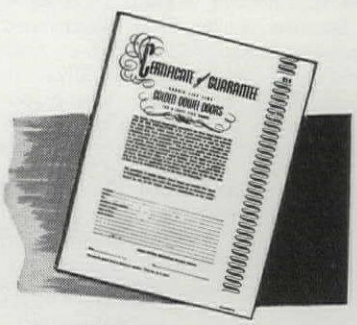

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reviews

(Continued from page 184)

all slum dwellers, together with the difficulties they face in obtaining housing outside blighted areas, has thrust the racial question firmly into urban renewal. In fact, the success, achieved in "Back-of-the-Yards" may be attributable as much to the fact that it has retained a homogeneous population as to the efforts of its residents and civic leaders.

A mere listing of these points, however, is by no means equal to a reading of the book itself. Most of its value is to be found in the fact that it gets down to specific problems and specific people, avoiding abstractions to a remarkable degree. The book is at its best when it describes the attitudes of tenants and owners to the program of rehabilitation, revealing in too many instances a depressing lack of contact between residents and officials engaged in the renewal program. Over-all, one receives the impression that only in those instances where the progress of blight is not far advanced is there great hope of success without efforts stronger and more continuing than any that have yet been made.

For architects and planners concerned with the future of our cities, this study of the human problems faced in rehabilitation should be required reading.

DAVID A. GROSSMAN
Providence, R. I.

BOOKS RECEIVED

Dufy. Marcel Brion; **Grunewald.** Huysmans and E. Ruhmer; **Manet.** John Richardson. Phaidon Press, 1958. Distributed by Doubleday & Co., 575 Madison Ave., New York, N. Y. Each: 112 pp., illus., 16 color plates, $3.95. First three monographs in a new art series to be known as Phaidon Alpha Books.

Guide for Planning School Plants. 1958 Edition. Research and Publications Committee, National Council on Schoolhouse Construction, George Peabody College for Teachers, Nashville, Tenn. 262 pp., illus. $3

Technical Drawing. Fourth Edition. Giesecke, Mitchell, and Spencer. The MacMillan Co., 60 Fifth Ave., New York, N. Y., 1958. 844 pp., illus. $10

Fundamentals of Pipe Drafting. Charles H. Thompson. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y., 1958. 66 pp., illus. $3.50 (paperbound)

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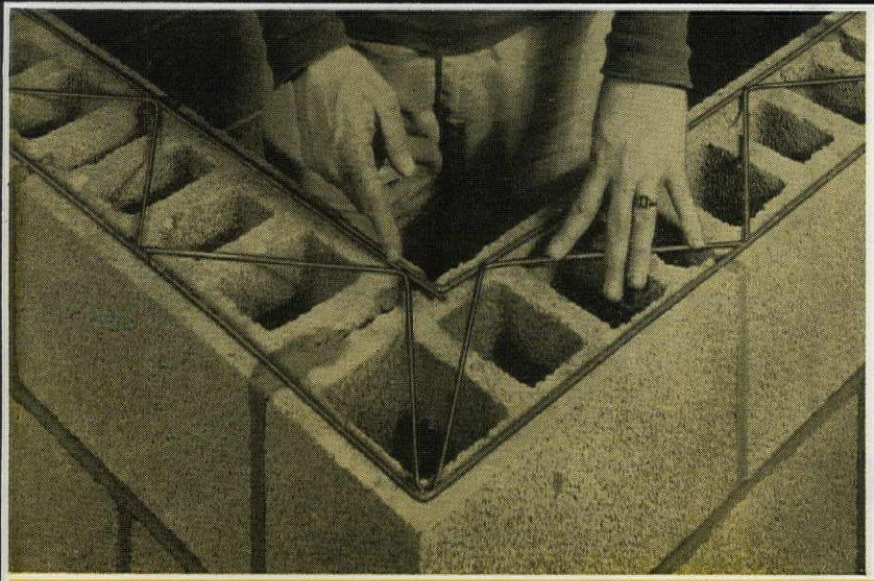

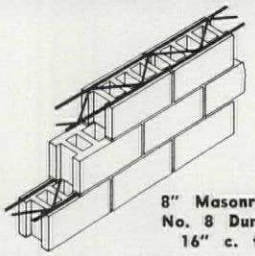

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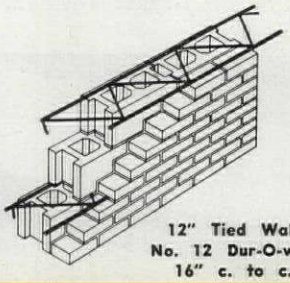

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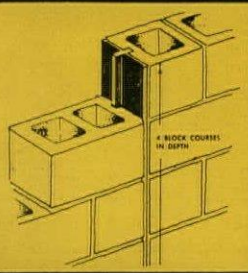

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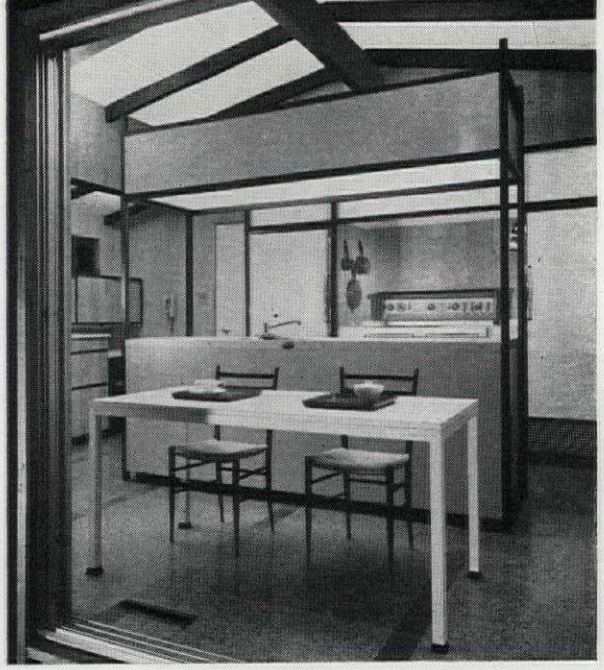

Kitchen dining area. Architect David Leavitt, AIA, is a partner in Leavitt & Henshell, New York City.

Home is designed on 3′ module with four roof heights. Highest is over the living room.

Photos by Ernest Silva, courtesy Living for Young Homemakers

Japanese-style masterpiece designed throughout with Insulite Roof Deck

Before even thinking about a lot, Ernest Silva, owner of this unusual home, spent five years researching Japanese architecture.

It's easy to see that his architect, David Leavitt, AIA, and builder Ralph Lill of Rochester, N.Y., have helped him make the most of his fresh ideas. They also have helped Mr. Silva take full advantage of Insulite Roof Deck's exceptional decorative and functional characteristics.

