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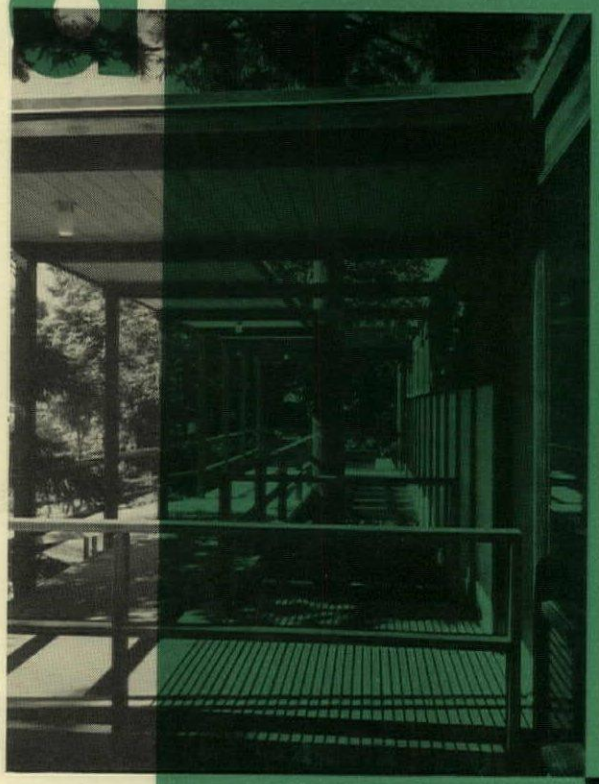

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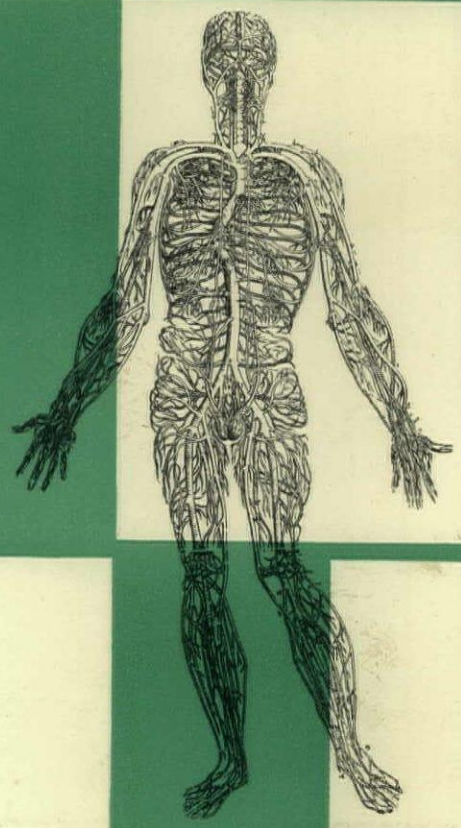

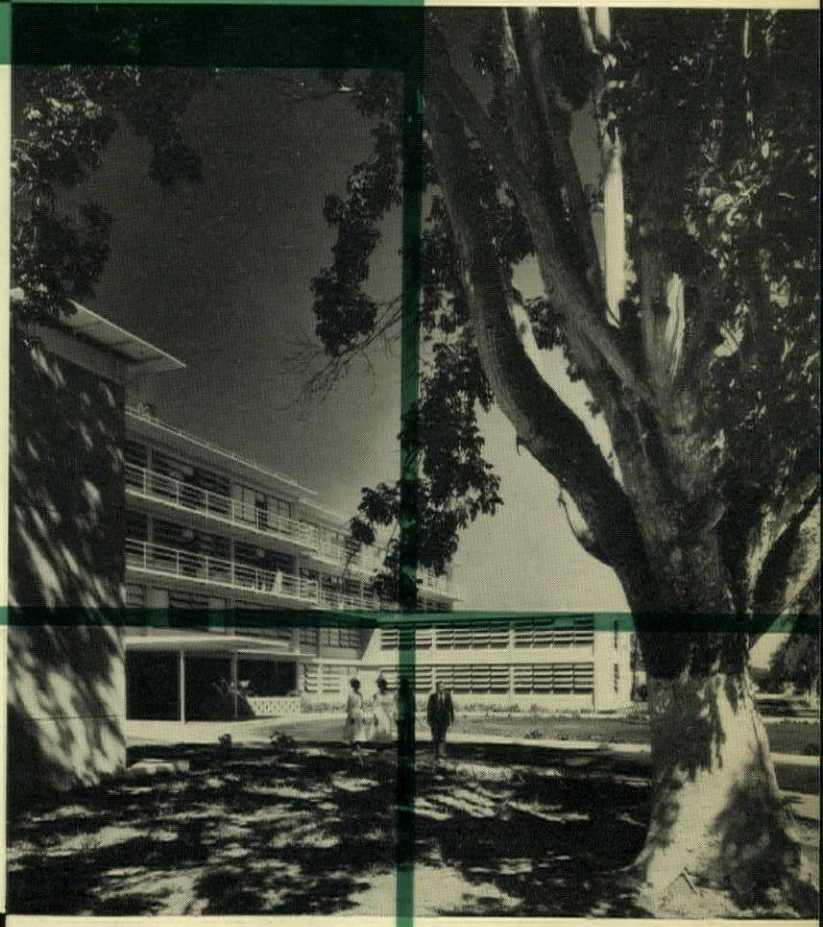

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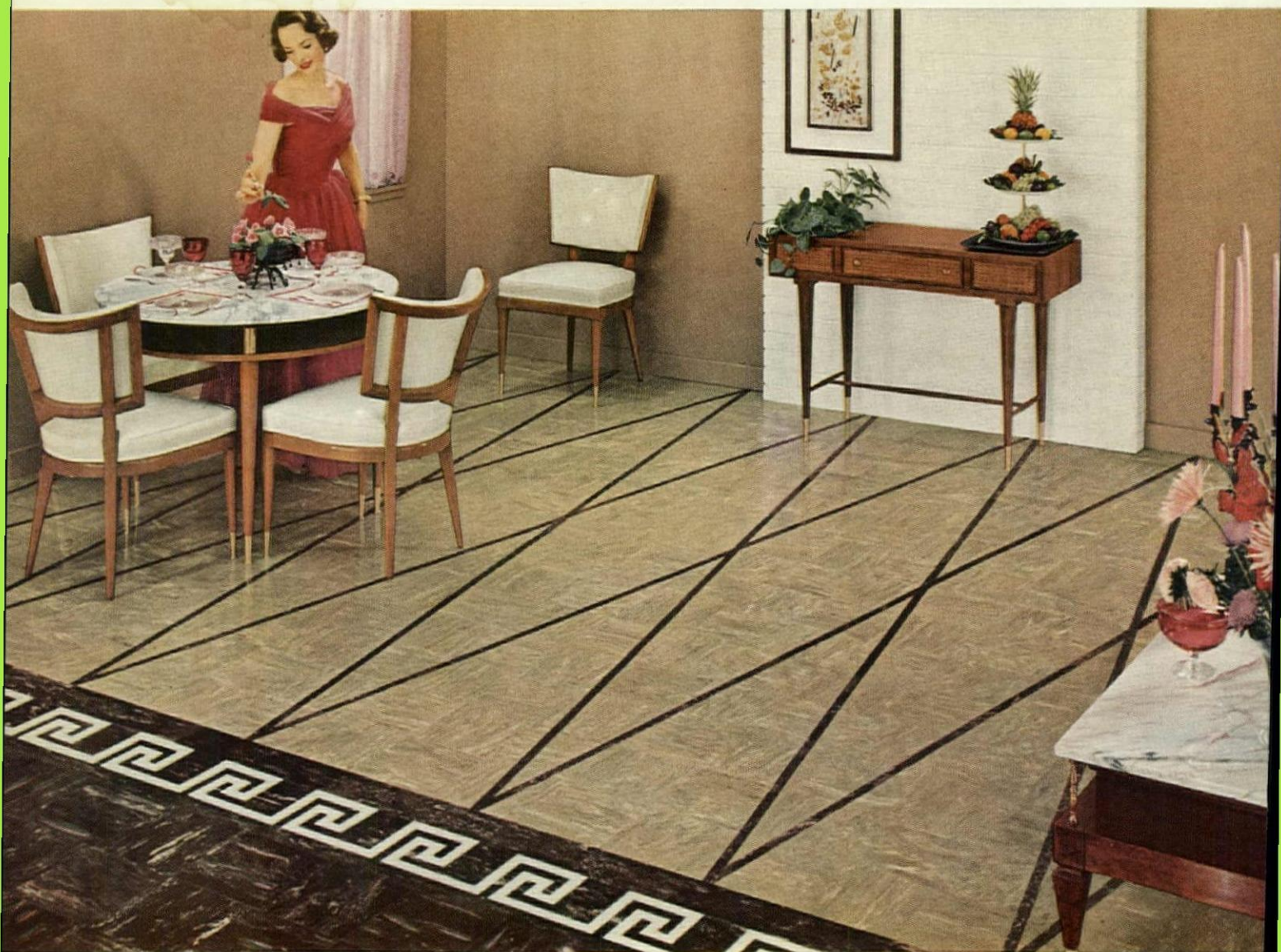

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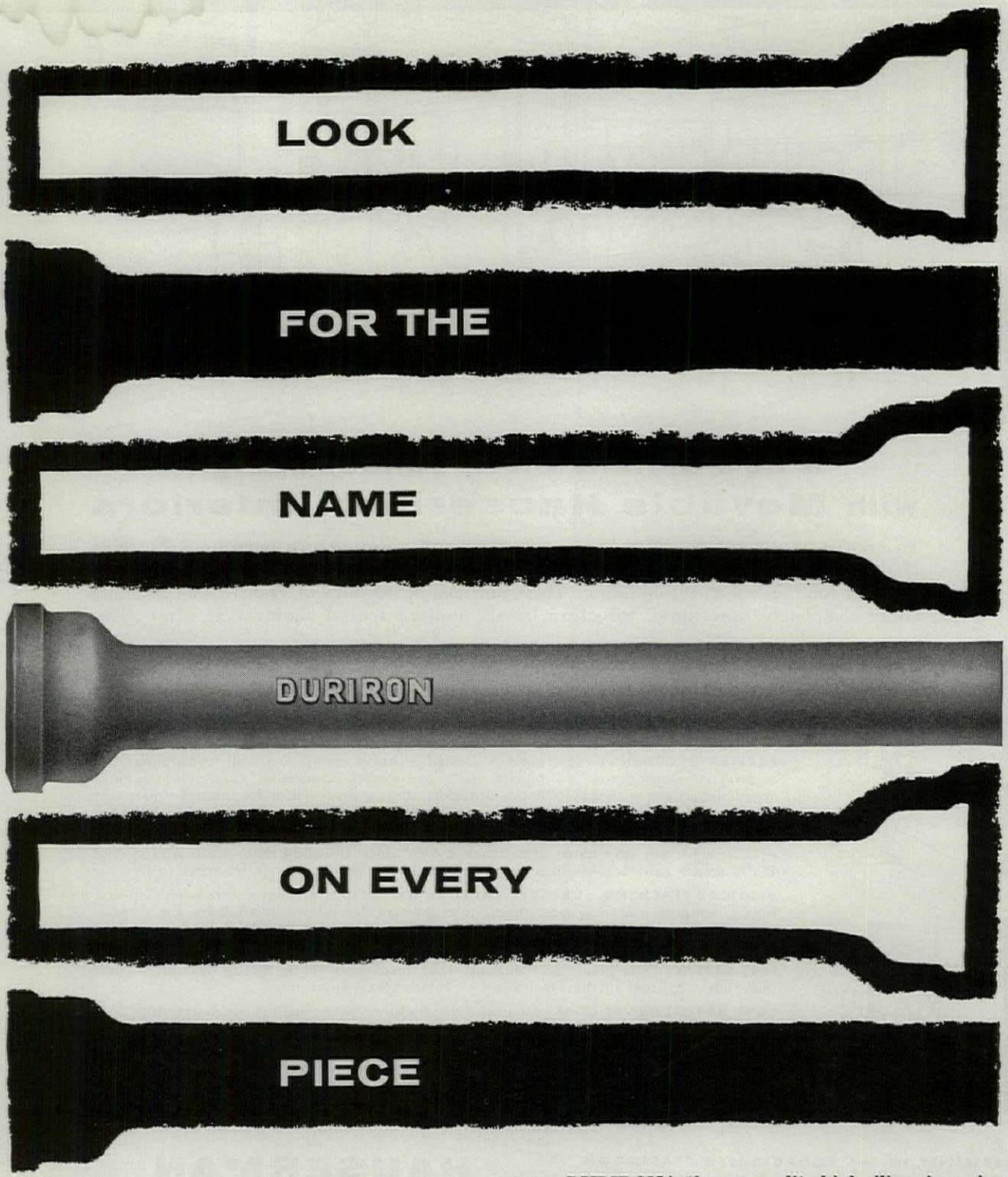

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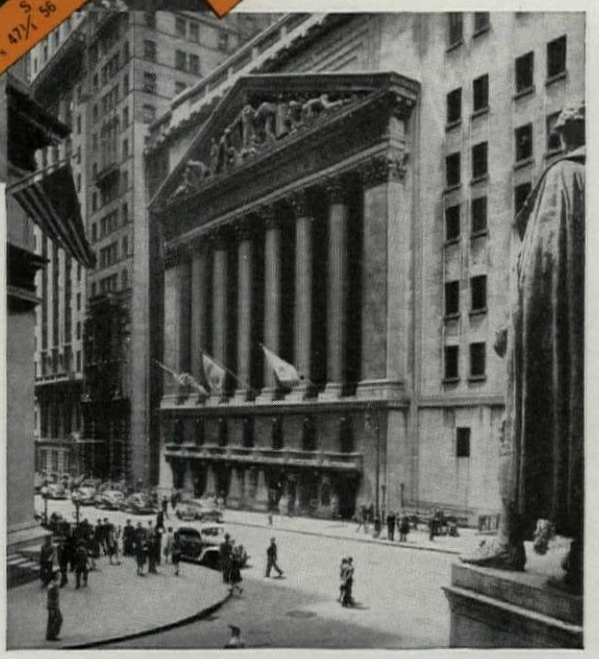

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It's the Law by Bernard Tomson

P/A Office Practice *column on the legal aspects of architecture and engineering. This month's column supplements Tomson's* Architectural & Engineering Law *(Reinhold, 1951) by reporting summaries of cases decided since publication of the book.*

PART V.
RIGHTS OF ARCHITECTS AND ENGINEERS COMPENSATION

Chapter 22—Effect of Cost Limitation on Compensation

Louisiana. *Rosenthal* v. *Gauthier*, 69 S. 2d 367 (1953). Where an Architect furnished plans and specifications for a building whose cost of construction would exceed the cost limit contemplated, it was held that the Architect was not entitled to his fee.

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Minnesota. *Wick* v. *Murphy*, 54 N.W. 2d 805 (1952). In an action to foreclose a mechanic's lien for architectural services under a contract which provided that the compensation was to be based upon the total cost of construction, it was held that the Architect's compensation could not be based on a rejected bid substantially in excess of the limitation placed by the Owners on the cost of construction.

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Louisiana. *Bruno* v. *Gauthier*, 70 S. 2d 693 (1954). An Architect sued for the unpaid balance of his fee for preparing plans and specifications for the construction of a residence. It was held that he was entitled to recover the amount sued for, even though the parties' original agreement fixed a limit on the cost of construction, which limit was exceeded. The Court's decision was based upon the fact that changes and additions requiring a larger expenditure were made and no objection had been registered to the plans ultimately furnished by the Architect.

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Colorado. *Medical Arts Building* v. *Ervin*, 257 P. 2d 969 (1953). In a suit to foreclose a mechanic's lien for services rendered by an Architect under a contract to prepare plans and specifications for remodeling a building, the Court held in favor of the Architect where the contract was plain and unambiguous and contained no reference to a $75,000 cost limitation. It was further held that the Architect was not liable for damages to the Owner for expenditures beyond the expectations and financial ability of the Owner in carrying out the plans.

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Chapter 23—Right to Mechanics' Lien

New York. *Bralus Corp.* v. *Berger*, 307 N.Y. 626 (1954). Application was made to discharge a mechanics' lien filed by an Architect for making drawings for preliminary plans which never became embodied in a structure. The Court held that the New York Lien Law does not call for the discharge of a lien arising from architect's plans which are preliminary in nature, provided they have progressed to a point where they can be characterized as "plans." Whether the drawings which were prepared to assist the Owner in deciding whether he wanted the building were "plans" or not, was a question of fact to be decided at the trial and not in a summary proceeding.

•

Washington. *Hyak Lumber & Mill Work* v. *Cissell*, 244 P. 2d 253 (1952). In an action to foreclose a materialman's lien in which the plaintiff established that sales had been made to the defendant, but failed to show that the materials (1) actually went into the building for which they were furnished, or (2) were actually delivered upon the site for use in such building, the Court, having refused to recognize the lien at the trial, denied a motion to reopen for further testimony by a carpenter to the effect that the carpenter had used the material on the home.

PART VI.
LIABILITY OF ARCHITECT OR ENGINEER TO OWNER

Chapter 24—Liability for Negligence or Fraud

Montana. *Garden City Floral Co., Inc.* v. *Hunt*, 255 P. 2d 352 (1953). A Landowner sued a Contractor for damages sustained when the wall of the Landowner's building collapsed and fell into an adjoining excavation being made by the Contractor for the Landowner. The Court held that although the Landowner was required by the contract to employ a duly qualified architect to supervise the work, the requirement of full supervision did not extend to the method and means of doing the work, but was complied with by the employment of an architect to supervise the result. The fact that the architect's license had expired for nonpayment of his license fee was held not to affect his qualifications as a "duly qualified" architect in view of his years of experience.

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Michigan. *Giffels & Vallet, Inc.* v. *Edw. C. Levy Co.*, 58 N.W. 2d 899 (1953). Suit was brought by an Engineering-Architectural Firm for services rendered in connection with an enlargement of a Corporation's plant and the Corporation counterclaimed for alleged delay in furnishing drawings. The Court held that the Corporation had the burden of proving that the Architectural Firm was solely responsible for the delay and that it had failed to sustain this burden. The Court added that, where both contracting parties contributed to a delay, neither can recover damages unless there is clear proof as to the apportionment of the delay and expenses attributable to each party.

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Virginia. *Surf Realty Corp.* v. *Standing*, 78 S.E. 2d 901 (1953). In a suit to enforce a mechanics' lien, in which the defendant claimed that the Architect had promised but failed to complete the work by a specified date and that the supervision of construction had not been proper, the Court found that the evidence did not sustain the contention that the Architect promised completion of the building within a certain date, or that the design had been faulty. In doing so, the Court said, at page 807: "An architect in the preparation of plans and drawings, owes to his employer the duty to exercise his skill and ability, his judgment and taste reasonably and without negligence. . . . in the absense of a special agreement, he is not liable for faults in construction resulting from defects in the plans because he does not imply or guarantee a perfect plan or a satisfactory result." Although affirming the judgment for enforcement of the mechanics' lien, the Court found that evidence established that the defective work on the roof of the building had been done under plaintiff's supervision and that the architect had been negligent in failing to discover these defects.

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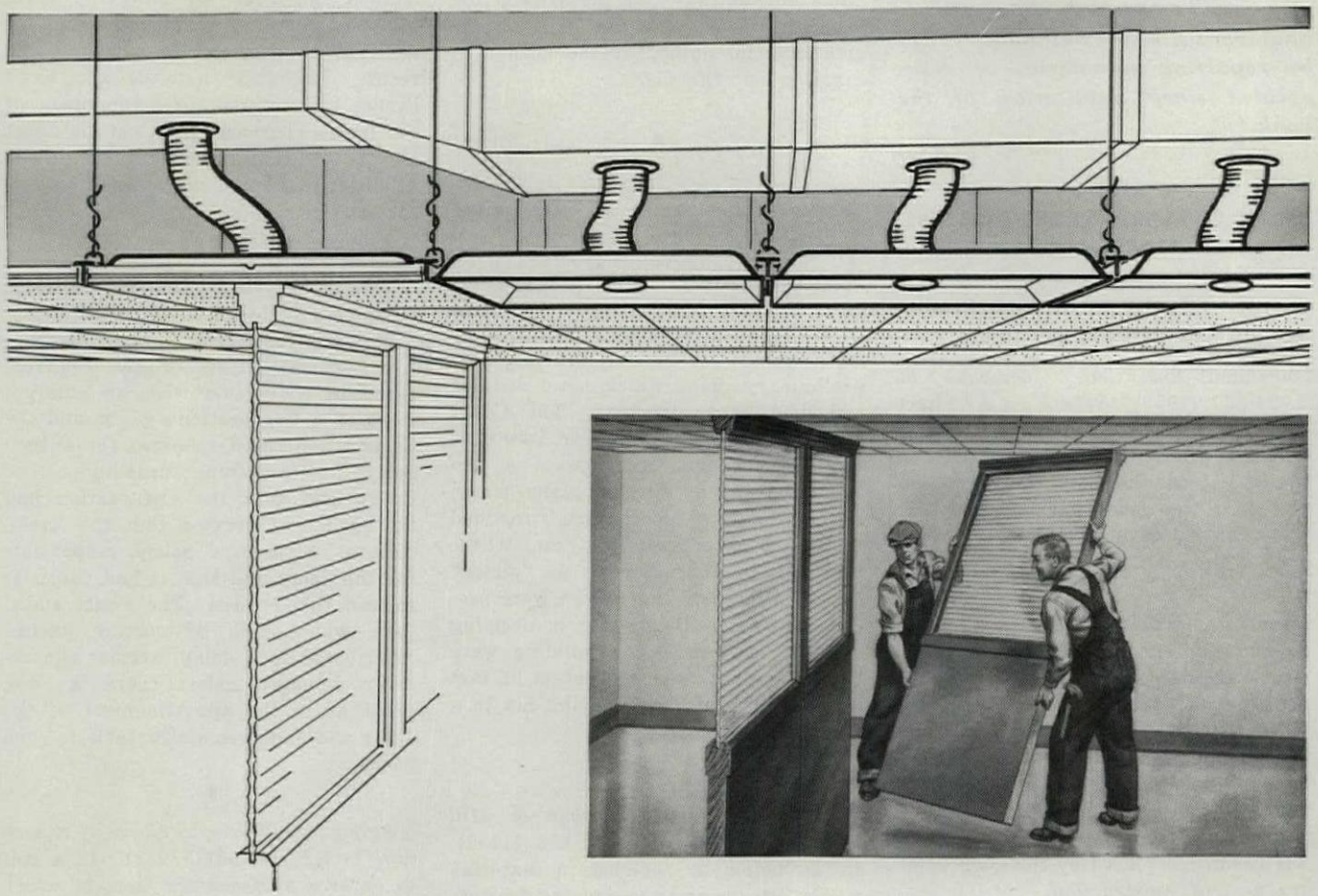

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SALES AND ENGINEERING REPRESENTATIVES IN PRINCIPAL CITIES OF UNITED STATES AND CANADA

Mechanical Engineering Critique by William J. McGuinness

P/A Office Practice *column on mechanical and electrical design and equipment, devoted this month to the subject, Air Conditioning: Office Building Modernization.*

Must existing office buildings have air conditioning installed in them in order to compete with new buildings which offer it? Air-conditioned space attracts personnel, improves office efficiency, and brings higher rentals; yet, packing a system into an old structure presents a number of problems, which countless owners are facing right now. The Twenty-Five Broadway Corporation recently appraised the relative advantages and difficulties of installing air conditioning in the Cunard Building at 25 Broadway, New York (built 1921), and solved its problems with directness and success.

questions to be resolved

Will air conditioning be an improvement in comfort and efficiency for the owner's operating personnel? Do the tenants want it and will they pay the increased rental? What will the system cost and will rent increases pay for it within a reasonable period of time? Can the structure accommodate new equipment loads and is there space for water chiller, pumps, ducts, pipes, controls, fresh-air intakes, and a cooling tower? Which type of system is best for the particular installation? How long will planning take; can installation be accomplished during working hours without disturbing tenants or must a premium be paid for overtime? Will the addition of ducts and other equipment disfigure the building interior? Will a larger or more skilled maintenance staff be required?

answers

Personnel. The Twenty-Five Broadway Corporation was farsighted enough to visualize benefits to both employer and employe, which have already been realized during the first complete year of operation.

Tenants. On the first canvass, 95 percent of the tenants wanted air conditioning and agreed to the increased rental. This increase amounted to 49 cents per sq ft of floor area per year for floors one through 11, which have a conventional duct system. Since the tenants desired individually controlled fan-coil units at windows in addition to the central system (on floors 12 through 22), the increase in rent is 65 cents per sq ft per year.

Structure. Twenty-two stories of 16-in. diameter chilled-water pipes weigh 100 tons; similar condenser-water pipes weigh 125 tons. The loads are carried to existing footings resting on bedrock. Analysis showed that existing columns were adequate for the extra weight and wind-load effect of a cooling tower placed on the roof. Basement compressors are supported by new foundations resting on rock.

Space. Like so many older buildings, this one has high ceilings. However, a critical condition occurred at the eleventh-floor ceiling where secondary water pipes and electric feeders supplying upper-zone risers (floors 12-22) crossed from interior shafts to the building perimeter. A furred ceiling below these pipes still gives 8′ 6″ clearance. It was found that two express elevators could be discontinued and removed; this space and an unused vent shaft were sealed to carry fresh and relief air. Unwrapped, condenser-water pipes stand within the relief-air space and wrapped, chilled-water lines as well as steam and return lines are contained within the fresh-air shaft. Space for air-handling units on each floor was found in storage areas which were cleared for the purpose. These space-finds were quite unusual since, frequently, rentable space must be sacrificed and its loss must be considered in an economic appraisal.

Cost. Total: $3 millions. Two millions of this was for the primary air-conditioning contract and the balance went for incurred changes in structure, finishes, and electrical work. A total of 600,000 sq ft of floor space is conditioned, requiring 1870 tons of refrigeration. The final installation cost per sq ft of space conditioned amounted to $5; total cost per ton of refrigeration was $1600. One ton of refrigeration services 320 sq ft.

System. Purchased steam and standby oil-fired boilers were retained. Steam-driven centrifugal compressors serve the plant which produces chilled water at 42 F for central air units on each floor. Central air units on upper floors (12-22) are smaller because fan-coil units below windows supplement them. These central units at each upper floor supply outside air which is tempered and filtered. In winter, operation of upper stories is exactly the same except that all units, central and window, use hot water converted from steam in the basement instead of chilled water. Lower stories use the central system, with hot water, for ventilation and movement of tempered air, but carry their heat load, as they did originally, by steam radiators at windows. The difference in the scheme for these two systems was based on the desire of tenants on upper stories for more flexible service. In off seasons, only outside air is circulated throughout the building.

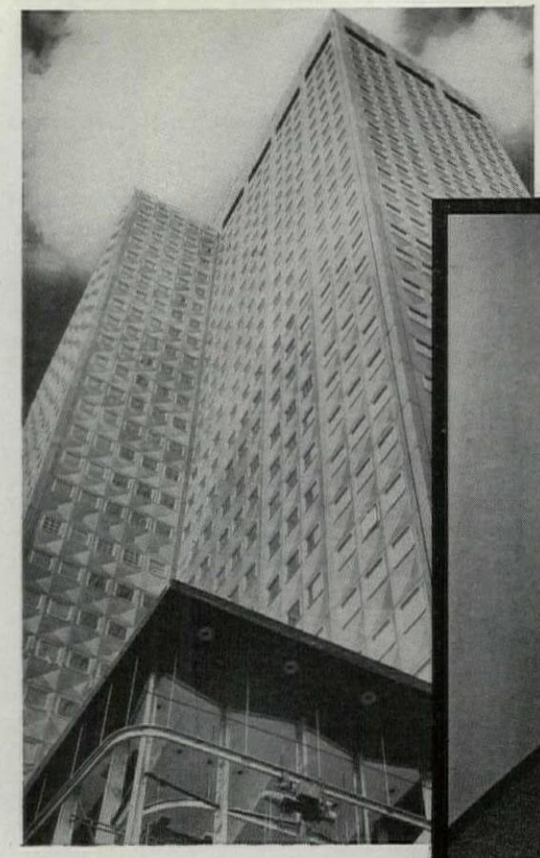
Amortization of cost. The cost of installation was 25 cents per sq ft; the average increase in rental is 57 cents per sq ft a year. Net operating income, after deducting for a 20-yr amortization plan, is 32 cents a sq ft.

Time. Economic study and planning required six months; installation 11 months. Almost all of the installation was accomplished during working hours, with a minimum of trouble for tenants.

Building interior. Although some ceilings and columns had to be furred, the appearance is no different than that of a new building with furred ceilings. Some of the duct runs were left exposed, and, with the aid of square corners (containing turning vanes), they look appropriate for their function.

Staff. A temporary increase in carpenters and painters was necessary but the operating staff of skilled and licensed engineers remains the same. An electronic-control system contributed substantially to this economy of operation. Located in the basement, it places high-frequency current on the existing 60-cycle electric system, requiring no extra wiring. Signals are picked off these regular wires at all stories. This device turns on the system at 8 a.m. and turns it off at 6 p.m.; every 10 minutes it sends out a check signal to see if any fan, pump, or other device has failed and relays this information to a control board. The engineer usually arrives at the source of trouble before the office manager has had time to complain.

The Building Manager for The Twenty-Five Broadway Corporation, worked closely with Edward Deeb, Project Manager for Kerby Saunders, Inc., Mechanical Contractors, on the design of the air-conditioning system.



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How The Architect Looks to The Building Product Salesman

P/A Office Practice *articles based on statements about architects from leading building product representatives.*

Last year William B. Remington, P/A's Eastern Regional Manager, carried out a rather extensive survey among architects, on the subject of what was good and what was bad about the approaches of building product salesmen calling on architectural offices. The results of that survey produced an article on the subject which appeared in *Printers' Ink*, December 3, 1954.

At that time, a number of the architects who voiced their likes and dislikes of the manufacturers' representatives suggested that turn-about might be fair play; and urged Remington to find out *what the salesman thought of the architect* he called upon.

A questionnaire on this subject was prepared and sent out to a number of salesmen whom the architects themselves had nominated, and this article is a condensation of the results. Certain points were repeated by many of the respondents; only a few quotations are used to indicate the sort of amplification that recurred.

Architects, these men said, "are in general very fair in their dealings with building materials and equipment salesmen." However, a minority are "choked with their own dignity," and in a great many instances might help themselves (as well as make life more pleasant and productive for the manufacturers' man) if they watched the following things:

Be frank with the salesman. "Tell him if his products haven't a chance," suggested one man. Another said, "When an architect calls a salesman in for information on a project, in too many instances he will not take him into his confidence and give him pertinent data about the status of the building, and sometimes not even the name of it. The salesman may spend considerable time and effort to secure a favorable specification . . . but finds himself at a disadvantage when he learns (almost at due date) that the building is being bid."

Worse than that, said another, "A few architects make the practice of going to the leader in the field for engineering information, including competitive outline specifications, and then they will invite his competitors to bid on the job on the basis of substitutes and omissions, with the object of gaining a low price."

Make the relationship mutually helpful. "Too often the architects tend to forget that their co-operation with a salesman is a two-way street," one man commented. "They are quite willing to extract all the technical help they can get from the salesman, and yet after the bids come in they are perfectly willing to put the same salesman in the breadline with everyone else." And another wrote, "Some architects will impose on a material man's time for information and for aid in the preparation of specifications; then he is conveniently forgotten when the time comes for purchasing."

Call for advice early. This point, repeated often, was expressed well by one man who wrote, "Don't wait until the last minute before asking a salesman for information. It may take several weeks to prepare data, write outline specifications, and assemble budget prices."

Allow the salesman enough time. "We know the architect is busy," runs a typical comment on this point, "and we know that he may be deeply involved in many projects. At the same time, if we are to be of value to him we must have sufficient of his time, in at least a neutral atmosphere or environment where our product can be presented to him for adequate evaluation."

"If the building product salesman has information of value to the architect," commented another, "he deserves a decent interview. Only in this way can the architect really learn of new products and new processes."

And a third said, more strongly, "There are some architects—a very small number—who refuse to expose themselves to a discussion of materials. Thus a poor specification is likely to be repeated on job after job."

See how products have worked. A typical comment in this category said, "Not all architects—because of the tremendous demands on their time—make follow-up calls or proper investigation of actual installations of products suggested by materials salesmen." And another remarked, "In some cases extremely erroneous information is accepted from competitive-material salesmen, with no attempt on the part of the architect at verification of claims."

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It was also evident from the answers that some salesmen realize their own faults—or at least the faults of their competitors. There are manufacturers' representatives, commented one, "who do not understand the position of the architect or architectural firm in relation to the over-all building project. The architect, naturally, objects to those salesmen who do not know their jobs. You can rest assured that the salesman who calls upon the architect without complete knowledge of his product is headed for trouble."

Throughout the responses ran an appreciation of the fact that "the architect" is not one single individual, but an organization. "In my opinion, the head of the firm is not the party a salesman should first attempt to sell," said one. And another added, "The salesman must know and be known to the principals in the office. However, it is probably more important for him to be thoroughly acquainted with the chief engineer, job captains, specification writer, and the draftsmen. Generally it is through his work with these people that he obtains his greatest success in selling his product."

In summary, these quotes were typical: "There is nothing wrong with the way architects deal with building materials and equipment salesmen." . . . "Naturally, there are some architects who refuse to listen or who profess to know more about the product than the salesman, but this is probably true in all lines of sales." . . . "A mutual respect is usually developed if the salesman fulfils his obligations to his company and to the architect."

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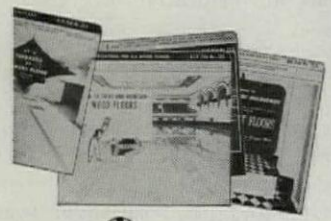

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Memorandum for Architects on a Planned Publicity Program

P/A Office Practice *article on the value of a carefully planned publicity program.*

P/A receives so many inquiries from architects whose work it plans to publish, asking, "Do you object if a school magazine (or a church magazine or a house magazine) also publishes this job?" that a restatement of our concept of a *planned publicity program* for good architecture seems in order.

P/A is heartily in favor of the widest possible publication and promotion of good architecture. And we assume that if your office has achieved an excellent building one of *your* prime interests is to have it seen and known by as many interested people as possible.

How can this be done? Perhaps you know the answer. If not, may we make a few suggestions that may be helpful.

In the first place, it is very important to realize that it is impossible to accomplish your goal through any *one* publication or any *one group* of publications. To do the total job, you should plan a rounded publicity program. In such a program, you should try to reach *at least* the following:

1. The local newspapers (when the job is in project form), announcing the new building, perhaps including a rendering, and reporting your authorship of it. The local newspapers again, when the building is dedicated or opened, preferably with photographs. Contact the City Desk Editors.

2. Some national magazine that reaches as many potential clients in a field as possible—a national school magazine, if your job is a school (*Nation's Schools, School Executive,* etc.); a national hospital magazine, if a hospital (*Hospitals, Modern Hospital,* etc.). And so on.

Suppose the job is one of particular commercial or business concern, one that would interest bankers or groups handling investments, it would be an excellent candidate to bring to the attention of one of the national business magazines (*Business Week, Fortune;* etc.).

Or, if it is a residence, there is a very wide choice of consumer magazine outlets (*American Home, Better Homes & Gardens, House Beautiful, House and Garden, Living for Young Homemakers,* etc., etc.).

3. For exchange within the profession; for architectural and engineering analysis and discussion, obviously it should also appear in a professional architectural magzine. There is prestige connected with *professional* publication, just as there is in the medical and legal professions—a prestige that many clients will recognize. And there is the secondary benefit of possible reprints, use in brochures, and so on.

There is no mystery about how to submit work to magazines. They are all eager to see publishable material. Just send the editors (their names appear on the magazine mastheads) a concise summary package—a few photographs; the floor plans; and a brief description highlighting the salient points. As a matter of fact, this is precisely the sort of submission that P/A likes to receive—and, in our case, we prefer to have prints from the working drawings rather than specially prepared floor plans.

As far as newspapers are concerned, several of them may be willing to run the story; since, as a rule, their subscription lists do not seriously overlap.