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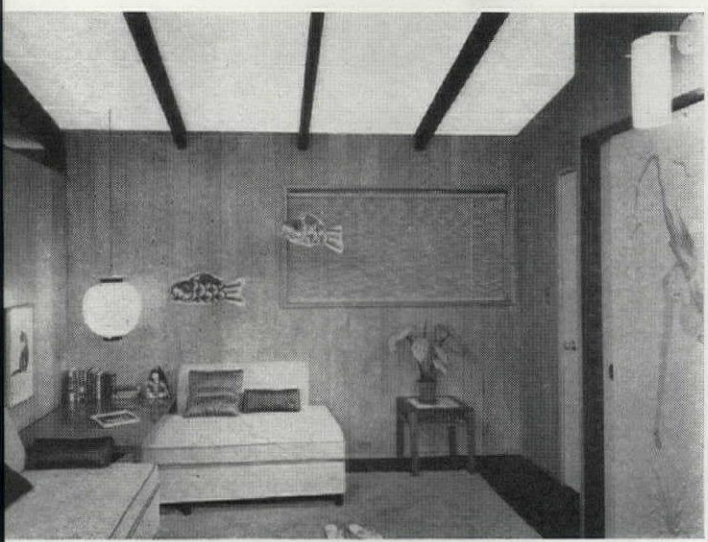
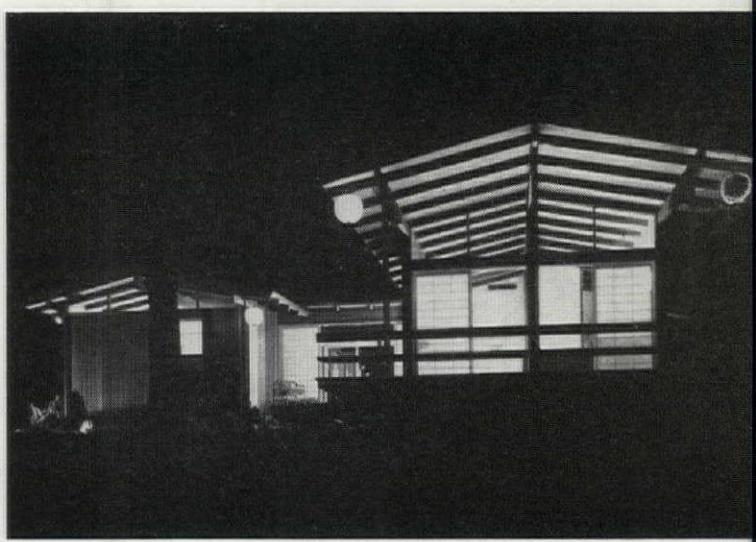
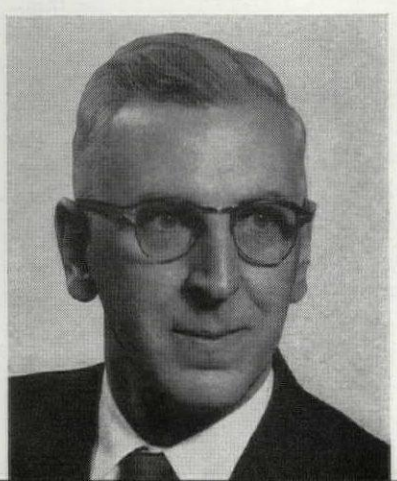


Oriental influence is felt throughout home. Note how Insulite Roof Deck blends with decor.



Night photo shows how Insulite Roof Deck creates a feeling of design continuity throughout.



oth builder Ralph Lill (left) and owner nest Silva (right) are extremely pleased th Insulite Roof Deck. Mr Lill says, t's easy to work with. Goes on fast."

p/a views

(Continued from page 64)

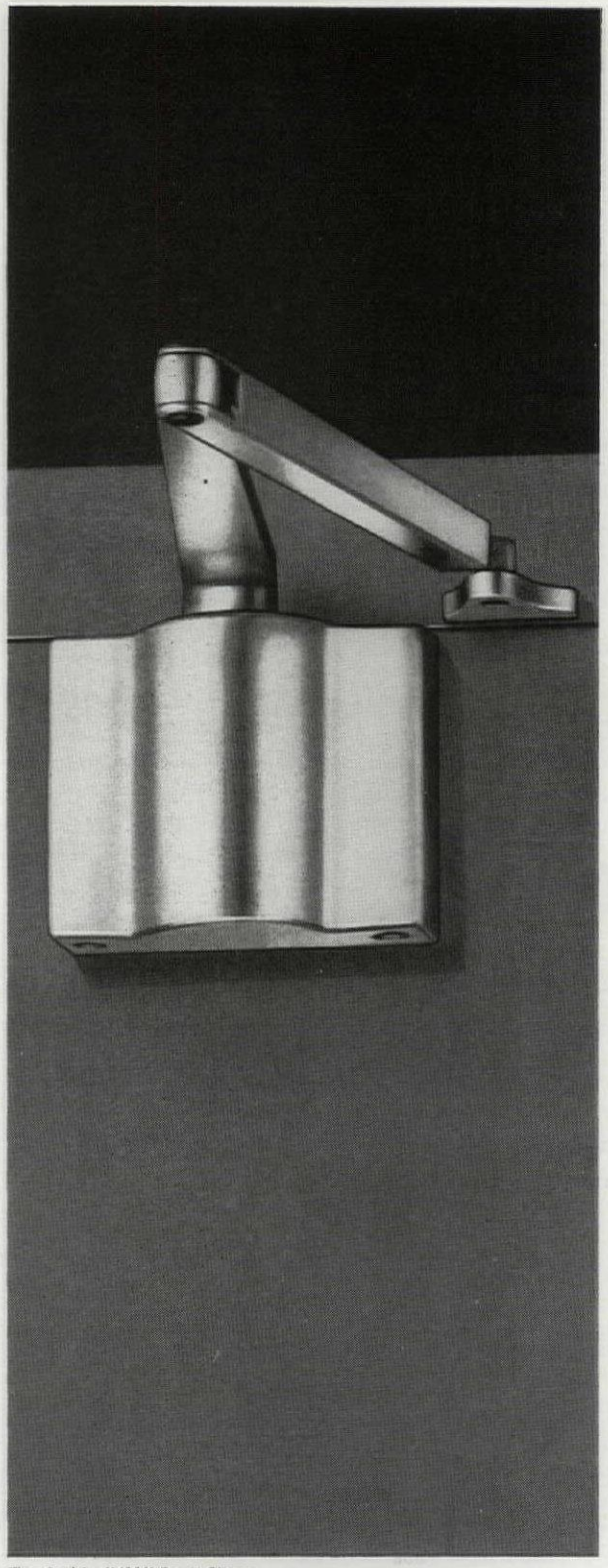
rooms are too low for their dimensions. I suspect, however, that if the architects had given two stories to such areas, as Creighton recommends, then the Esthetic Critic would immediately give way to the Practical Critic who would argue that, after all, they created their beautiful spaces only because their clients permitted them to avoid the problem of the office building. Either way, could the architects have won? A little later Creighton asserts that any critic of the Seagram is bound to question whether air conditioning, sunshades, and all the rest of the compensatory devices required to make glass towers habitable justify such a tower in the first place. But again why single out Seagram for a criticism which applies to most of postwar down town building during the past few years? Having made Seagram a goat for mid-Manhattan congestion, Creighton now proposes to make it a goat for glass buildings, all of which are prime examples of function following form.

Much more significant it seems to me are Creighton's strictures against a "symbol of the industrial-assembly approach to architecture" which "made impossible the specification of any standard, industrially produced component, without cutting or patching." This is a fascinating observation and I wish that I had thought to consider the problem. It needs detailed analysis, however. To what extent does the mass of the components required for a single building of this size justify the extravagance of Mies' custom approach? To what extent is the custom approach in such a building justified as a means of *establishing* standards? In the Seagram building, according to Creighton, idiosyncratic dimensioning in the interest of handsome architectural proportions for the exterior complicated office planning inside. Another problem worth careful investigation.

From such provocative sallies, Creighton turns briefly to the esthetics of the exterior. Those interested can make their own comparisons of our points of view on this matter, since I would like to turn immediately to his opening and closing remarks on the nature of architectural criticism. Now no one would disagree with Creighton that architectural criticism ideally concerns itself with the social aspects and the technology of a building as well as with its design. In practice, within the limits of a magazine article especially, this ideal criticism is often truncated in favor of an intensive examination of certain aspects of the building which merit special attention. In order to make his points, Creighton either simply ignored certain aspects of the building (economics, for example, which are particularly interesting with respect to the Seagram), or merely alluded to problems about which he reaches no definitive conclusions (his technological observations), or leaned on previous analyses (esthetics). If we are forced to make a choice, however, and ask why the Seagram is internationally significant—why, indeed, Creighton thought it worth "re-reassessing"—it can be for one central (and one subordinate) reason only. Esthetically (and urbanistically, despite Creighton's momentary flight from the practical to the chimerical) this building is especially important. Over-concentration on its esthetics, first by its architects and then by its critics, has justified Creighton's taking the building "down a peg." Once down that peg, however, the central meaning of the building remains.

To summarize: on Creighton's first major point, the problem of downtown congestion: why not start with something like the Socony-Vacuum Building if a single structure must be castigated for the sins of the metropolis? On the plaza: I simply think Creighton in error. On the exterior esthetics, which I have not discussed here: he makes some sensitive observations, but this is not his focus. Although he sharply disagrees with me about the esthetics of the exterior in a few respects, some of his strictures are matters of opinion; some (especially the floating quality of the building) can, I think, be reconciled with mine, although he may not believe it. All of which leaves us with his major contributions in respect to function and technology. On function: some of his objections are easily remedied, like optional interior railings for those afflicted with vertigo and two-storied conference rooms whenever Seagram gives the word. Some apply to all metal-and-glass buildings and deserve generic treat-

(Continued on page 196)



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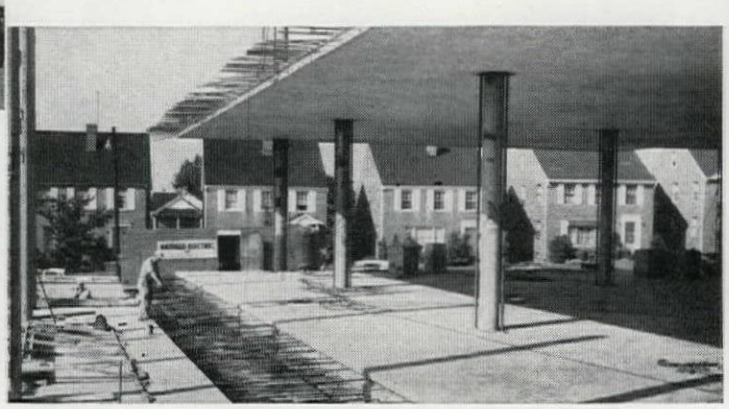

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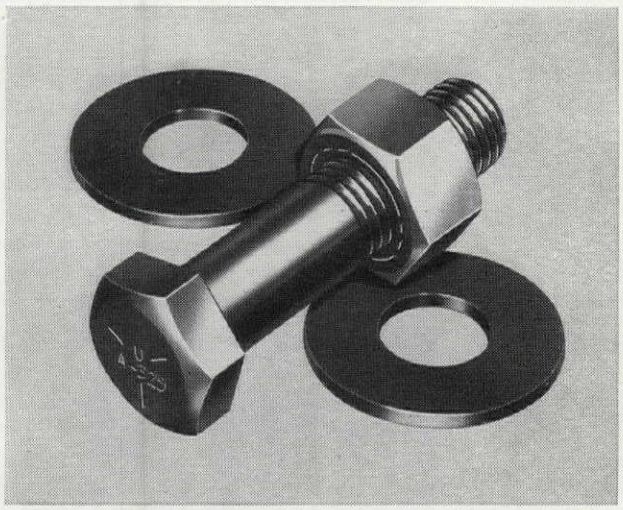

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p/a views

(Continued from page 192)

ment. The extensive amount of dark core space is, on the other hand, a valid objection. So is the awkward interior dimensioning resulting from the esthetics of the exterior grid; but this finding needs demonstration. Finally, on the related complication of the technology by the esthetics: another acute observation which needs proof. But even if the Seagram were functionally and technologically faultless, and these were its only virtues, such qualities would at best rate a technical note. On the other hand, there is so much to be learned from the formal elements of the Seagram, and so uniquely from this building, that it seemed especially worthwhile to me to concentrate in this area. I wish now that I had stated the limitation of my analysis specifically. I wish, too, that I had mentioned that the formalism of the Seagram, which is its pride, is also fraught with dangers of which I am very well aware.

And now we "historians" — whom Creighton twits, much as certain historians feel that their arguments gain lustre by snide references to journalists—pause in our "learned reviews" for other architectural journals and *The New Yorker*. We await the Full Seagram Treatment for the next commercial building that comes *Progressive Architecture's* way. And I don't mean those pallid "round robbins"—pallid by FST standards, at any rate, however helpful they may be in themselves. I refer to smashing critiques which begin with Creighton's initial question about the Seagram: should this building have been built in the first place?