In the specialized, national-magazine field, however, there is considerable duplication of readership within any one category. Usually, only one of them would publish it. If the work is brought to the attention of one national school magazine, for example, it should not be offered to another magazine in this field—unless and until the first reports that it is unable to use it. And so, with the other categories.

In each group of publications, obviously the most advantageous magazine for you to approach is the one that is read by the largest number of those whom you wish to reach. We cannot recommend one over another in the fields other than our own—though, as you undoubtedly know, the circulation figures and the particular groups that subscribe to the different magazines are a matter of public record and can readily be ascertained.

If you are doing a serious job of planned publicity, these figures must be analyzed. It is possible, for instance, that one school magazine may reach more administrators, another, more school-board members. Which group do you want to have see your work? One of the consumer home magazines may have a greater circulation in the economic category you are interested in than another.

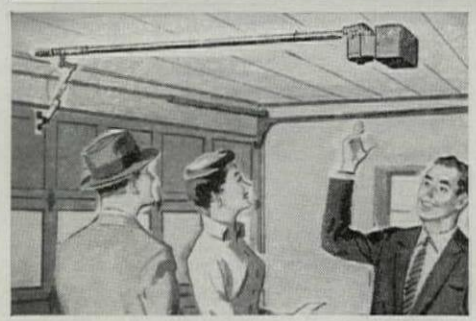
To use as an example our own field of publication—architecture—it is possible to isolate from the December 31, 1954, circulation figures the *professional* circulation of the three leading magazines, as follows:

P/A reaches 24,593 architects and engineers. The *Record* has nearly the same number: 24,330. *Forum* has only 13,463 architects and engineers on its books.

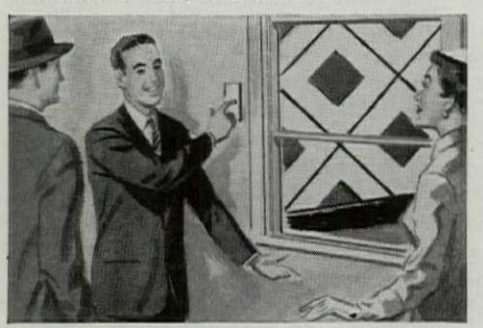
In addition, P/A goes each month to 10,094 designers and draftsmen (tomorrow's architects and engineers). The *Forum* has 5332 subscribers in this category; the *Record* 3603.

Thus P/A's total *professional* circulation, we boast proudly, comes to 34,687—nearly 7,000 more than *Record* and 16,000 more than *Forum.*

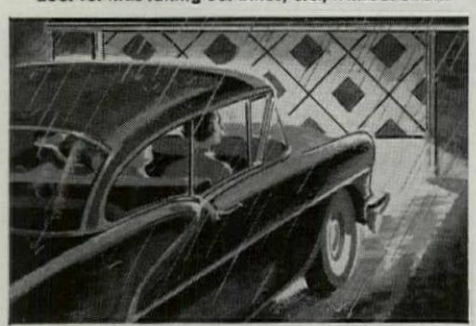
The same sort of analysis can be made for any group by the architect or his public-relations counsel, in preparing a *planned publicity program* for work of which he is proud. In summary: no *one* publication can do the promotion job you want for your best work. Appearance in *several* noncompeting publications — preferably those whose readership includes the largest number of people you want to reach—seems the logical approach.



Delco-matic makes the garage door as mechanically up-to-date as the rest of the home; adds a new and different sales feature which will be used at least FOUR TIMES EVERY DAY—much oftener than many other conveniences.



Housewife operates Delco-matic from button in car or button inside home; can open and close door for kids taking out bikes, etc., without effort.



Delco-matic means safety after dark, comfort and convenience day and night in any weather.

The most overdue improvement in any fine home has just arrived in a package marked

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Would you, as an architect, agree that the most overdue item of standard equipment in the architect-designed, custom-built home is the garage door operator? Every such home implies the use of many household conveniences and it is estimated that upward of 20 motors will help to run the household.

Yet, the garage door, largest item of moving equipment in the whole place, may still be operated by hand, just as it was 20 years ago. And, the housewife will still have to get out of her car in rain, snow or midnight darkness to operate it.

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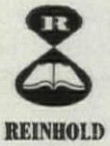


REINHOLD

"progressive code"

Dear Editor: In August 1955 P/A, page 80, you refer to New Orleans as "a city restricted by an archaic building code." Charles R. Colbert, Architect, tells us that this comes from a misunderstanding of statements made by him in reference to his Motel de Ville in this city.

In view of the fact that the New Orleans Building Code is, we believe, the most modern code in the country, exactly the opposite of your characterization as "archaic," you will wish to make not just a simple retraction, but publish an informative description of our Code for the benefit of your readers. We suggest to PROGRESSIVE ARCHITECTURE an article captioned "A *Progressive* (and Progressing) Building Code." Your examination will disclose the following more or less unique features:

1. This Code is bound loose-leaf, and the type is kept set up so that any page can be quickly and economically revised.

2. Revisions are made four times each year. There is no good reason to be more than three months "archaic." Each batch of revisions contains a list of pages with latest revision date for each page.

3. The Code has a cross-index, making all matter easily accessible.

4. In its "foreword" the Code is committed: To make no regulation not needed to control danger; To make the greatest possible freedom of choice consistent with the rights of others; To make no increase in building costs unless needed; To adopt and take adantage of nationally recognized standards.

5. A special article permits the use of alternate and equivalent methods or materials.

6. Any ruling by the inspection division may be appealed to a board which meets regularly each month.

Our Code may need improvement in many respects, and is getting it. The building industry and equipment interests are consulted freely and are helping continuously.

The New Orleans Code is *alive*. It is positively not archaic, or antiquated, or senile, and we are sure you are glad to know this.

RUSH P. STRONG, Chairman
Building Standards and Appeals
New Orleans, La.

sounding the alarm

Dear Editor: In paragraph 2044 of the article "Fire-Alarm Systems" *(August 1955 P/A)*, L. T. Chandler refers to the Pre-Signal Feature. In theory, the hospital nurse carries a key to ring the general alarm after checking the pre-signalled situation. In practice, the necessary key is somewhere else. Does the author have any suggestions?

GEORGE ERETY SHOEMAKER
Ithan, Pa.

Dear Editor: *Sounding of the general alarm after checking the pre-signal situation is normally restricted only to key personnel. The fire-alarm manufacturer should furnish the desired number of keys, having large durable tags which give instructions as to operation. The general alarm may be sounded from any fire-alarm station with the use of these keys which are solely in possession of those delegated by the hospital administrator.* L. T. CHANDLER

(Continued on page 14)

WHEN YOU CHANGE YOUR ADDRESS

Please report both new and old addresses directly to P/A five weeks before you move. The Post Office will not forward your magazine to the new address unless you pay extra postage. Avoid this needless expense by notifying us five weeks in advance.

PROGRESSIVE ARCHITECTURE
Circulation Department
430 Park Ave., New York 22, N. Y.

(Continued from page 13)

interesting and useful

Dear Editor: I find your magazine very interesting and useful. The material is well presented and your text is always clear and precise and refrains from that excessive emoting and super rationalization which some of your competitors feel is necessary. The technical features are excellent, as are those aspects dealing with professional practice—and both are entered in related sections of our office library. W. R. GIBSON

Victoria, British Columbia
Canada

appointments

OHIO STATE UNIVERSITY College of Engineering recently announced the appointment of HAMILTON GRAY to the chairmanship, with rank of professor, in the department of civil engineering.

CARL W. LARSON, recently appointed Acting State Architect of New York, becomes head of newly created Division of Architecture within Department of Public Works. Cornelius J. White has resigned from post of State Architect.

ILLINOIS INSTITUTE OF TECHNOLOGY announces promotion of faculty members: Dr. L. F. MONDOLFO to director of the department of metallurgical engineering; Dr. EBENEZER VEY, civil engineering, to rank of full professor; JACQUES C. BROWNSON, architecture, and PASQUALE PORCELLI, mathematics, to assistant professors.

elections

PAUL B. BROWN and ALFRED H. MITSCHKE, Architects, and FREDERICK J. HILDEBRANDT, Civil Engineer, were recently elected Vice-Presidents by Directors of HARLEY, ELLINGTON & DAY, INC., Architects-Engineers, 153 E. Elizabeth St., Detroit 1, Mich.

change of name

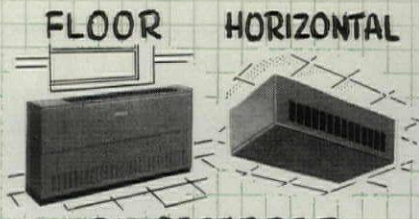
INTERNATIONAL HEATING & AIR-CONDITIONING EXPOSITION is new name of old-established International Heating & Ventilating Exposition. The 1957 exposition will be held in Chicago, February 25-March 1. Management of the exposition continues under direction of INTERNATIONAL EXPOSITION CO., 480 Lexington Ave., New York 17, N. Y.

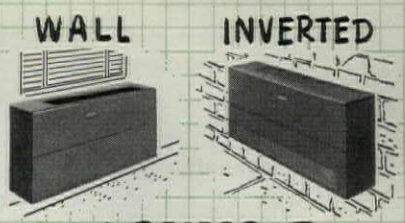
credit to model makers

THOMAS W. SALMON & ASSOCIATES, 30 E. 21 St., New York, N. Y., made the handsome models of Roosevelt Field Shopping Center, the WEBB & KNAPP project featured in September 1955 P/A.

(Continued on page 16)

A System Designer's DREAM





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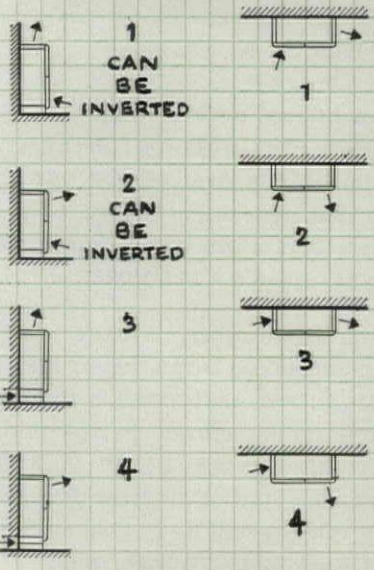

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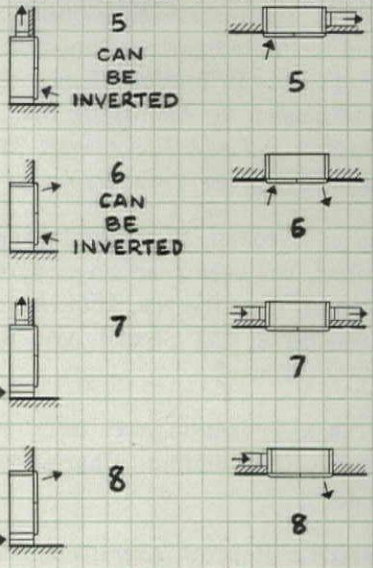

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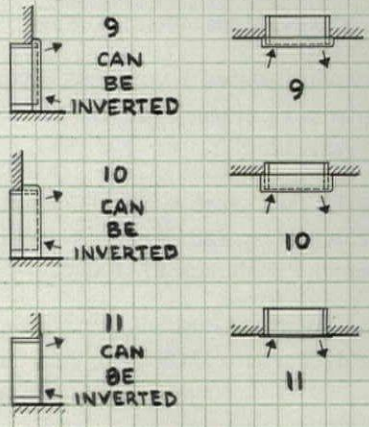

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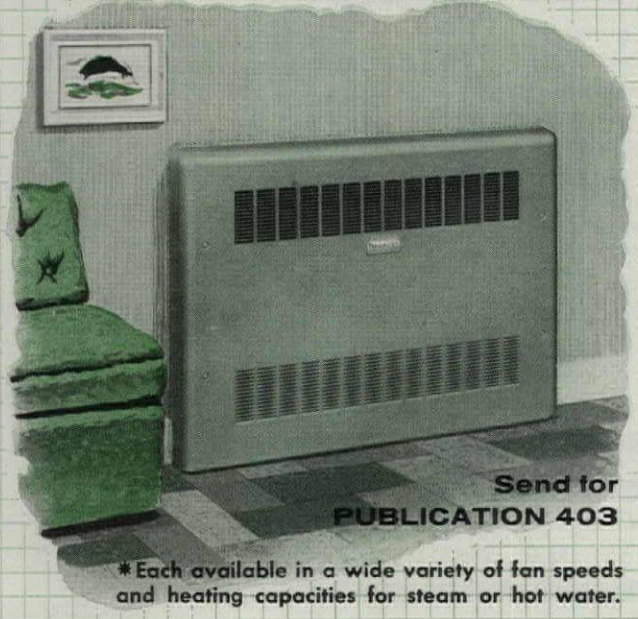

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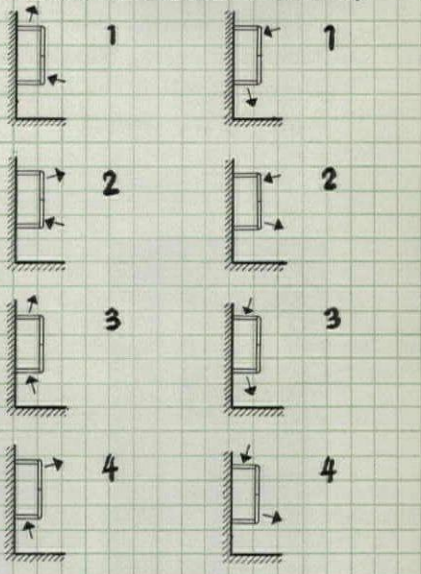

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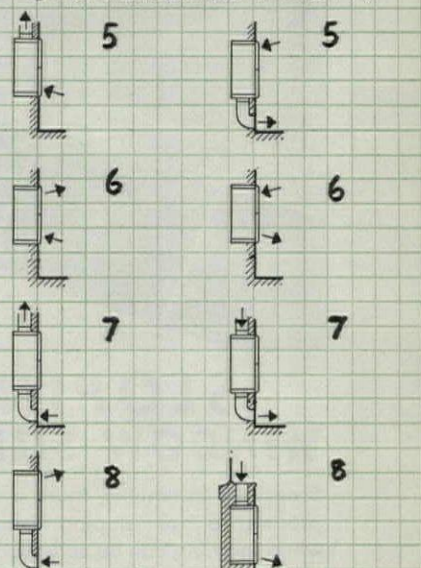

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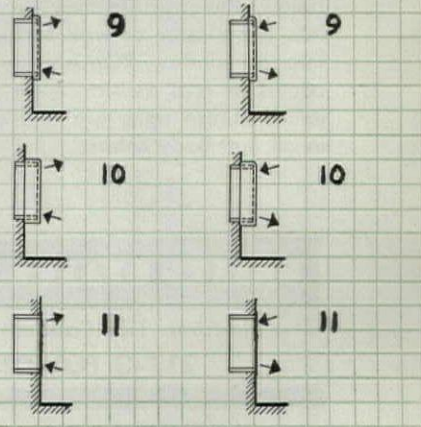

JOHN J. NESBITT, INC., PHILADELPHIA 36, PENNSYLVANIA

notices

(Continued from page 14)

consultant

WALTER SANDERS, Chairman of Department of Architecture, UNIVERSITY OF MICHIGAN, has been retained by ALBERT KAHN, Associated Architects-Engineers, New Center Bldg., Detroit 2, Mich., as a consultant on architectural design.

CIAM

CIAM Directors FRANCO ALBINI, IGNAZIO GARDELLA, ERNESTO N. ROGERS, and GIUSEPPE SAMONA announce that the 1956 Summer School will deal with real planning and architectural problems of Venice. Enquiries should be sent after December 1955 to Segreteria Scuola Estiva CIAM, c/o Instituto Universitario di Architettura, Fondamenta Nani 1012, Dorso Duro Venezia (Italy).

new firm

CHANDLER CUDLIPP ASSOCIATES, INC., Interior Designers, 231 E. 51 St., New York 22, N. Y.

new offices, partnerships

CLARENCE CULLIMORE, JR., Architect, has joined the firm of KENNEY & MAAG, Bakersfield and Tulare, Calif., as a partner. Firm will be known as KENNEY, MAAG & CULLIMORE.

HAROLD H. MUNGER, Architect, recently announced formation of MUNGER MUNGER & ASSOCIATES, a father-and-son architectural partnership. HAROLD C. MUNGER, BYRON F. KILLINGER, and staff of 10 form the new group. Offices will be located at National Bank Bldg., Toledo, Ohio.

PAUL S. DOD, THOMAS E. COOPER, and LLOYD H. SLOMANSON have been advanced to limited partnership in the office of SERGE P. PETROFF. Firm will now be known as ARCHITECT SERGE P. PETROFF, A.I.A. & ASSOCIATES, 285 Madison Ave., New York, N. Y.

Firm of GEORGE N. BURKHALTER, Architect, has been changed to partnership of BURKHALTER, HICKERSON & ASSOCIATES, 908 Second Ave. S., Nashville, Tenn.

HUNTER & SPURLING, Architects, 56 Capital City Building, Charleston, W. Va.

CLEMMER & HORTON, Architects, 202 Grant Bldg., Hickory, N. C.

UEL C. RAMEY & ASSOCIATES, Architects, 830 N. Main, Wichita, Kans.

LOCKWOOD GREENE ENGINEERS, INC., Architects-Engineers, 41 E. 42 St., New York 17, N.Y.

ELLIS E. BANKSON & SON, Consulting Engineers, 822 Wood St., Wilkinsburg, Pittsburgh 21, Pa.

IRVING BOIGON, Architect, 321 Davenport Rd., Toronto 5, Ontario, Canada.

(Continued on page 21)

new addresses

JAMES WILLIAM KIDENEY & ASSOCIATES, Architects-Engineers, 220 Delaware Ave., Buffalo 2, N.Y.

J. FLOYD YEWELL, Architectural Renderer-Designer, Hillsdale, N.Y.

NORMAN C. NAGLE, Architect, 688 Sexton Bldg., Minneapolis 15, Minn.

BERLA & ABEL, 310 Headquarters Bldg., 2000 P St., N.W., Washington 6, D.C.

WESLEY R. KING, 700 E. State St., Geneva, Ill.

ALTON L. CRAFT, Architect, 133 E. 39 St., New York 16, N.Y.