WILLIAM H. JORDY
Brown University
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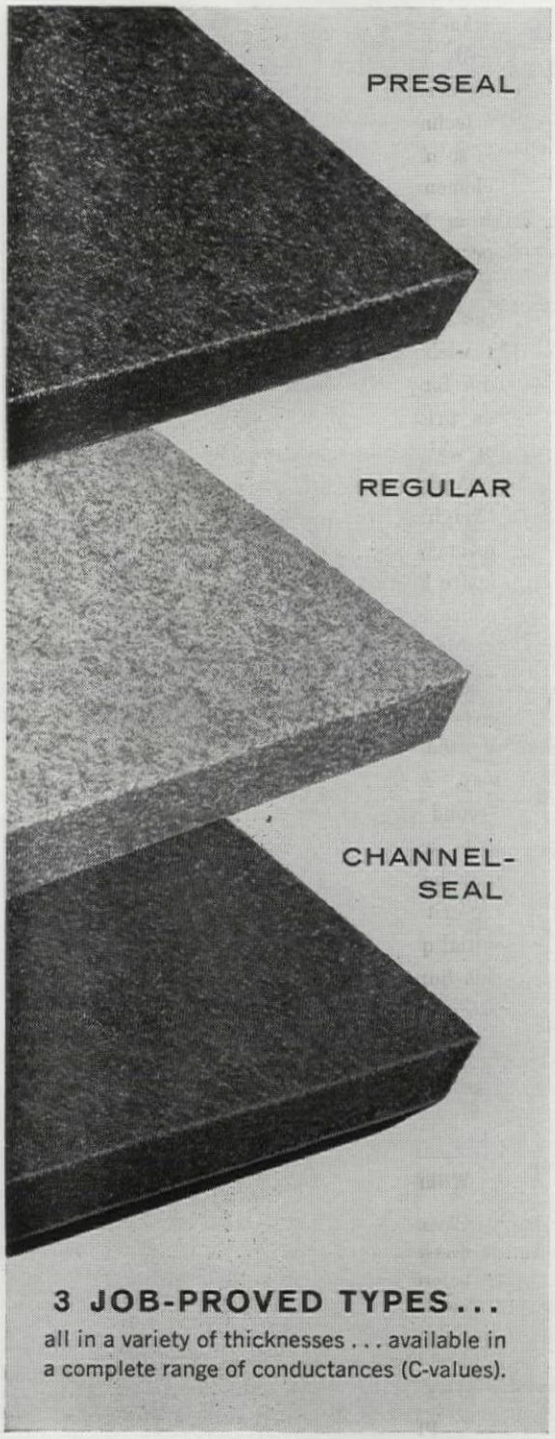

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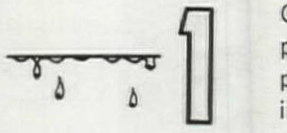

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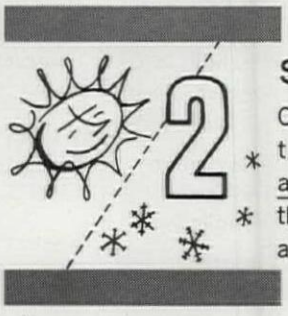

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MARSHALL R. LEEPER, elected Vice-President of UNITED STATES PLYWOOD CORPORATION. RAYMOND C. PLATOW, appointed as Technical Director.

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JOHN ALICO, appointed Director of Engineering, and CHARLES H. CREASSER, as Vice-President in charge of Manufacturing for the WALWORTH COMPANY.

SAMUEL REGENSTRIEF, elected President; CHARLES BOTTORFF, Vice-President and Treasurer; and LEE BURKE, Vice-President-Engineering of DESIGN AND MANUFACTURING CORP., successor company to American Kitchens Division of AVCO MANUFACTURING.

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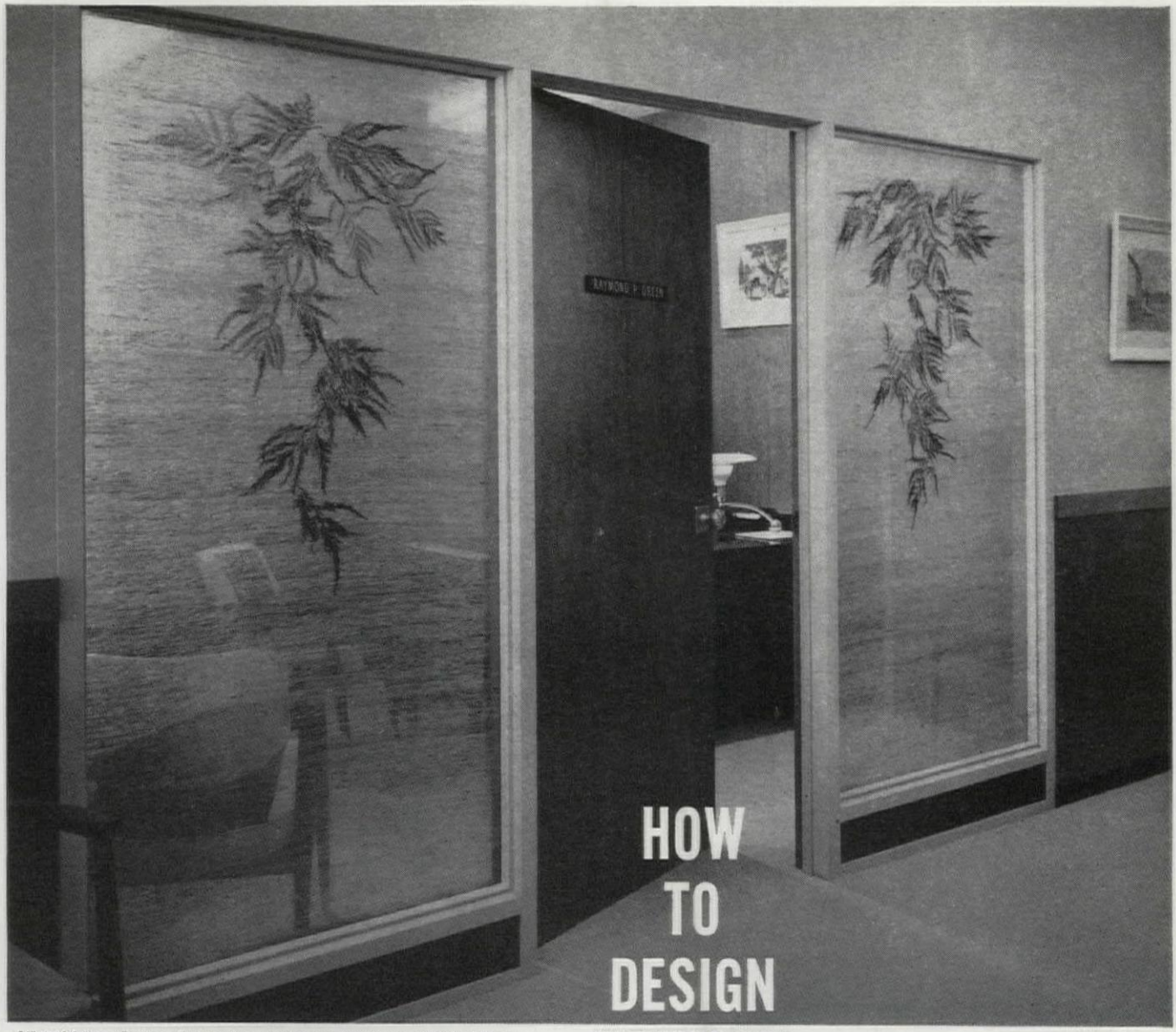

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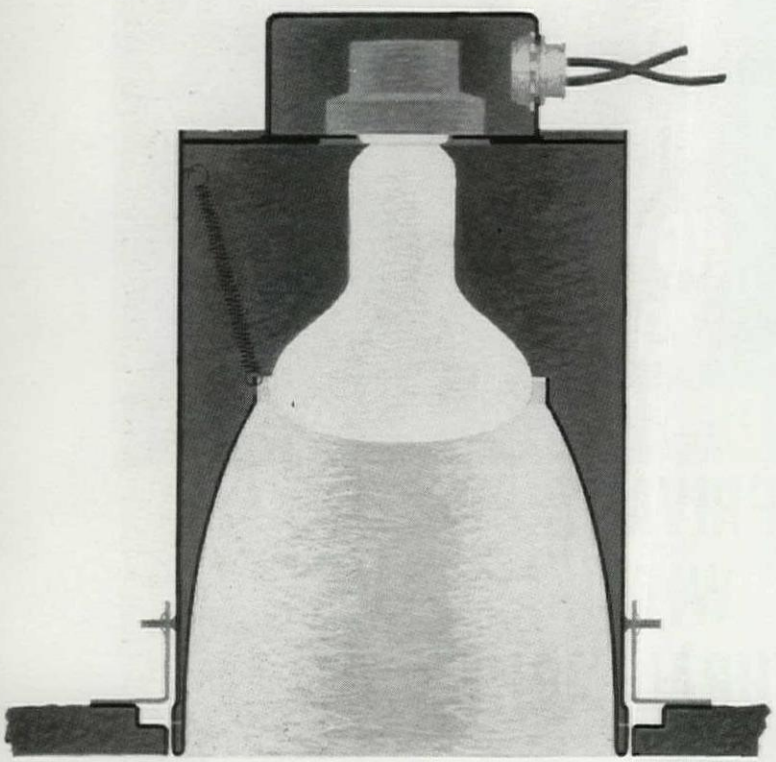

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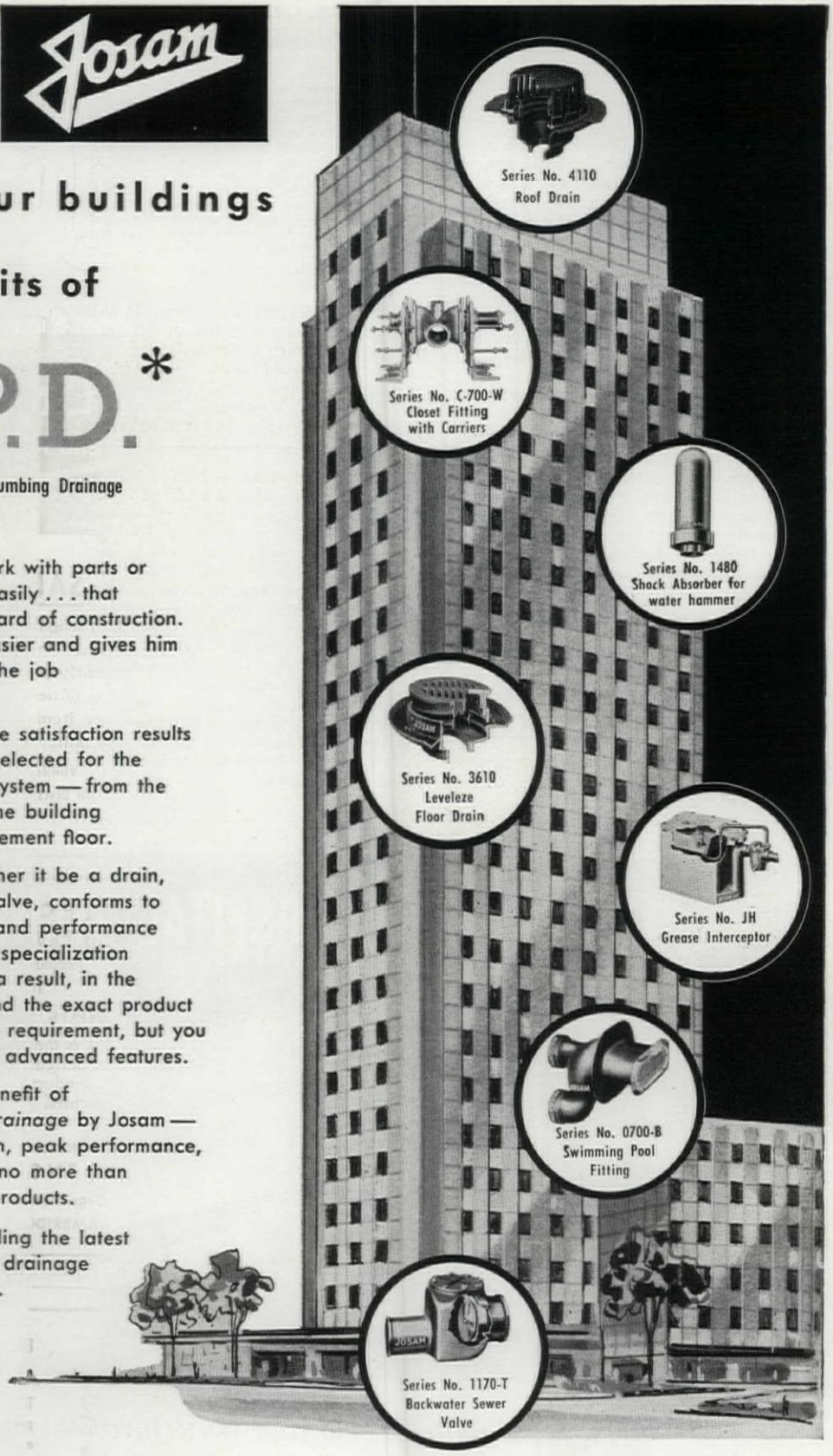