A. G. WYATT & ASSOCIATES, Consulting Engineers, 209 South High St., Columbus 15, Ohio.

ERNEST J. HABERSTROH, Architect, 836 Elm St., Reading, Pa.

R. DUANE CONNER, Architect, 2520 Classen Blvd., Oklahoma City 6, Okla.

FRED POJEZNY, JR., Architect, 1715 North Broadway, Oklahoma City, Okla.

ALLISON & RIBLE, Architects, 3670 Wilshire Blvd., Los Angeles 5, Calif.

MEYER & EVERS, Architects, 268 Market St., San Francisco 11, Calif.

HARRY M. DENYES, JR., Architect, 950 N. Hunter Blvd., Birmingham, Mich.

ARMET & DAVIS, Architects, 2440 W. Third St., Los Angeles 57, Calif.

J. HERBERT BURMEISTER, Architect, 70 Fulton Ave., Hempstead, L.I.

Editorial Offices, AMERICAN SOCIETY FOR ENGINEERING EDUCATION, University of Illinois, Urbana, Ill.

A. QUINCY JONES & FREDERICK E. EMMONS, Architects, EMIEL BECSKY, Associate, 12248 Santa Monica Blvd., Los Angeles 25, Calif.

(Continued from page 16)

ARNOLD LAWRENCE, Architect, 571 Porter St., Manchester, Conn.

ELLIOTT B. HADLEY, Architect, 860 Snell Island Blvd., St. Petersburg, Fla.

HOLLIS WHIPPLE KINCAID, Architect, 81 Market Sq., Newington 11, Conn.

ED NICHOLSON, Architect, 2003 N. Main Ave., San Antonio, Tex.

CHESTER N. LOWE, Architect, 17102 Kinsman Road, Shaker Heights, Ohio.

ARTHUR B. RATHERT, Architect, 4341 Chippewa St., St. Louis 16, Mo.

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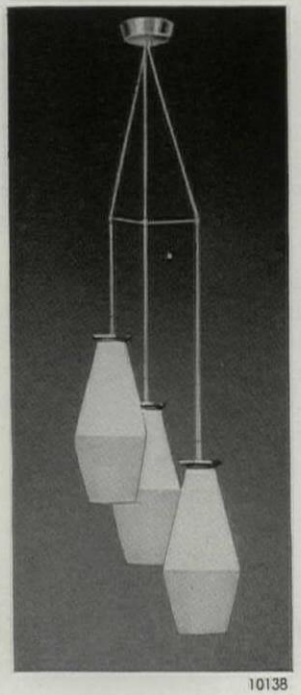

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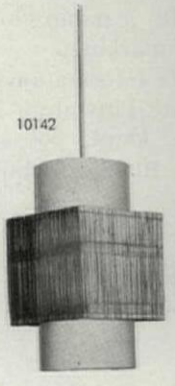

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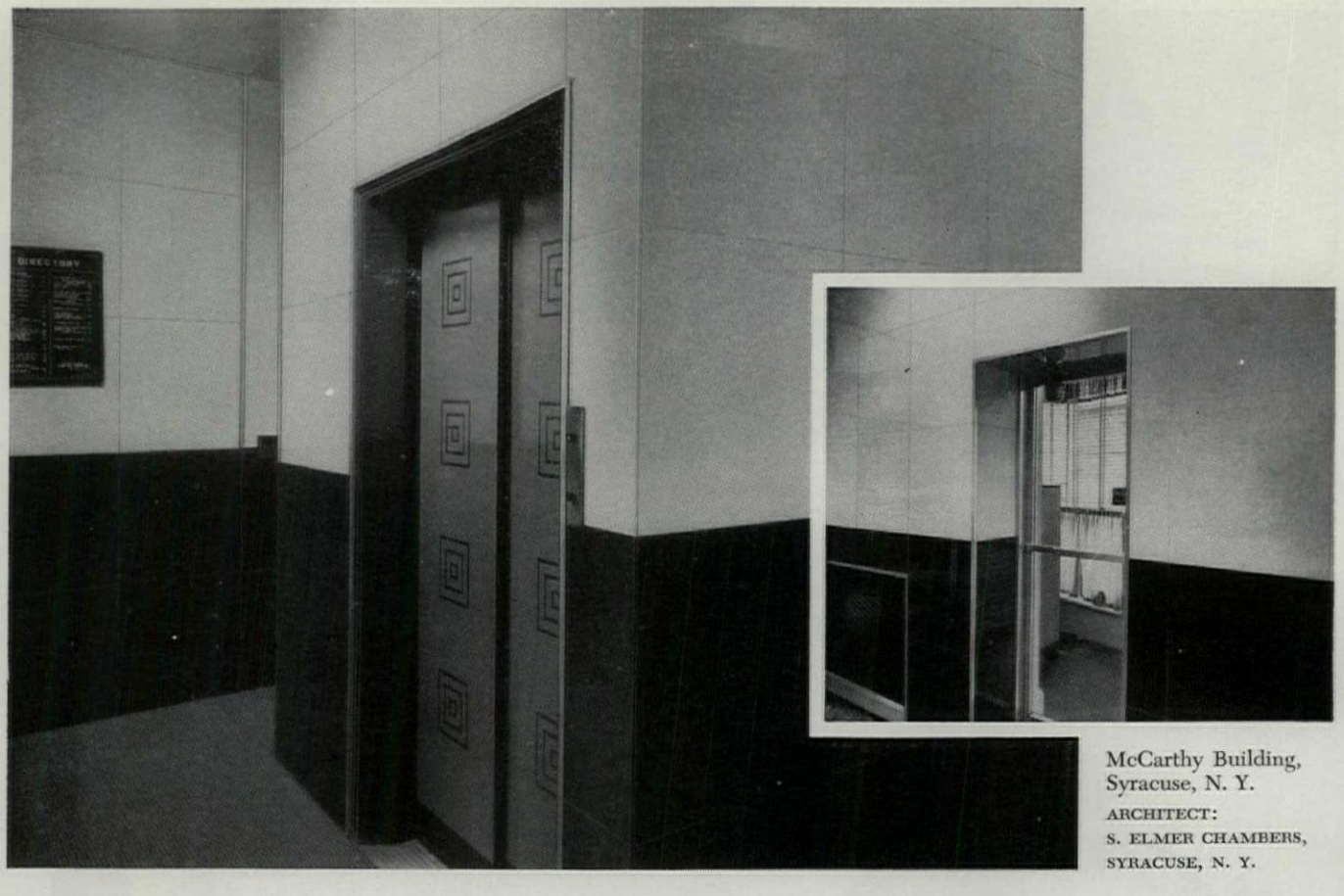

McCarthy Building,
Syracuse, N. Y.
ARCHITECT:
S. ELMER CHAMBERS,
SYRACUSE, N. Y.

Carrara® Glass ...the material architects prefer for building lobby walls

First impressions are very important —especially when it's the effect an office building lobby has upon prospective customers and clients. As the official reception room the lobby must reflect the character of the building . . . must be modern, inviting and attractive.

For this reason many architects are specifying colorful, lustrous Carrara Structural Glass to finish lobby walls in their most impressive buildings. Carrara Glass is especially suitable for this application. It is all pure glass. Its smooth, mechanically ground and polished finish has an unusually high degree of lustre and beauty that lends a note of distinction to any building. The true even joints between the large sections of Carrara create a modern, uncluttered effect. In addition, Carrara Glass is available in ten lovely colors which permit a wide range of decorative possibilities.

Because Carrara Structural Glass has a smooth finish and an even homogeneous structure, it offers no opportunity for dirt and germs to collect. It is unaffected by grease, pencil marks, odors, acid soaps and other cleaning compounds. It is very easy to clean, usually an occasional wiping with a damp cloth keeps it fresh and sparkling.

For more information on Carrara Glass, write Pittsburgh Plate Glass Company, Dept. 5364, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

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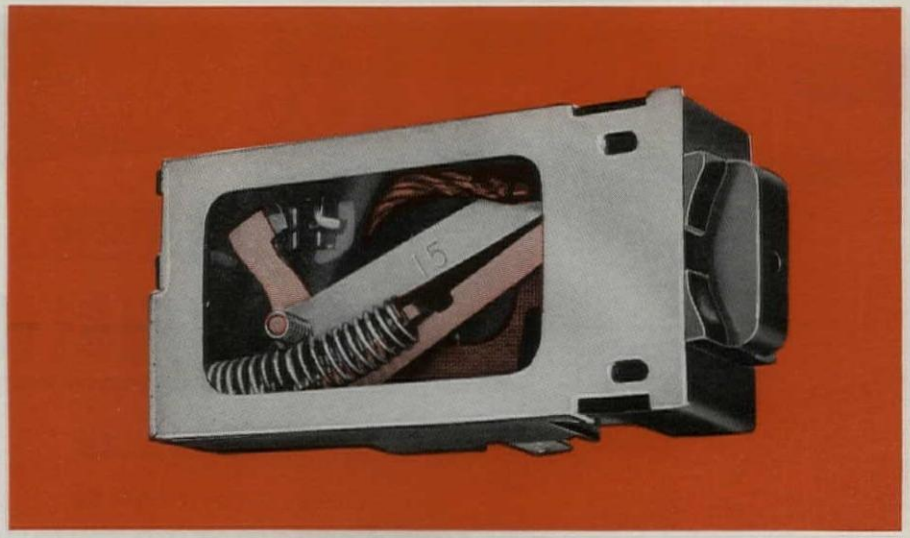

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First, they provide double protection. Duo-Guard Pushmatics guard circuits (1) *thermally* against normal overloads, and (2) *solenoid magnetically* against high overloads and shorts. Branch circuits as well as delicate wiring in lamp cords are protected separately. And nuisance tripping from harmless overloads is completely eliminated.

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. . . IF IT'S DIFFERENT
. . . IF IT'S BETTER . . . IT'S

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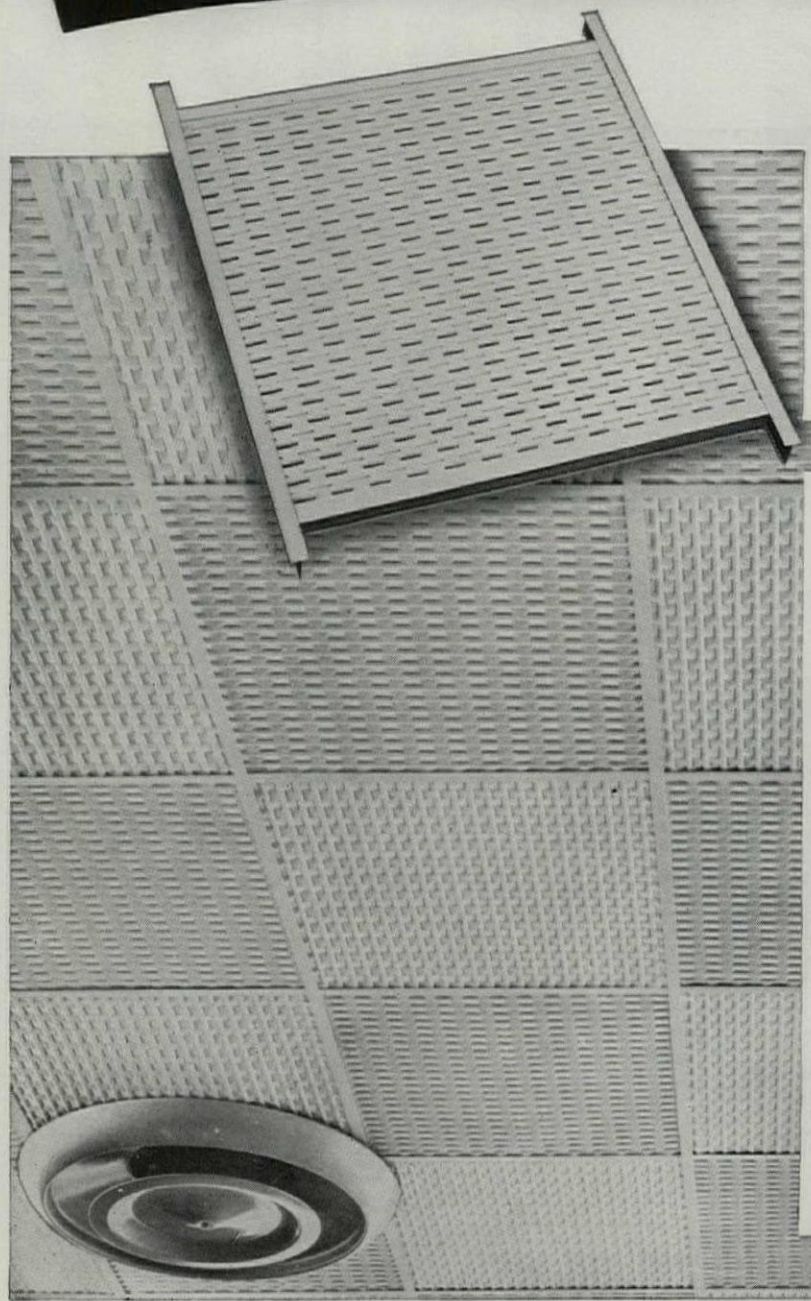

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STEELACOUSTIC
TRADE MARK

PANELS

new, economical sound conditioning material and suspension system

Note these Outstanding STEELACOUSTIC Features!

- **Incombustible**—In accordance with requirements of Federal Specification SS-A-118b, Class A Incombustible, as tested and reported by the Acoustical Materials Association.
- **High Sound Absorption**—.70 noise reduction coefficient for less noise, better hearing. Linear openings in the face of each panel permit sound to pass through to a sound-absorbing element laminated to the back.
- **Easy Maintenance**—Maximum washability of baked enamel finish on all exposed surfaces. Panels may also be repainted without loss of sound absorption.
- **Economy**—Low-cost installation through efficient assembly of 24″ x 24″ Steelacoustic units, Celotex T&T* exposed grid suspension system.
- **Attractive**—Steel panels provide an attractive design for wide variety of commercial, industrial, and institutional areas. Available in white and striacolored green, brown, and black. Light reflection value of .71.
- **Removable**—Easy access to ducts, wiring, and other utilities above ceiling through easy removability of Steelacoustic panels.

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The Celotex Corporation, 120 S. LaSalle St., Chicago 3, Illi

†(U. S. PAT. NO. D-168, 763)

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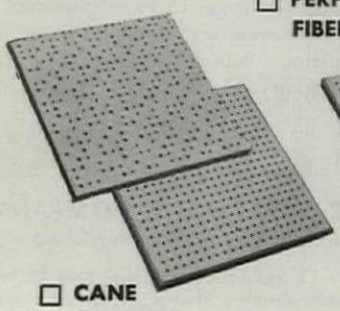
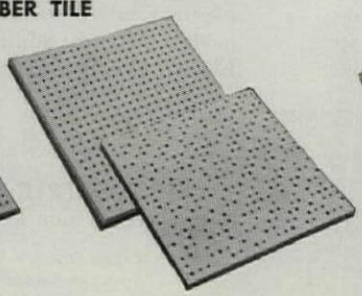
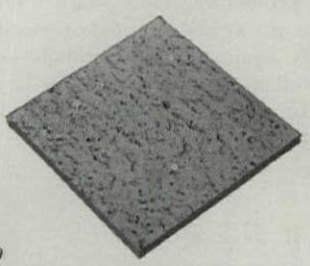
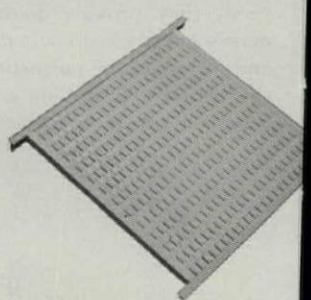




☐ CANE FIBER TILE



☐ CELOTONE® FISSURED MINERAL FIBER TILE



☐ STEELACOUSTIC PANELS

Architects Please Note!

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ARIZONA
Phoenix, Tucson .. Laing-Garrett Construction Specialties, Inc.

ARKANSAS
Little Rock ..... Acoustics & Specialties Co.
Memphis 3, Tenn. .. Acoustics & Specialties, Inc.

CALIFORNIA
Bakersfield ..... The Harold E. Shugart Co. of Bakersfield
Los Angeles 38. The Harold E. Shugart Co., Inc.
Fresno, Oakland 6, Sacramento 14, San Francisco 3, San Jose, Stockton ..... Western Asbestos Co.
San Diego 1. Baird-Hackett Sound Control, Inc.

COLORADO
Denver 1 ..... Lauren Burt, Inc. of Colorado

CONNECTICUT
E. Hartford 8 ..... C. A. Bader Co.

DELAWARE
Baltimore 11, Md. ..... The Hampshire Corp.
Philadelphia 31, Pa. ..... Jacobson & Co., Inc.

DISTRICT OF COLUMBIA
Bladensburg, Md. ..... The Hampshire Corp.