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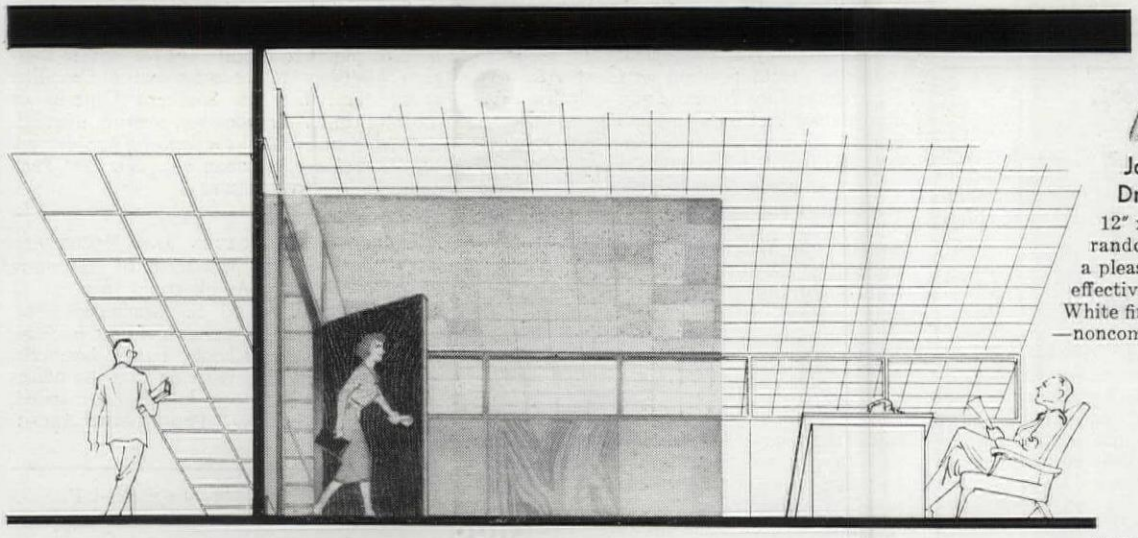

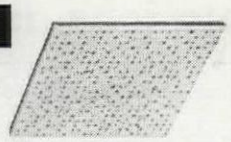

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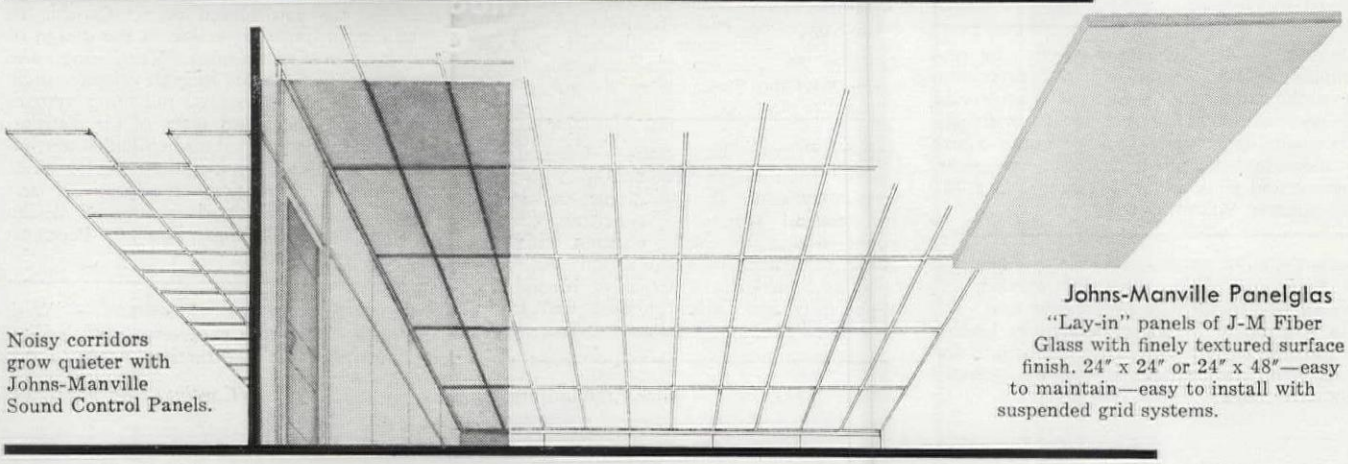

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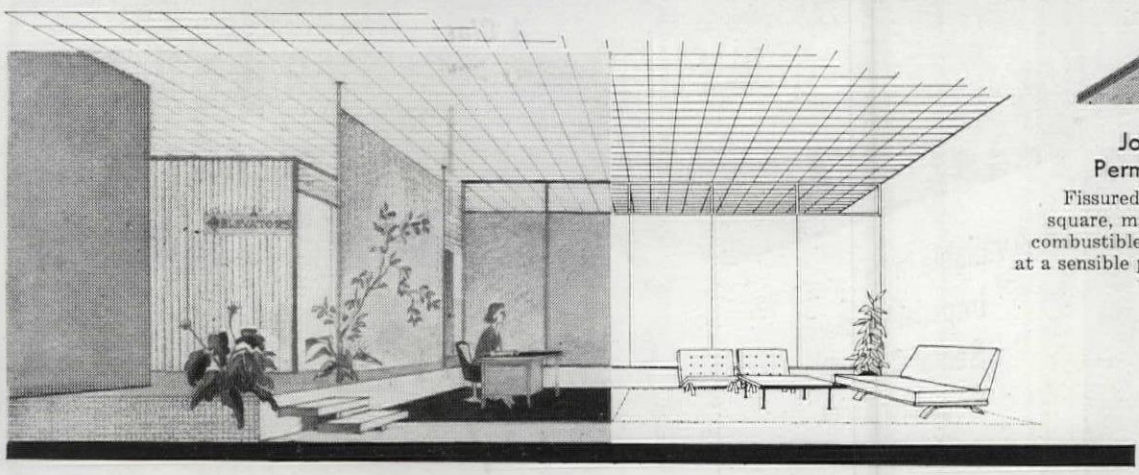

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(Continued on page 209)

Radiant Ceiling News

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Modern Building Uses Radiant Ceilings...

International Minerals and Chemical Corporation selects Burgess-Manning Radiant Acoustical Ceiling for new Administrative and Research Center

The group of buildings recently occupied by International Minerals and Chemical Corp. in Skokie, Illinois represents 15 years of careful planning. It consists of six connected buildings, of modern design and construction, located on a broad plaza adjoining a forest preserve and is one of the show places of this Northwest Chicago suburban industrial area.

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New administrative and research center of the International Minerals and Chemical Corporation at Skokie, Illinois, built by the Turner Construction Co. of New York.

A typical view showing the Burgess-Manning Radiant Acoustical Ceiling installed in a general office area.