FLORIDA
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Miami 42. . Acousti Engineering of Miami, Ltd.
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Atlanta 3 ..... Acousti Engineering Co.
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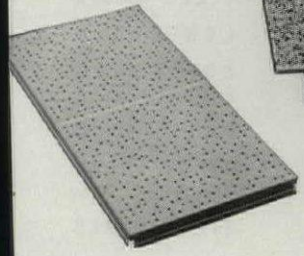
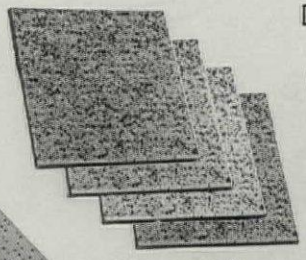
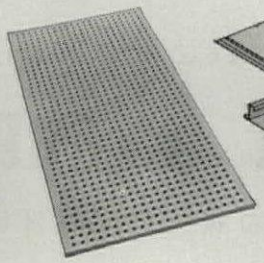
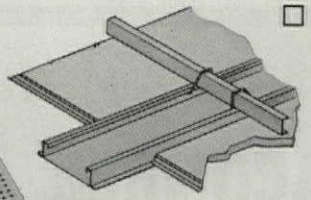




☐ **VARITEX® FINISH CANE FIBER TILE**

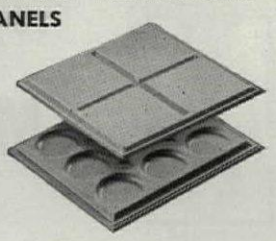
☐ **CAVITY TILE**





☐ **ACOUSTI-LINE® SUSPENSION SYSTEM**

☐ **ACOUSTI-LUX* AND LUMICEL* TRANSLUCENT PANELS**



(U. S. PAT. NOS. 2,216,992 AND 2,710,335)

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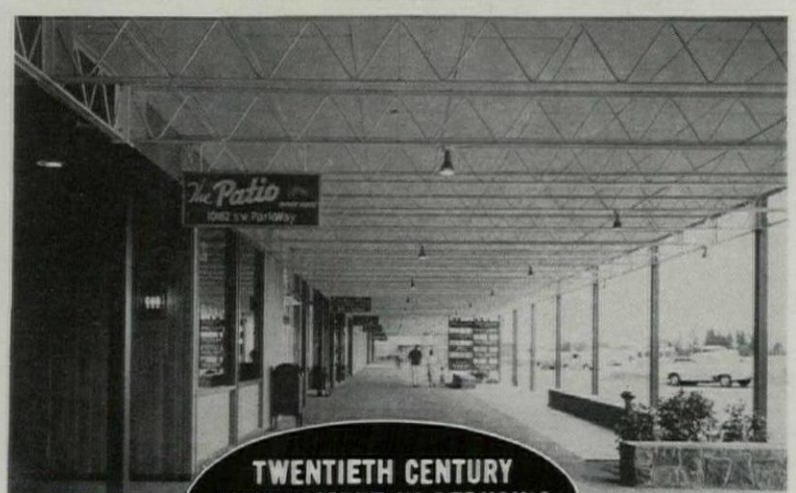
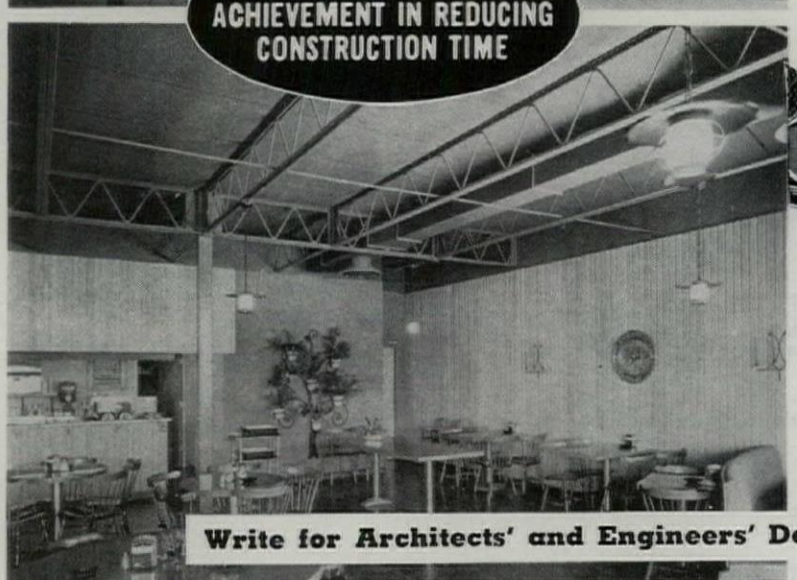
V-LOK Steel Framing

BROUGHT AN IMMEDIATE ARCHITECT AND BUILDER RESPONSE



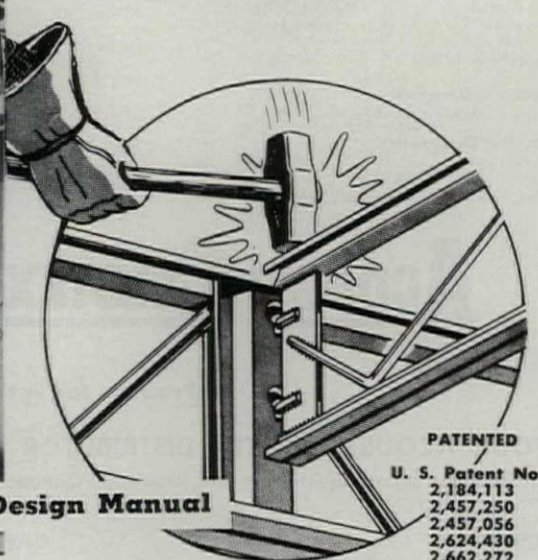
TWENTIETH CENTURY ACHIEVEMENT IN REDUCING CONSTRUCTION TIME



The driven joint — the V-LOK method of assembling an entire steel frame in days instead of weeks IS PROGRESS — unparalleled in Steel Construction.

To have the frame up and the roof covering the entire operation in a matter of days, puts occupancy months ahead of ordinary methods.

There's a Macomber Representative near you to give you complete information. Contact him.



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2,624,430
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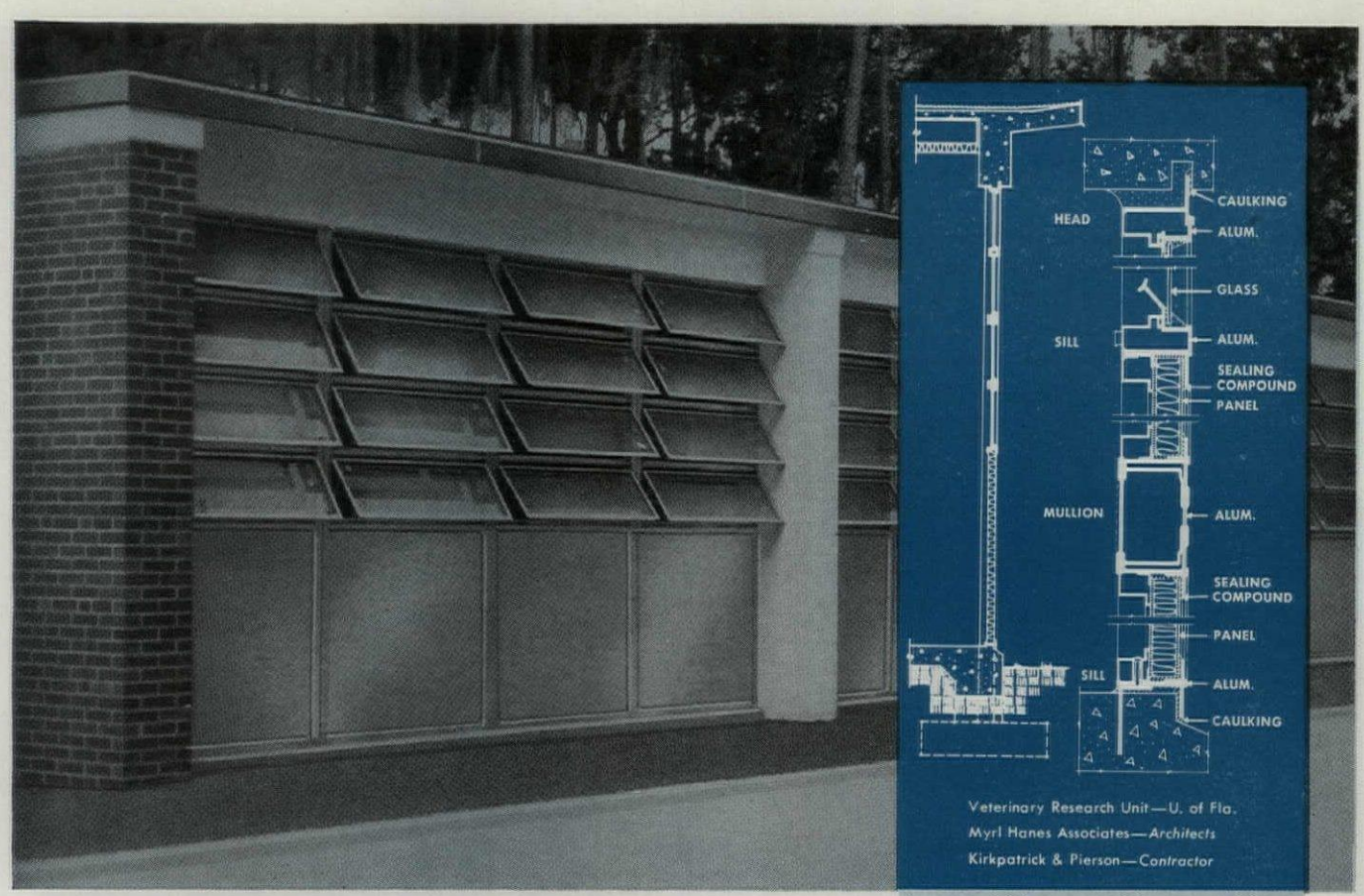

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Myrl Hanes Associates—*Architects*
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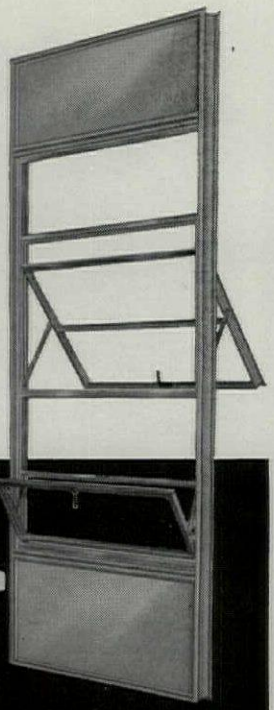
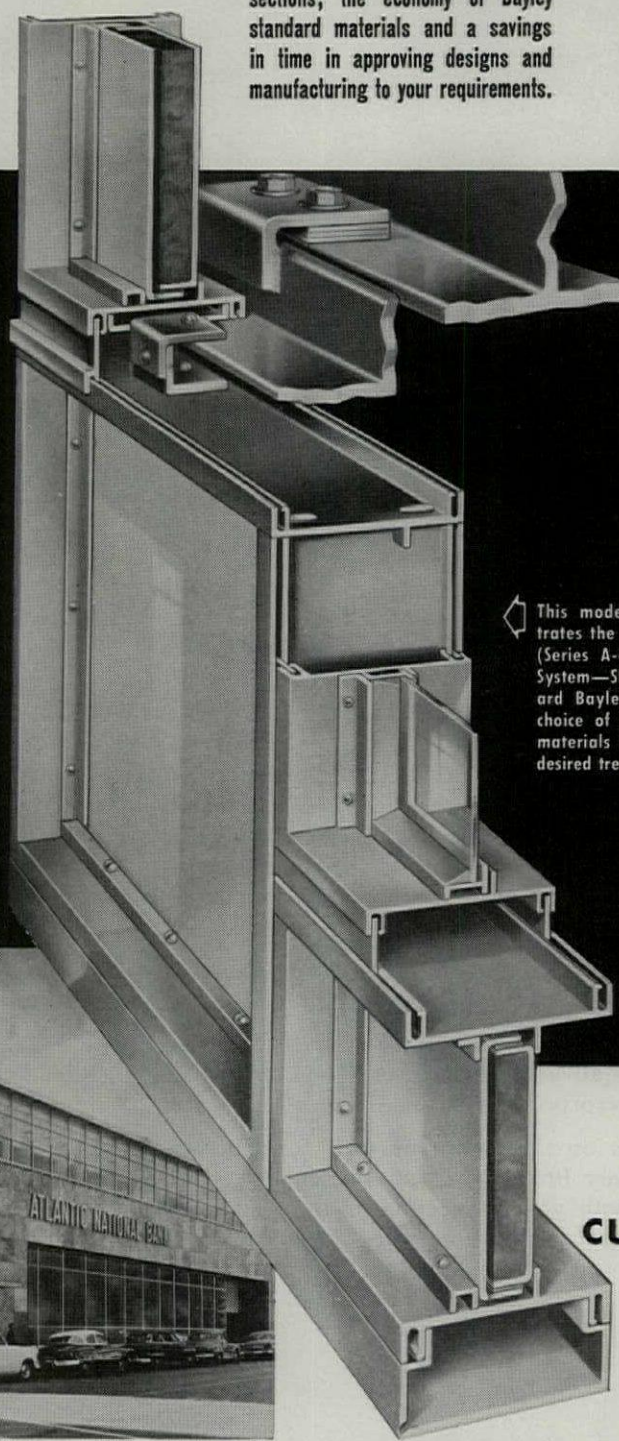
Curtain Wall Systems

The Bayley Curtain-Wall System represents the latest advance in fundamental designing, based on Bayley's 30 years of performance-proved experience in engineering curtain-wall installations. It offers versatility of application that affords you wide latitude of building design with the economy of standard details. A thorough study of the illustration below reveals the soundness of its engineering. It is also quickly apparent that through the use of a Bayley System you gain the advantages of proved structural sections; the economy of Bayley standard materials and a savings in time in approving designs and manufacturing to your requirements.



With Bayley's sub-frame designs you can achieve distinctive, individualized curtain wall treatments, of almost unlimited variety, without the costliness of special window designing. Standard Bayley Aluminum Projected Windows, with heavy channel frames and a choice of ventilator arrangements, serve as the basic unit . . . and at the same time afford the maximum in air, light and vision. Combining versatility of application with standard details and sections, Bayley can help you accomplish some surprising and exciting things.

If consulted in the early stages of your project, giving Bayley an opportunity to properly pre-engineer your job you will be assured of maximum ultimate satisfaction in both design appearance and integral building construction.



This model assembly illustrates the Bayley Sub-frame (Series A-450) Curtain-Wall System—Showing how standard Bayley Windows or a choice of panel - decorating materials can achieve any desired treatment.

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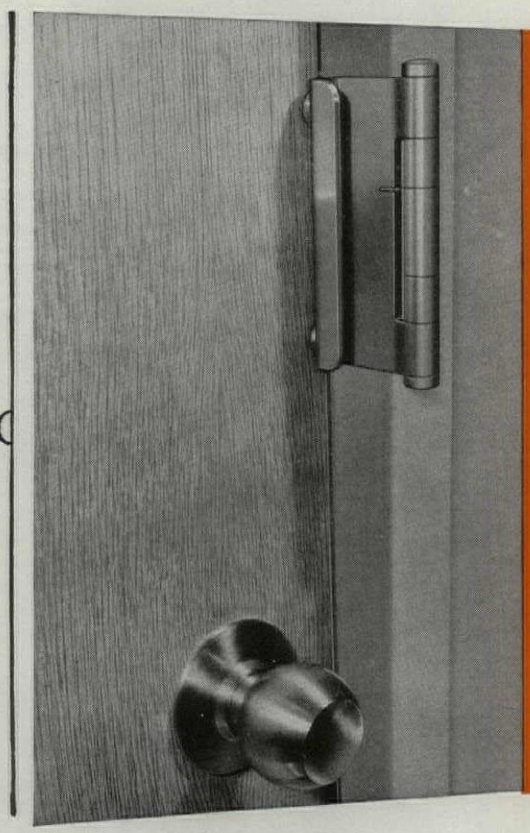
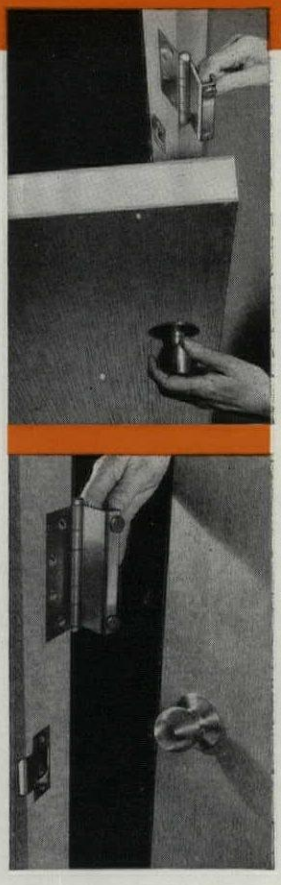


hinged door stop

for institutional application to rescue patients from toilet rooms



hinged door stop
provides emergency release

allows doors to swing
outward on pivot hinges

jamb leaf mounts on
standard 4½" butt hinge
frame reinforcement

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made in wrought steel, 4½" length of joint, available in dull bronze or chromium finish.

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GOLD SEAL INLAID LINOLEUM

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SPECIFICATIONS — Commercial gauge (⅛") for heavy traffic, commercial, industrial, and institutional areas. 6' wide by-the-yard and 9" x 9" tile. Burlap back. Patterns: 22 Veltone®, 4 Plain, 6 Battleship, 5 Jaspe. Install over suspended subfloors, wood or concrete.