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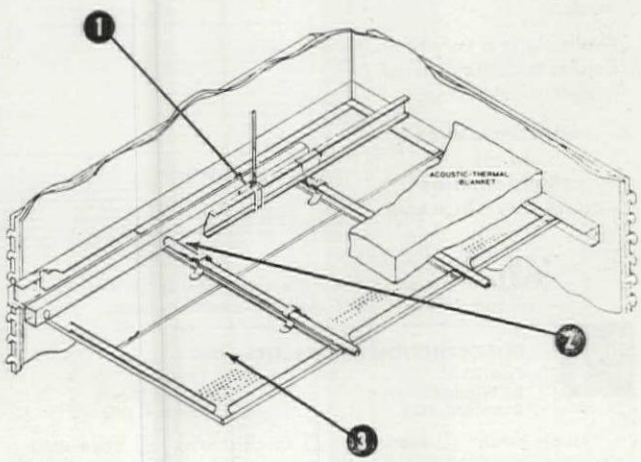

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(Continued from page 206)

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P.S.

popular taste

The subject of criticism of architecture, which has occupied this page on a number of occasions recently, leads inevitably to the questions of *popular taste* and *public understanding*. Critiques in P/A are directed to professionals. How would objective criticism of architectural design and town planning be received in the popular press? Would they do harm? Would they do any good? Several basic questions arise:

1 Is the level of popular taste necessarily "bad" in relation to progress in design? Must a developing art form always be avant-garde in relation to the public taste; so that as the public is "educated" and "accepts" the form, a new avant-gardeism is necessarily developing to which, in endless cycles, the public must then become educated?

I would answer no to this question. It seems to me that one must believe, as part of one's faith in the democratic process and the potential development of social participation by all people, that popular taste can become a taste for the "good" in all the arts. This would seem, in theory, to be a function of developing education and cultural advance. It would also seem, in actual practice, to have been proved possible in certain areas of cultural understanding in the United States (sale of good paper-back books; interest in good music, reasonably high-level theatre, etc.) and in a rather high level of popular taste in design of useful objects in, for example, the Scandinavian countries.

2 Are there really various levels of taste (upper, upper-middle, middle, etc., as Russell Lynes has defined them) so that what is good architecture to one level of education, experience, and sophistication might be bad or mediocre, or just plain uninteresting to another level?

If there are such taste levels (as there undoubtedly are differences in activity-interests and activity-habits related to occupation, income, amount and type of education and other social factors) they are probably caused by degrees of *information* and *experience*. Hence it would seem that differences can be made to decrease as information and experience increase. It is interesting that an exhibit of avant-garde art arranged for popular observance almost always is successful. The traveling Picasso show last year drew fascinated observers from all income and habit-sophistication levels. The Outsider and the Insider seemed to rub elbows before his paintings. The lonely and the gregarious appeared equally fascinated.

3 Is it possible to translate a rather low level of popular taste (such as we now have in design, whether of buildings, interior decor, or automobiles) into something laudable—approaching a folk art—simply because this is "popular" and therefore (democratically) "good" taste? Can the googy architecture of roadside hot-dog stands, the apparently genuine popular liking for corny overdecoration, be considered in terms of naturally developing arts such as jazz music, and thus be translated into an important architecture?

This "coming rapprochement between modern architecture and popular taste" as it has been called, is foreseen by some critics because of a belief that, to quote Douglas Haskell: "What makes the artist a leader is that he discovers the aim that is struggling to express itself and then identifies himself with it. He helps it to emerge in a manner more satisfactory to its originators than would have been possible through their own unguided efforts." Most critics of art—and certainly most artists—have been concerned with the relation of the artist to nature, and with his ability to interpret nature and man—things, emotions, desires, frustrations, ambitions. Seldom (except in depressed artistic periods of low ability or pure pandering, or revolutionary periods when art became an instrument of popular revolt) has high art been considered a matter of identification with popular artistic understanding. This position would seem completely to abnegate the artist's role as artist and would make him rather a leader or a teacher—admirable but very different roles.

It would seem that undeveloped popular taste should be developed and improved, and I believe that this is possible today. To attempt to *express* it, or to cater to it would seem, if not patronizing, at least romantic and sentimental. It would have the grave danger of becoming our equivalent of the now dead-ended Soviet social-realism in the arts. Soviet architecture (in its very worst period of crude neo-renaissance skyscraper design) was explained and justified to me by Alexandre Vlassov, then Chief Architect of Moscow, in an interview in Poland in 1952, in these familiar words

"Soviet architecture is designed to the needs and desires of the people, while the so-called modernists produced buildings that no one understood or liked but themselves. In the Soviet Union the people have the deciding word . . ." The "so-called modernists" in the US produced Lever House, a rather popularly understood bit of advanced architecture. The social-realists from Moscow, under Vlassov, produced the Palace of Culture in Warsaw, which the Polish people, one hears, would love to be rid of.

Finally, on this subject, it seems to me that when a popular art reaches a stage where it should be taken seriously *as art* (when handcraft carving becomes serious sculpture; when folk-dancing reaches professional stature; when jazz music becomes capable of serious analysis and criticism) then this art must be considered, evaluated, enjoyed, and criticized by the same serious standards and criteria that are applied to any other fine art.

•

In trying to answer these questions, I seem to have come to a general conclusion: intelligent, objective, critical discussion of architecture, directed to the general public should be good for the profession. It should educate, inform, and therefore raise taste levels and basic understanding of contemporary design aims. In this way, experiment and advance, rather than catering and compromise, could be made easier.

Final conclusion: architects should encourage, and not be afraid of, popular criticism. It has its dangers; it also has great potential benefits.