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FLOORS AND WALLS
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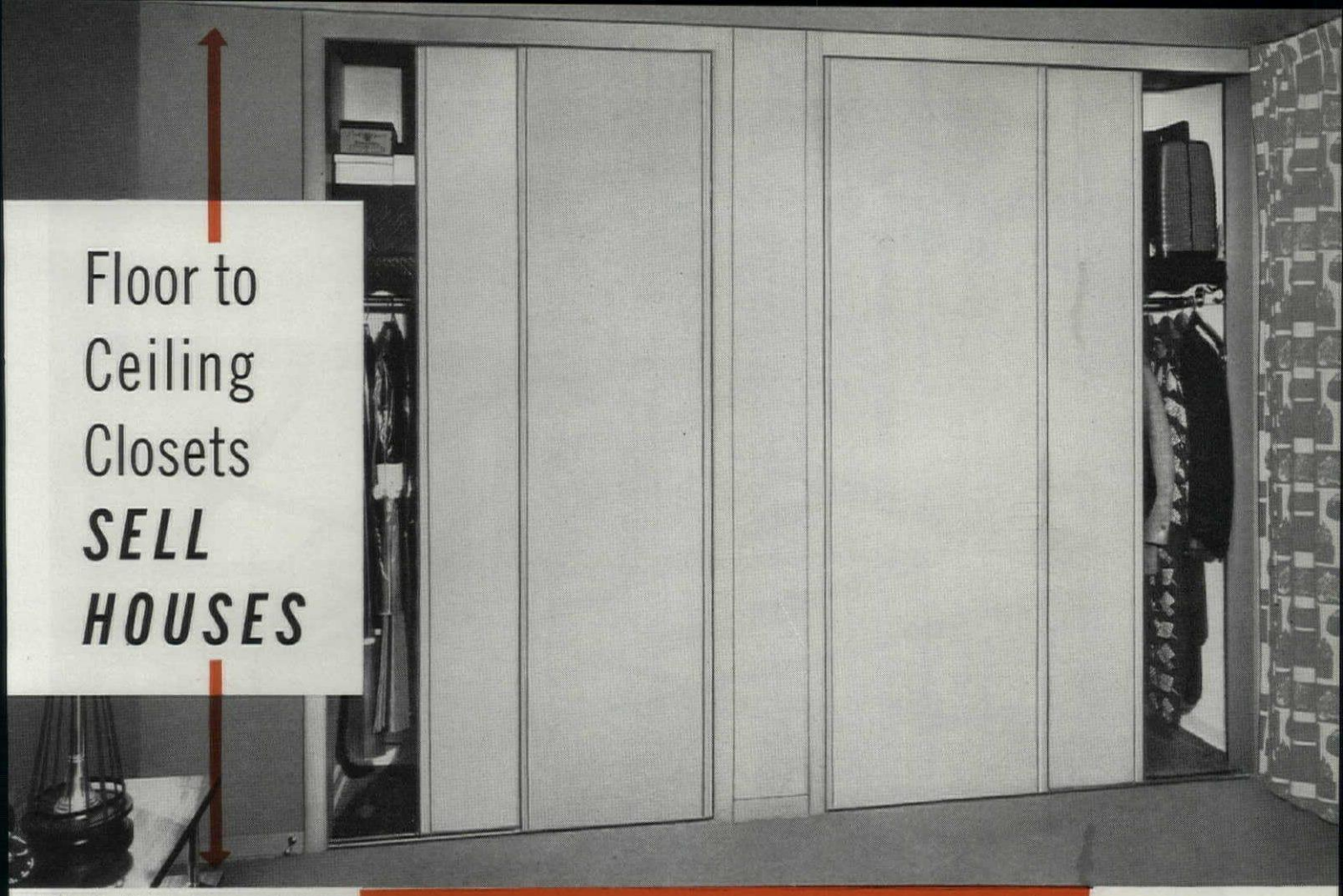

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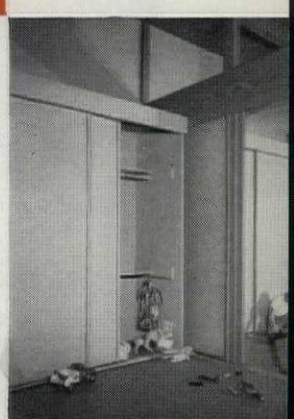
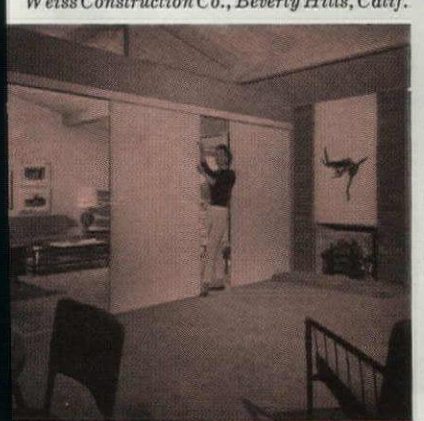
Glide-All Doors are engineered trouble-free and are quality built. They are ready to install in 8′ and 6′8″ heights in a variety of standard widths, flush or recessed panel types. Write today for specifications and full details.



Glide-All panels turn a big daytime playroom into separate bedrooms, spacious wardrobes have Glide-All fronts. Trudy Richards Tract Homes built by Weiss Construction Co., Beverly Hills, Calif.

Use Glide-All Sliding panels as room dividers for more flexible living . . . as in the Trudy Richards Tract Homes built by Weiss Construction Co., Beverly Hills, Calif.



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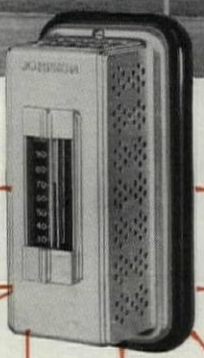
SMALL HOSPITAL INSURES

Ideal Temperatures
Waste-Free Heating and Cooling
with JOHNSON CONTROL



The new 45-bed St. Joseph Hospital* in Del Norte, Colorado, is an excellent example of the modern approach to the problem of temperature and humidity regulation in the smaller hospitals. The correct solution to that problem is a system of Johnson *Individual Room* Control engineered to meet the exact needs of the individual building.

AIR CONDITIONED AREAS

At St. Joseph's, in the air conditioned operating and delivery sections, optimum temperatures are maintained constantly by strategically located Johnson Thermostats in each individual room. The humidity of the conditioned air is also controlled at all times by Johnson Room Humidostats. Complete safety, *even in the presence of explosive anesthetic gases,* is assured by the use of pneumatic control apparatus.

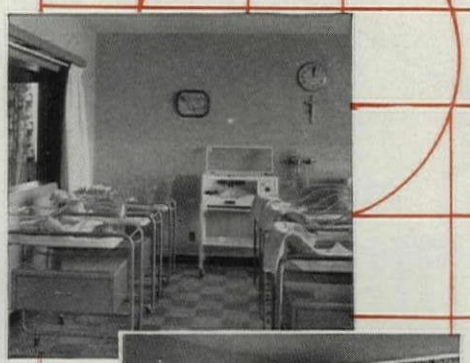
HEAT REGULATION

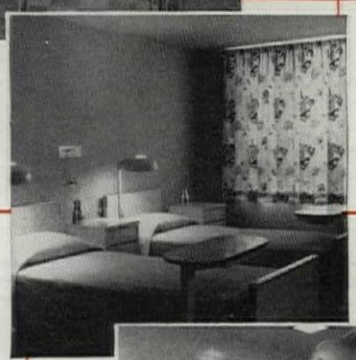
During the heating season, Johnson *Individual Room* Thermostats control Johnson Valves on convectors to insure the exact temperature desired in all other rooms of the building, including all patient rooms, offices and public areas. Comfort control is also provided on the building's unit ventilators.

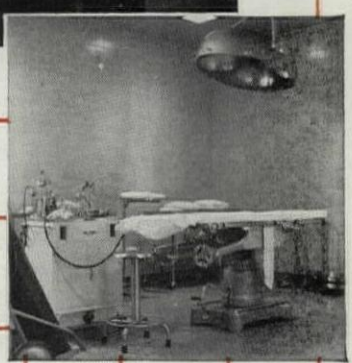
In addition to *individual room* control, behind the scenes other Johnson Thermostats, Valves, Dampers and other controllers regulate the basic operation of the heating and air conditioning equipment. All apparatus is combined into a single, highly efficient system that not only provides the finest in individual room temperature regulation but accomplishes all this at the lowest possible heating and cooling cost.

In hospitals everywhere—and in all other types and sizes of buildings, new or existing—Johnson Control automatically insures the ultimate in comfort, convenience and economy. Each Johnson System, like the one in St. Joseph's, is planned to meet the exact needs of the individual building.

Next time you have a temperature or humidity control problem, talk it over with an engineer from a nearby Johnson branch. He draws on the more than 70 years' experience of the only nationwide organization devoted exclusively to planning, manufacturing and installing automatic temperature control systems. His help is yours for the asking. Johnson Service Company, Milwaukee 1, Wisconsin. Direct Branch Offices in Principal Cities.







JOHNSON CONTROL

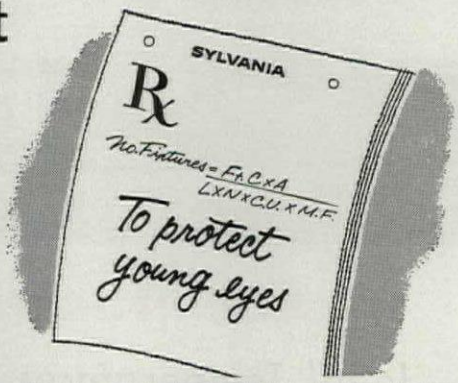
TEMPERATURE AIR CONDITIONING

PLANNING • MANUFACTURING • INSTALLING • SINCE 1885

**St. Joseph Hospital, Del Norte, Colorado. Thomas & Sweet, architects, Colorado Springs; K. J. Murray, mechanical engineer, Denver; Howard Whitlock Construction Co., general contractor, Pueblo; Brickham & Tomberlin, mechanical contractor, Denver.*

Needed:

Soft, even, low-brightness illumination ...a true glare-free effect



Before and After. Washington High School (Washington, Pa.) installed a Sylvan-Aire low-brightness lighting system, greatly reduced glare in this classroom.

Prescription: Sylvan-Aire Wall-to-Wall Lighting System

When you look for soft, even, low-brightness illumination . . . *a true shadow-free, glare-free effect* . . . consider Sylvan-Aire lighting systems by Sylvania.

Sylvan-Aire provides a "flat sheet" source of light—not mere "spots"—greatly reducing direct and reflected glare. Unbroken rows of white corrugated plastic strips, 2 to 4 feet below the ceiling, get their low-brightness light from properly spaced fluorescent fixtures on the ceiling. They cover unattractive wiring, piping and fittings overhead. Optional V-shaped "Sono-Wedges" between rows (shown above) help reduce noise level, making Sylvan-Aire a new 3-way treatment of beauty, sight and sound!

Your school, too, deserves the better seeing and working conditions, the better reading and study habits, to be gained through proper lighting. For assistance with your school lighting problems, the Sylvania lighting specialist in your area will be glad to drop in for a consultation or group meeting at any time.

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☐ Please send me your free informative booklet, "Some Whys and Hows of Modern School Lighting."

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WITH 700 SERIES SLIDING DOOR HARDWARE

This new series of sliding door hardware is excellent for any type of installation because of its universal design and low cost. It will carry doors up to 100 pounds each, including floor to ceiling doors from ¾" to 1¾" thick. The aluminum track is easily attached to any standard head jamb. Doors can be hung after hangers are attached but will not jump track. Adjustable hangers with one inch nylon rollers and oil impregnated bearings. Complete packaged sets available.

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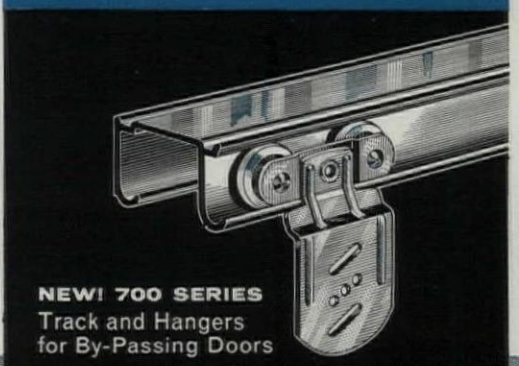

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for By-Passing Doors

NEW!
Sliding Door Pulls
For wardrobes and cabinets. Surface mounted—no mortising.
No. 863, 1½" long.
No. 865, 2½" long.
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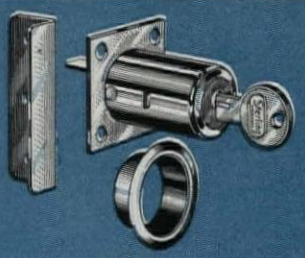
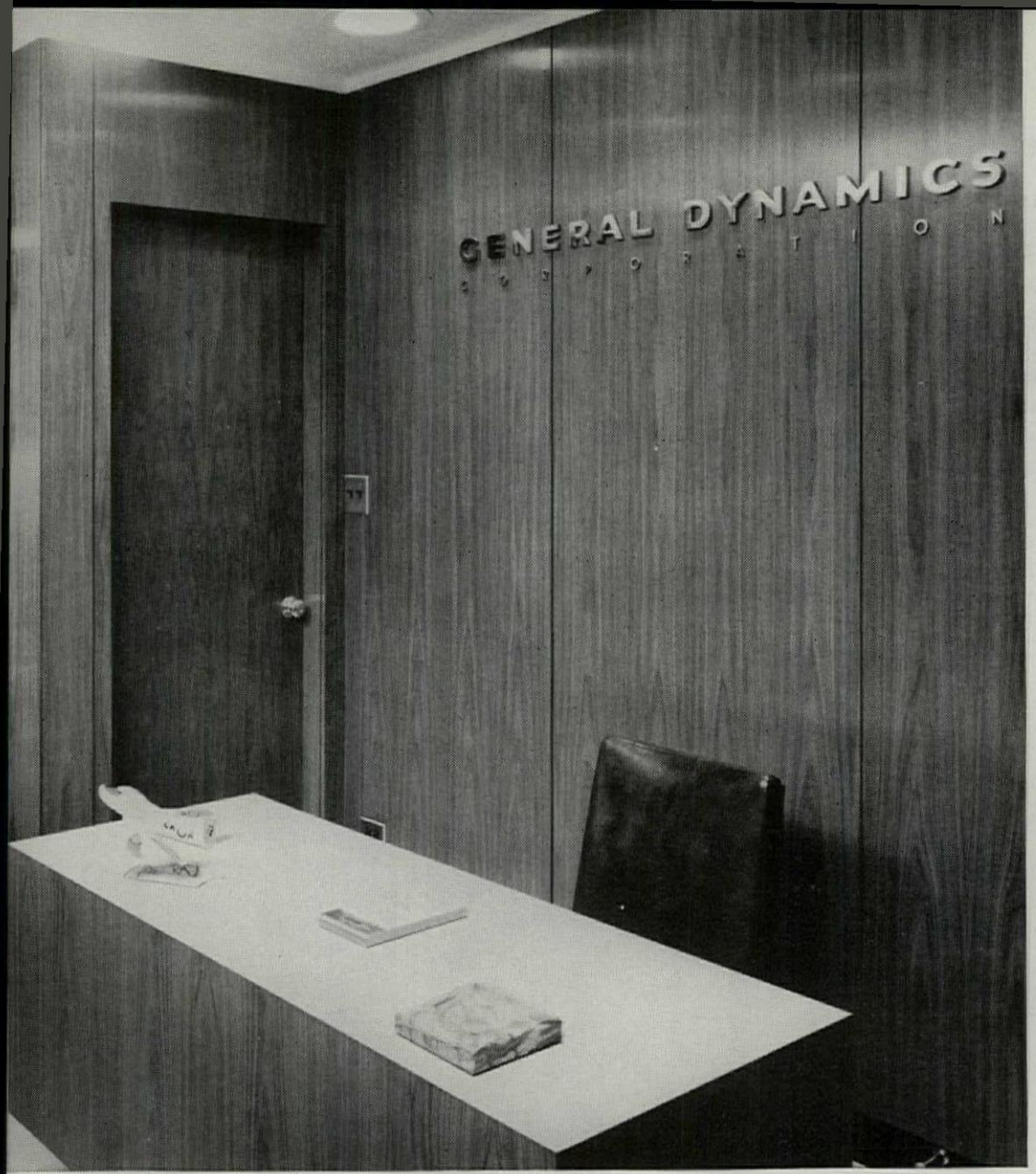
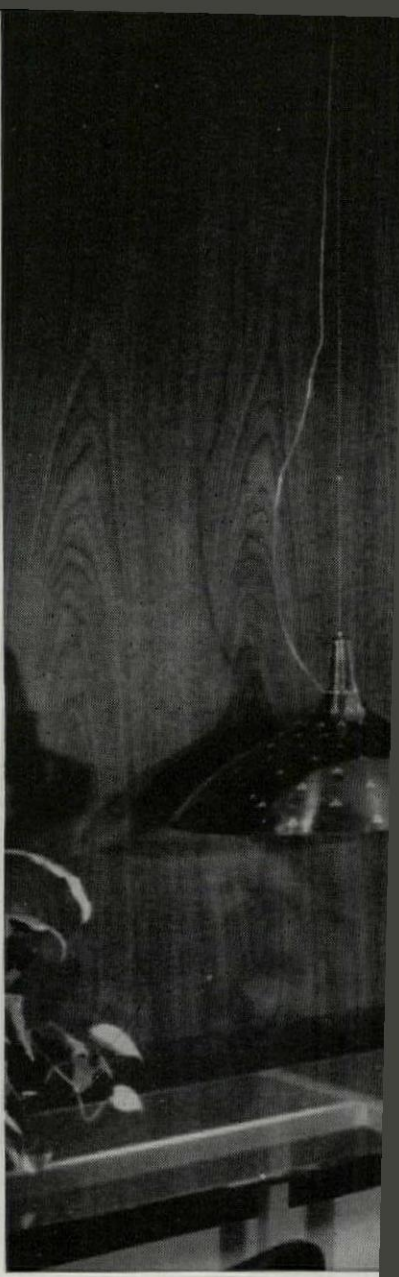
Anodized aluminum.
All popular finishes.



No. 1058 Sliding Door Lock
For by-passing closet doors. Easy to install—bore one hole. All popular finishes. For ¾" to 1¾" thick doors.

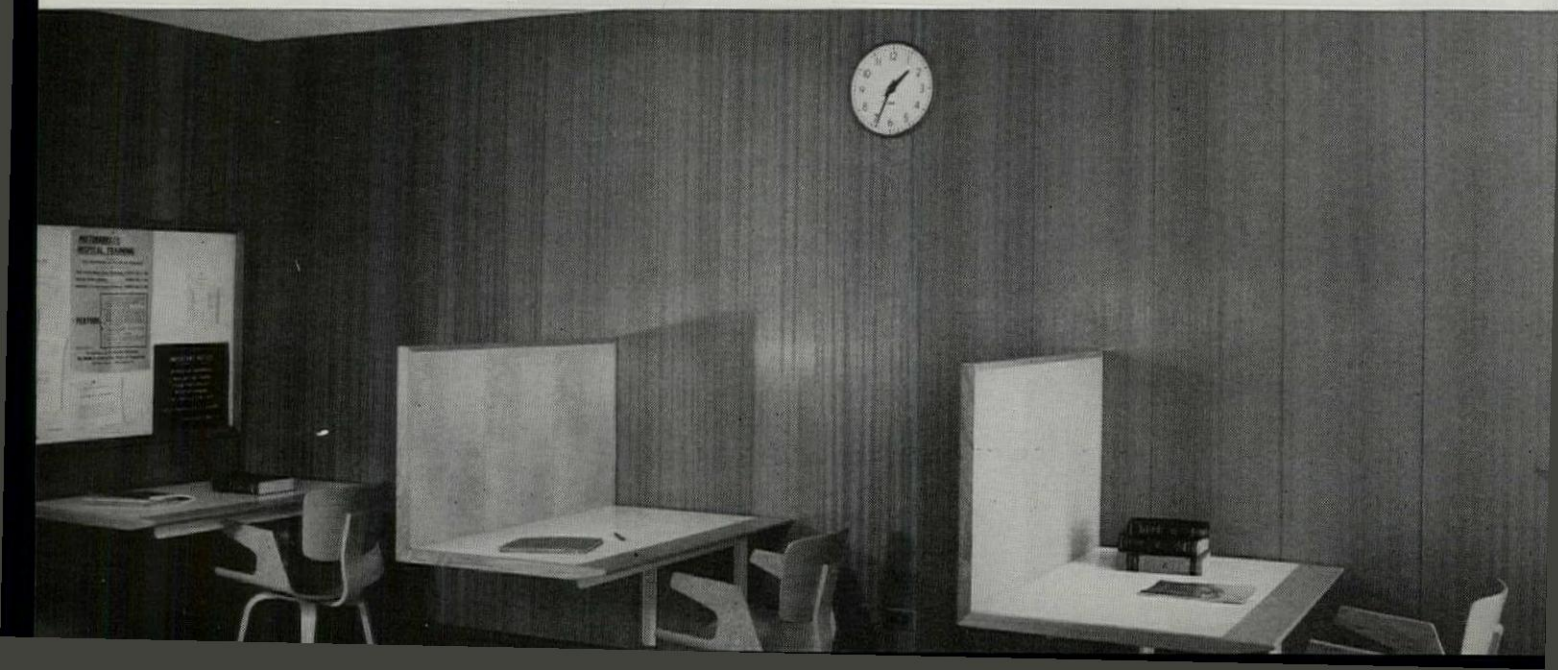
NEW!
Nylon and Steel Floor Guide
For by-passing doors. Simple, sturdy. Easily installed with two screws. No. 902 for ¾" doors. No. 906 for 1⅛" doors. No. 908 for 1¾" doors.

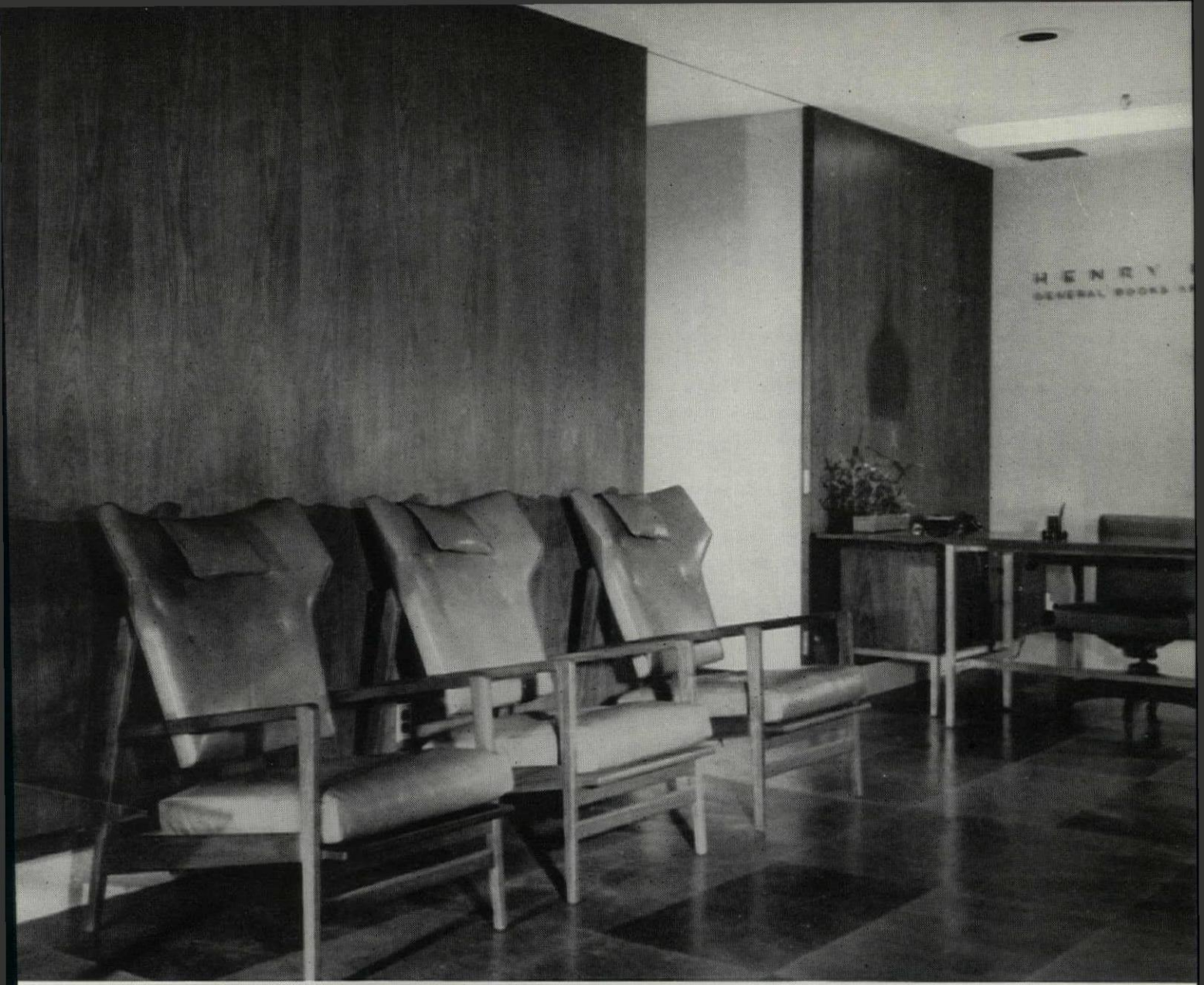




Reception room in offices of General Dynamics Corporation, New York, features Weldwood walnut walls, matching Weldwood Mineral Core Door, and Weldwood walnut desk. Interior planning by Ethel Pilson Warren and Joseph W. Rogers, Jr. Cabinetwork fabricated and installed by The Bartos Company.

Walls of Philippine Mahogany Plankweld and desks of birch Weldwood with white Micarta® tops are used in study room of Lankenau Hospital, Philadelphia, Pa. Architect: Vincent G. Kling.





chly grained walnut Weldwood paneling provides warmth and subtle luxury in reception room of Henry Holt & Co., New York City. Interiors by Designs For Business.

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Beautiful wood walls—natural companion to good design

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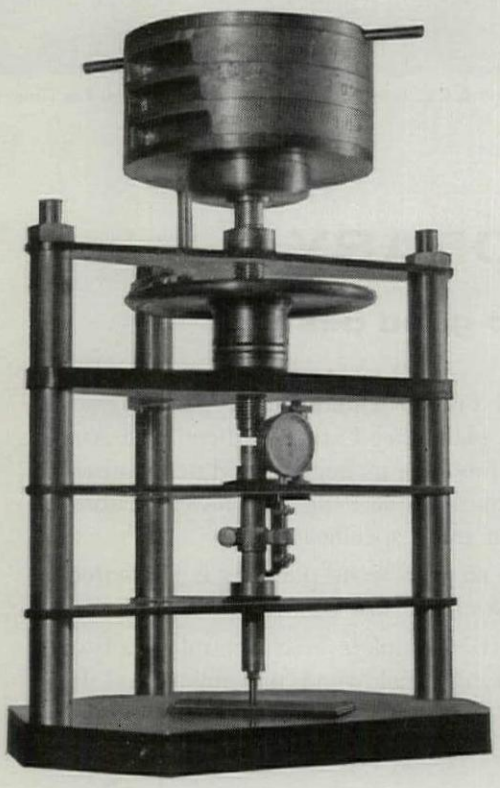
Comfort, noise, and indentation are controlled by . . .

THE RESILIENCY OF FLOORS

Technically speaking, resilience is a property involving the elastic energy inherent in a material which causes it to regain its original shape when an external load is withdrawn. For practical purposes, however, the resilience of a floor, in its broadest sense, affects more than its properties of recovery from indentation, important though these may be.

For the purposes of this article, resiliency is treated in the more comprehensive sense—as affecting underfoot comfort, and the noise generated by foot traffic, as well as the floor's resistance to or recovery from indentation by foot traffic and other short-term loads.

Recovery from indentation. In assessing the resilience of any particular flooring, the momentary indentations involved in walking are those which are of primary importance. These pressures are quite high—often as much as several thousand pounds per square inch when contact is first made with the floor under the edge of the heel. The method ordinarily used for measuring a floor's resilience is the measurement of its recovery from short-term indentations. Such measurements are of great practical assistance to architects in making their selection of floors—especially for heavy traffic areas. Because the testing requirements of Federal Specifications for different types of flooring vary, no direct numerical comparison of short-term indentation characteristics of various resilient floors can be made.



A standard instrument used to measure the recovery of resilient flooring materials from short-term indentation is the Armstrong Indentation Tester. Developed in the Armstrong Research and Development Center, this instrument is one of several types that are used in determining the data on the resilience of floors described on these pages.

Inability of a floor to recover from the indentation caused by temporary loads will also cause the floor to present an irregular and unsightly surface and to become difficult to keep clean.

RESILIENT FLOORS RATED IN ORDER OF RESILIENCE

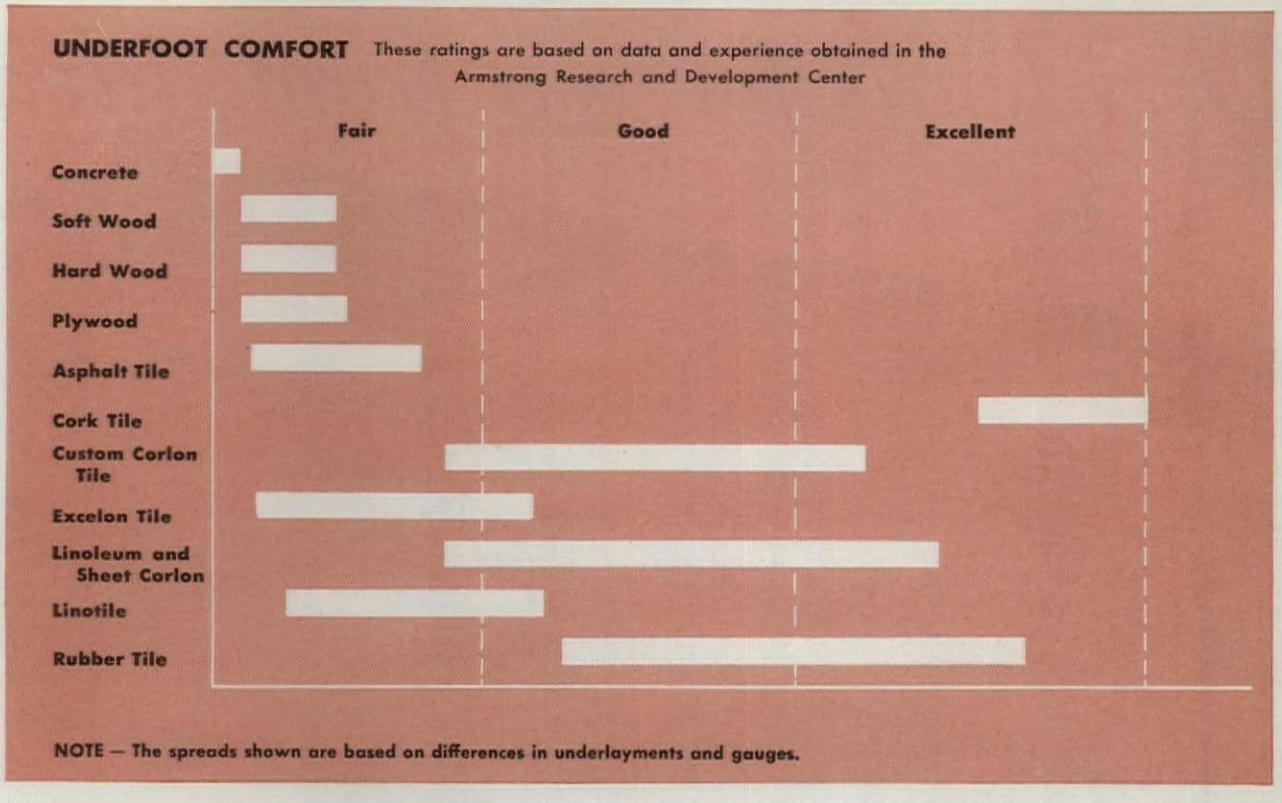
1. Cork Tile
2. Rubber Tile & Custom Corlon Tile
3. Linoleum & Sheet Corlon
4. Linotile
5. Excelon Tile
6. Asphalt Tile

MAXIMUM STATIC LOAD LIMITS FOR ARMSTRONG RESILIENT FLOORS

Type of Flooring	Load Limit Lbs. per Sq. Inch
Asphalt Tile and Excelon Tile	25
Cork Tile	40
Linoleum and Corlon (felt-back)	75
Linotile, Rubber Tile and Custom Corlon Tile	200

The table above indicates the maximum safe load limit on Armstrong Resilient Floors before the material becomes slightly indented. These figures are the results of indentation tests conducted by the Armstrong Research and Development Center and are used as a basis for computing the area of bearing surface of Armstrong Furniture Rests. These Furniture Rests and Cups are recommended to eliminate excessive indentation in resilient flooring caused by heavy static loads.

Underfoot comfort. This is an important consideration in the selection of floors in any building, and becomes a vital factor in the many areas where prolonged periods of walking or standing tend to cause fatigue. Retail stores, hospital corridors, restaurant and cafeteria service areas are obvious examples of locations where the efficiency of personnel may be seriously affected by comfort underfoot—and where the choice of the right floor may help considerably to reduce fatigue and increase efficiency. The accompanying chart has been prepared by the Armstrong Research and Development Center for the purpose of helping architects to ascertain the relative "comfort" of all types of floors. It must be emphasized that the chart is relative rather than absolute, since underfoot comfort is affected by factors other than the compos



tion of the floor itself—such as the underlayment and adhesive used in its installation.

Quietness. With the public more aware of the ill effects of noise than ever before, the reduction of sound from floor traffic becomes increasingly important to architects. The impact of footsteps on hard floors is a common source of annoyance—and in areas such as corridors, where the sound tends to reverberate through adjoining rooms, impact noise can be a very serious problem.

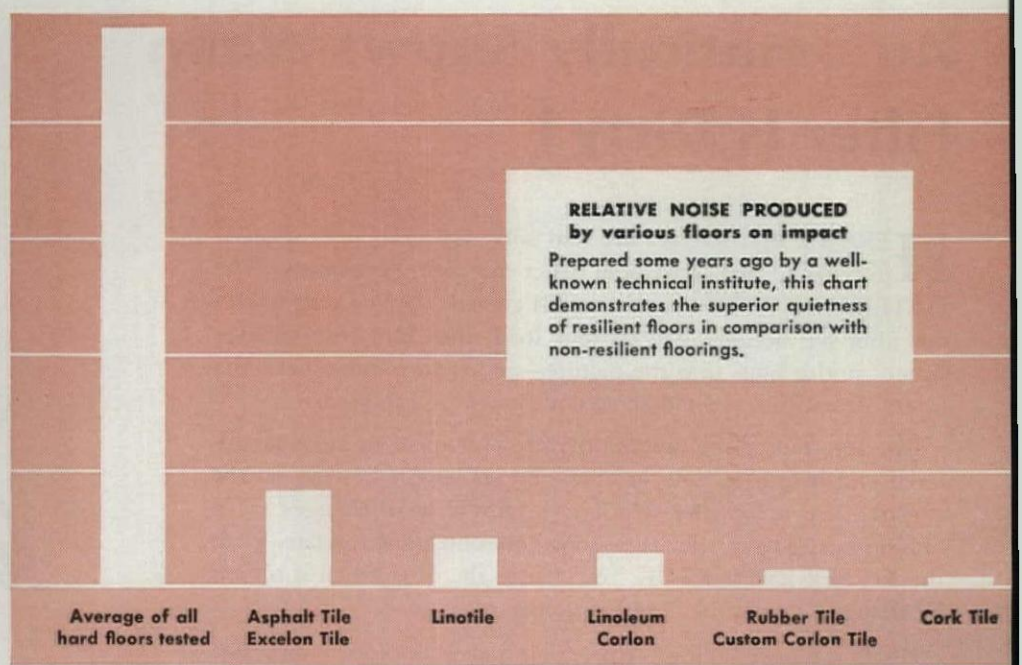
Resilient floors, because of their composition, give under the impact of footsteps, dropped objects, and rolling wheels. This cushioning effect actively reduces traffic noise. All types of resilient floors rate well as "low noise producers" in comparison with concrete or marble. Their relative noise-on-impact qualities are shown on the chart at lower right.

While resilient floors will soften the sound of foot traffic, they will not appreciably subdue noise originating from other sources. "Sound conditioning"—or the absorption of noise such as the clatter of typewriters, kitchenware, and conversation—can best be accomplished by the use of acoustical materials. Generally, neither resilient floors nor acoustical materials stop the passage of noise through the building structure itself.

RMSTRONG CORK COMPANY makes all types of resilient floors for all types of inte- Almost any flooring problem can be met one or more of the floors in the Armstrong As a result, we have no special bias toward one type and can offer architects impartial nmendations on any flooring problem. Our interest is to aid you in making a sound ng selection.

mstrong's sales representatives throughout ountry will be glad to consult with architects make specific recommendations for indil jobs. Your Armstrong representative has le variety of experience and training in re- flooring and can also call upon the Arm- Research and Development Center for asce with special problems.

helpful information on any flooring quesust call your nearest Armstrong District Of- write direct to Armstrong Cork Company, Division, 111 Watson St., Lancaster, Pa.