Thomas H. Creighton

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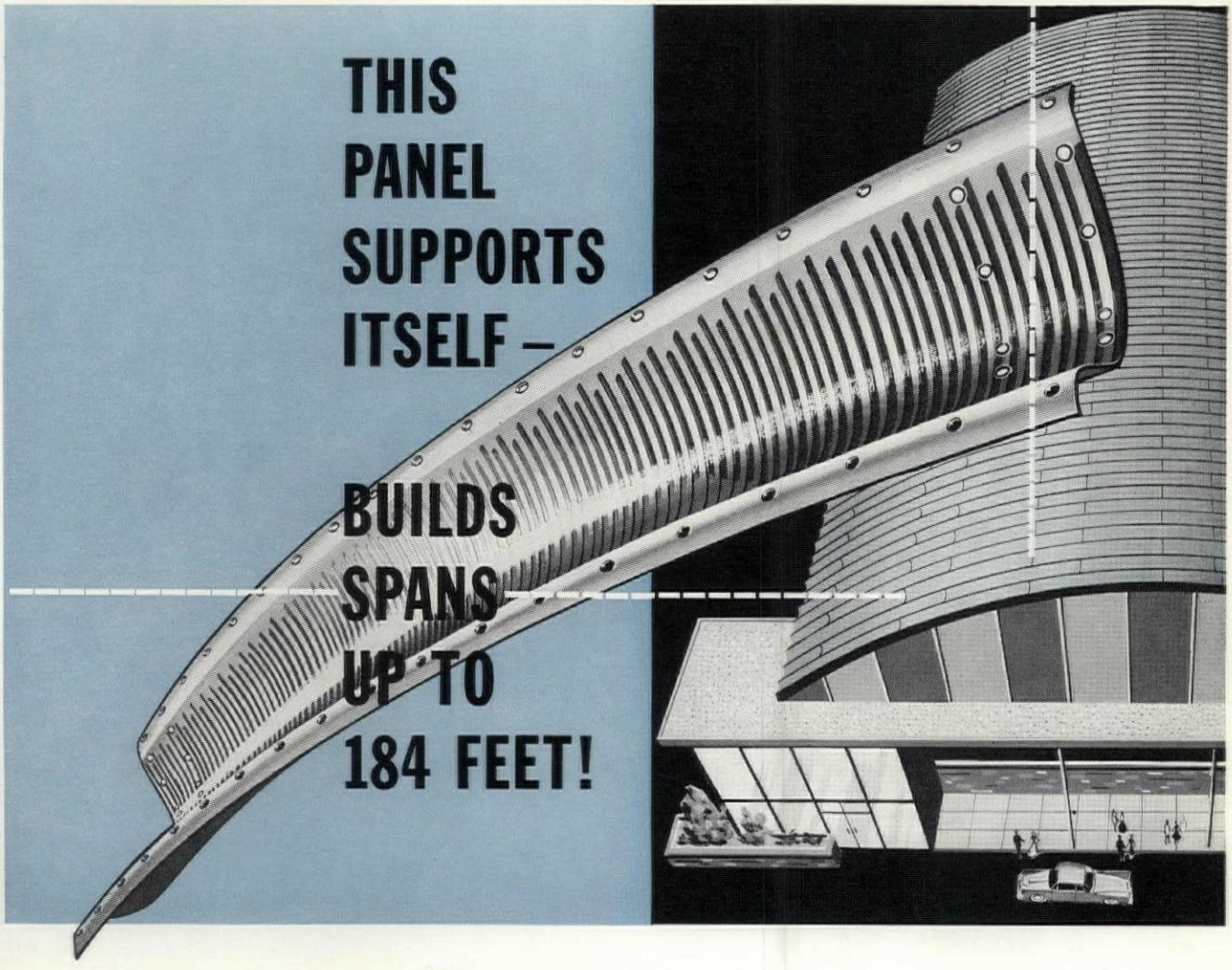

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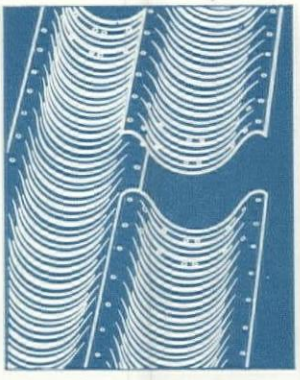

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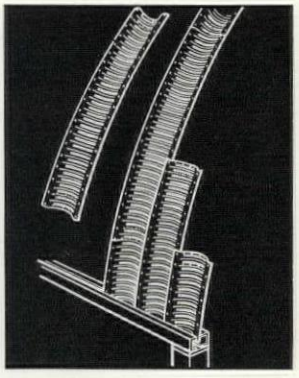

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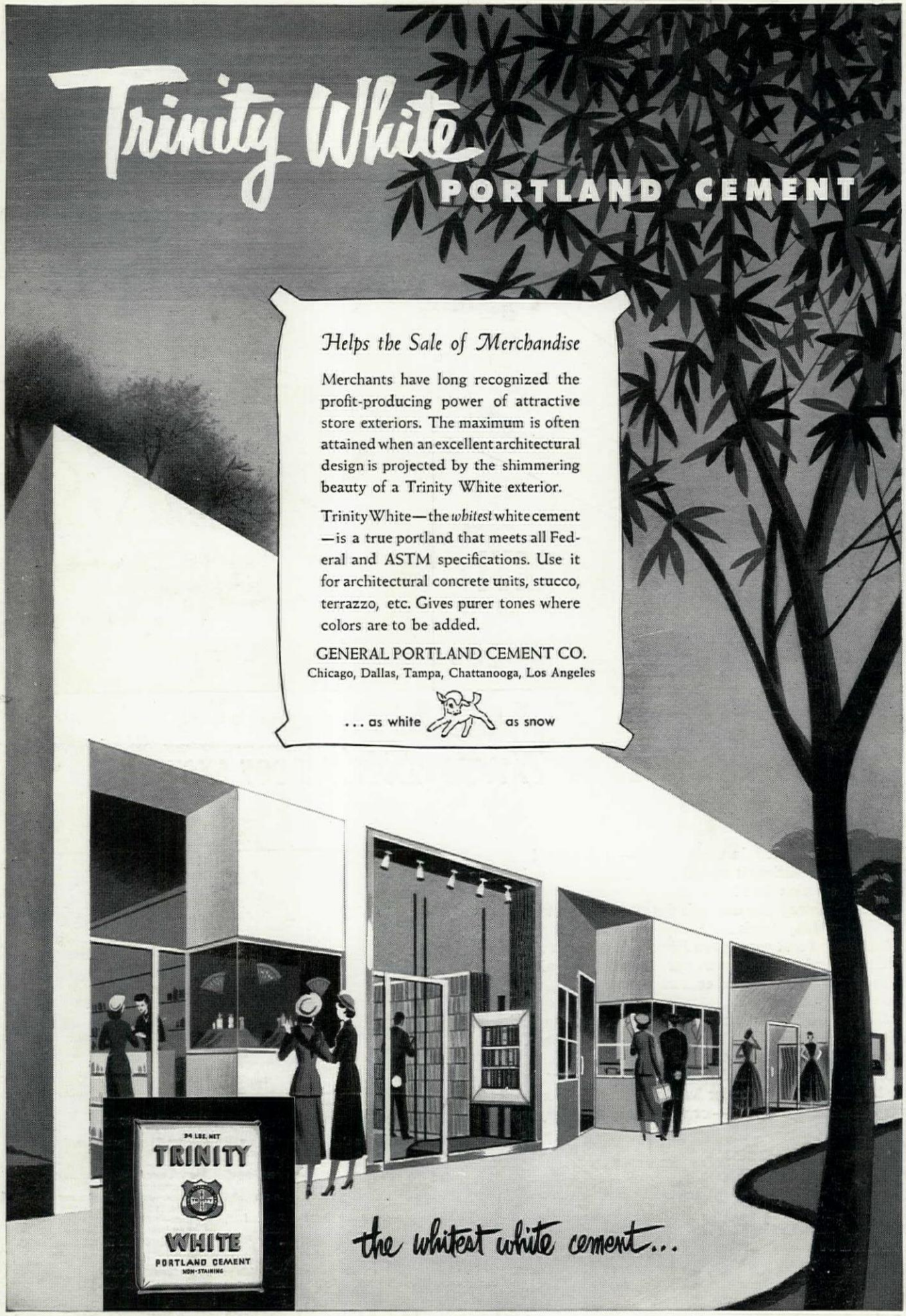
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