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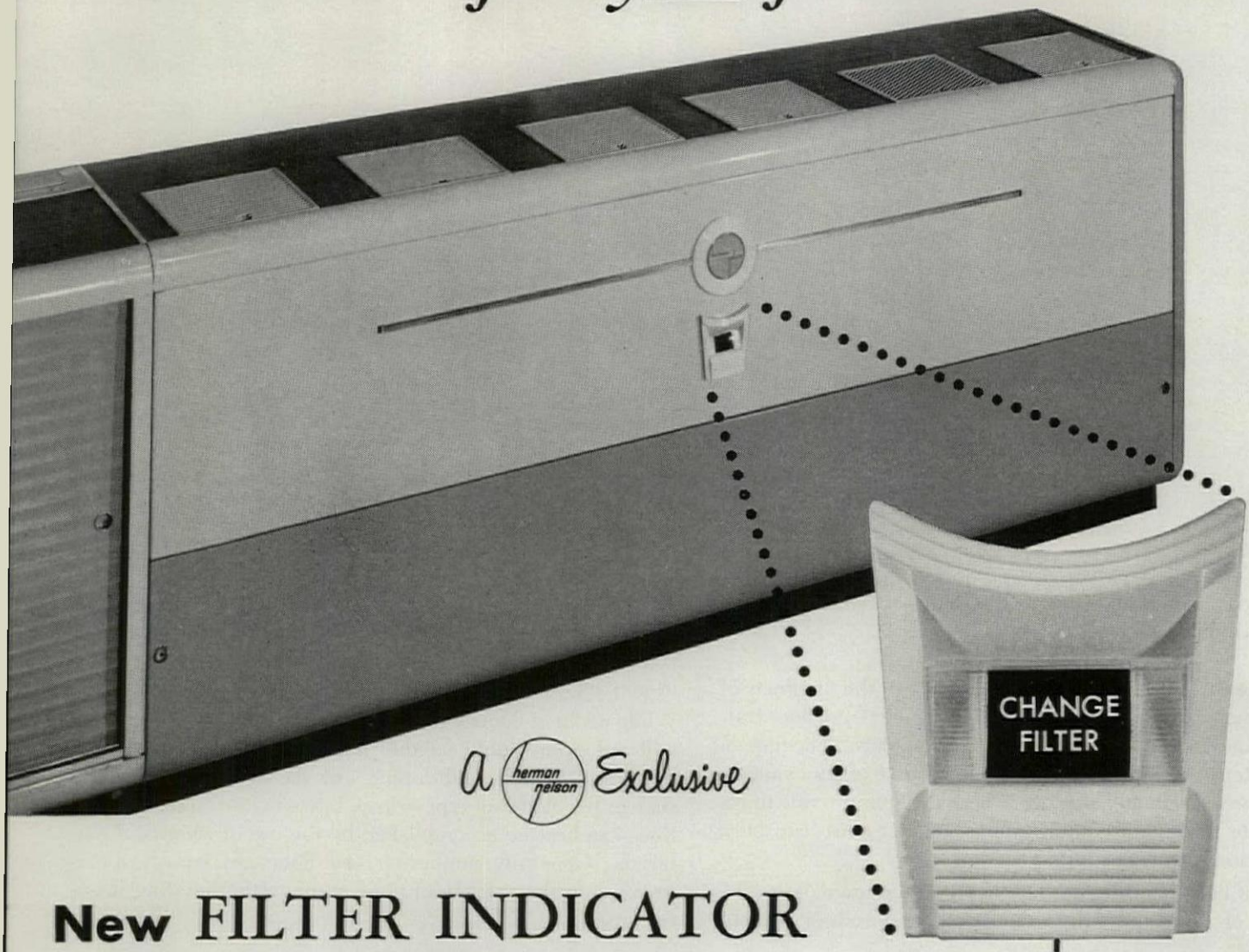
Dividends for you from advanced



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New FILTER INDICATOR Automatically Shows When Filter Is Dirty!

HERE'S a practical feature that solves the problem of *when* to change the classroom filter in unit ventilators. The FILTER INDICATOR eliminates all guesswork. The very second the filter has accumulated its dust load, the vivid red "Change Filter" notice pops into the picture—and it *stays* there until the filter is removed and either reconditioned or replaced.

The location of the unit ventilator, amount of outdoor air filtered and length of time in operation *all* have a bearing on the effective life of a filter. Until now, filters were changed on a hit-and-miss guesswork basis—some too soon, most too late. With the FILTER INDICATOR, you change the filter when it *should* be changed—no sooner, and certainly no later.

Here's a money-saving feature, that makes absolutely sure that every bit of the efficiency *built into* Herman Nelson Unit Ventilators is *achieved* continuously in every installation.

Provides
COOLING, HEATING
VENTILATION, ODOR CONTROL
DRAFT ELIMINATION
All at minimum cost

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UNIT VENTILATOR PRODUCTS
AMERICAN AIR FILTER COMPANY, INC.
SYSTEM OF
CLASSROOM COOLING, HEATING AND VENTILATING

design!

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Renewable Filter Cuts Service Costs in Half!

Herman Nelson AMERglas renewable filters combine the best features of a permanent filter with the time and money-saving advantages of a replaceable filter. By utilizing permanent frames and throw-away media, the cost of classroom filters is just about half that of complete replaceable filters. Just four easy steps and the filter is restored to original efficiency—

1. Remove the aluminum filter frame from the unit ventilator and dispose of soiled media.

2. Pull out desired length of clean AMERglas media from self-dispensing carton and cut with scissors.

3. Insert the clean filter media in the frame and lower hinged top into position.

4. Replace the filter frame in the unit ventilator. It's ready to go.

+ A Host of Other Time and Money Saving Features

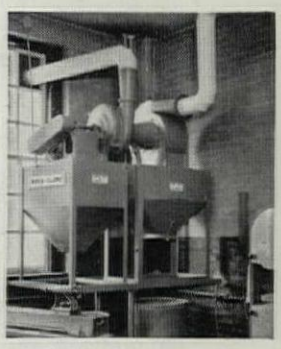
- **Access grilles in top—For oiling of end bearings and motor without removing front of unit or any panels.**
- **Removable discharge grilles—For cleaning fans and fan housings without removing front panels.**
- **Split front panel—Allows removal of soiled filter by removing small, easy-to-handle lower panel.**
- ***All* filters for Herman Nelson Unit Ventilators are one-piece filters. Just one piece to remove, one piece to clean or replace.**
- **Herman Nelson units are protected by famous Bonderite corrosion resistant paint base, then finished in beautiful, long-lasting, mar-resistant baked enamel.**
- **Utility cabinet tops are now available in stainproof plastic laminate as well as linoleum.**
- **Motors are direct drive (no belt replacement), and except for oiling, completely maintenance-free.**

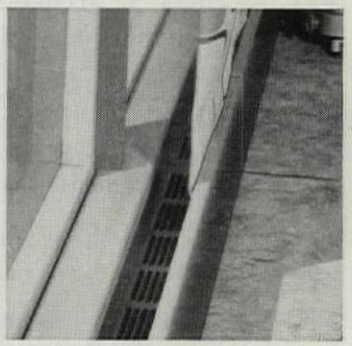
Herman Nelson's continuing concentration on *maintained performance* means time and money saving dividends to you. It's little wonder that architects specify Herman Nelson Unit Ventilators without qualification, and that budget-minded, performance-conscious school officials are Herman Nelson's best customers. For complete information, see our catalog in Sweet's Architectural File, or mail coupon.

OTHER AAF herman nelson SCHOOL PRODUCTS

KEEPS WOODWORKING SHOP SPIC AND SPAN

Type D ROTO-CLONE collects chips and sawdust from woodworking equipment at St. Bernard High School, Cincinnati, Ohio. The unit is self-contained and requires little floor space.



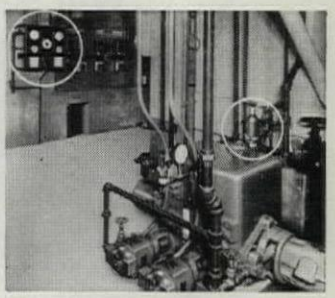


COMFORT WITHOUT CONFUSION IN THE AUDIO-VISUAL CLASSROOM

Herman Nelson Light|Stop accessory permits operation of unit ventilator in darkened classroom — prevents discharge air from billowing curtains and causing distracting light streaks.

BALANCES HEAT AND BUDGETS

Illinois Selectotherm—an automatically controlled high vacuum steam heating system which through single dial control, balances heat supply against heat loss in many school spaces.



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Dept. PA-11
Louisville 8, Kentucky

I would appreciate receiving literature describing the following products—

- ☐ Filter Indicator
- ☐ Renewable Filters
- ☐ Illinois Selectotherm
- ☐ Dust Control for Woodworking Shops
- ☐ Light|Stop Curtain Accessory

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SPECIFY WATER REPELLENTS MADE WITH "LINDE" C-25 SILICONE

CONTROL EFFLORESCENCE: Preserve original building beauty with lasting control of unsightly efflorescence, streaking, staining.

KEEP BUILDINGS CLEAN: Since water cannot penetrate, rain washes dirt and dust right down to the ground. Yet walls can still "breathe."

RETARD WEATHERING, SPALLING: Eliminate chipping, cracking, spalling due to freezing by keeping water out of masonry.

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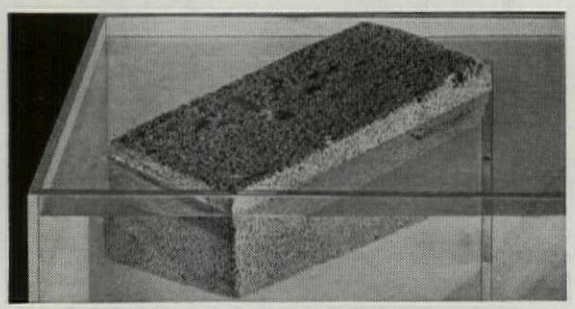
LONG LASTING: Accelerated weathering tests indicate effectiveness lasts up to ten years.

APPLIES WITH EASE: By low-pressure spray or flood brushing. Dries quickly for clear, colorless finish.

Will Make A Brick Float



This lighter-than-water fire brick was coated with masonry water repellent made with *Linde* C-25 Silicone, and dried thoroughly. Placed in tank, it repels the water and floats like a cork. Untreated, brick would soak up water and sink instantly.

Sample Specifications

1 All above-grade masonry exposed to weather shall be treated with clear silicone masonry water repellent.

2 At the time of application to new construction, any mortar shall be at least 30 days old. If weather has bordered on freezing, the age before treatment should be approximately 60 days. Product used shall be a concentration of at least 3% LINDE C-25 Silicone in mineral spirits.

3 After all mortar has properly set, one flooding coat of clear silicone water repellent as specified shall be applied to all masonry surfaces from top down to grade. The water repellent shall be delivered to the site in sealed containers, and be applied in strict accordance with the manufacturer's instructions. At the time of treatment the building shall be dry. Following rain, two to three days of clear weather shall have elapsed to allow the masonry to dry. Application can be made at any temperature between 0 deg. F. and 100 deg. F. It will take longer for solvent evaporation at the lower temperature. Coverage shall be sufficient to provide a run-down of 6 to 12 inches. Approximate coverage per gal. should be as follows:

Hard-Fired Brick	**150 sq. ft. per gal.**
Concrete Block	**150 sq. ft. per gal.**
Soft Brick	**100 sq. ft. per gal.**
Light Weight Aggregate Brick	**75 sq. ft. per gal.**

4 Normal safety precautions common to handling hydrocarbon solvents should be taken to prevent fires, to avoid excessive inhalation of solvent fumes, and to avoid excessive contact with the skin.

FOR FURTHER INFORMATION WRITE DEPT. B-11

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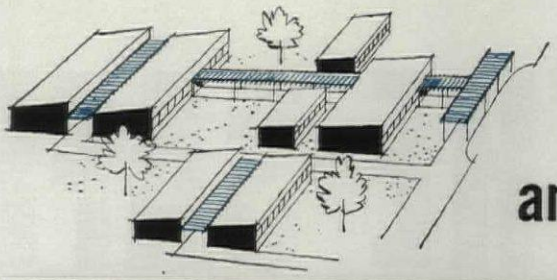

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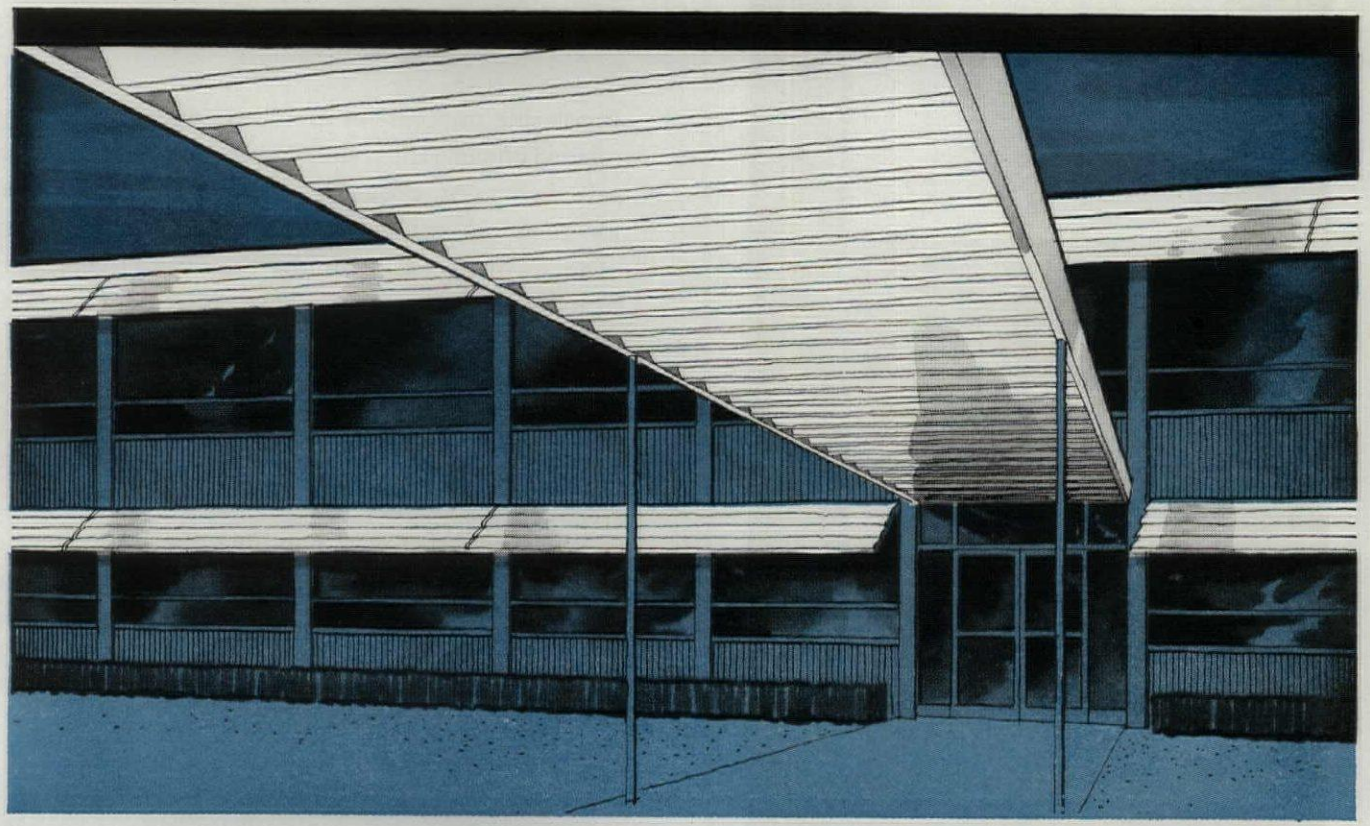

KAWNEER all-aluminum prefabricated

CANOPY

entrance protection

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K-LOUVER

window protection

overhang addition

School design can be simplified with Kawneer's Sun-Control and weather protection products. You have great flexibility with the prefabricated sections enabling you to cover almost every glass opening and passageway to design specifications. The advantages far exceed the relatively low cost. Both products are made of heavy-gauge alumilited aluminum which means long, maintenance-free life. The reflective surface assures cool areas. The unique shapes such as the "W" of the canopy sections provide and encourage ventilation, yet protect from rain, and snow. The quick and easy erection means a faster completion date and fewer labor hours. Fill out the coupon below to learn more about Kawneer Sun-Control and Weather Protection products, and how they can be adapted to your school plans.

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Kawneer Company, Niles, Michigan
Gentlemen:

_____ Please send me further information on the Canopy and K-Louver.

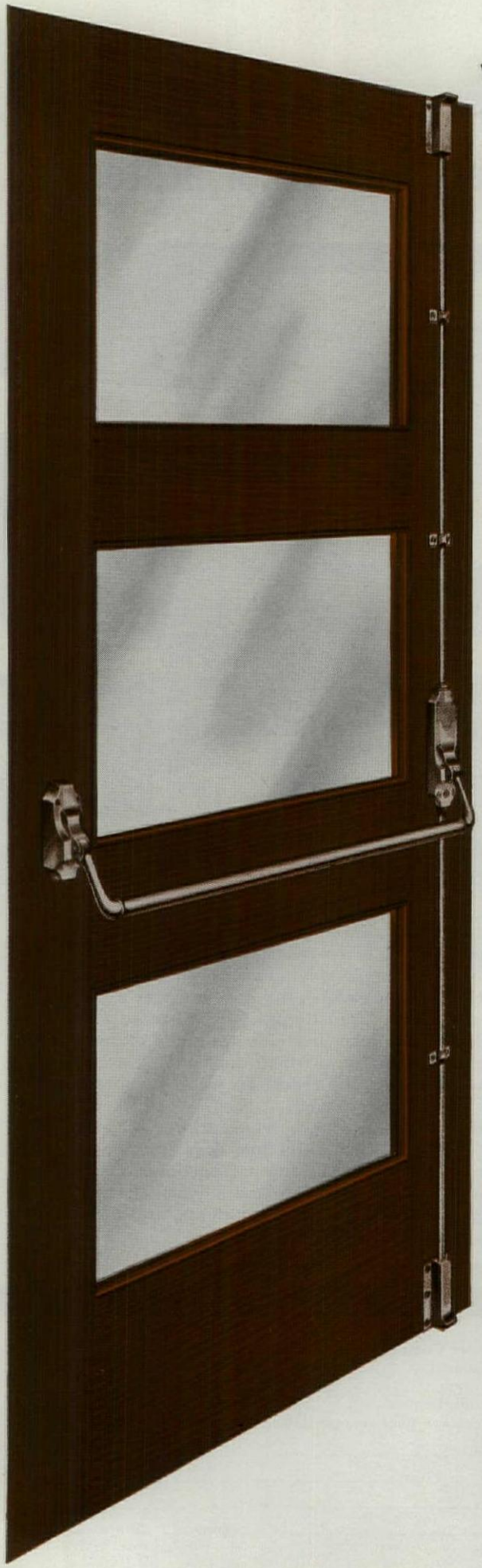
_____ Have your representative contact me.

Name_____

School or Firm_____

Street_____

City_____ Zone_____ State_____

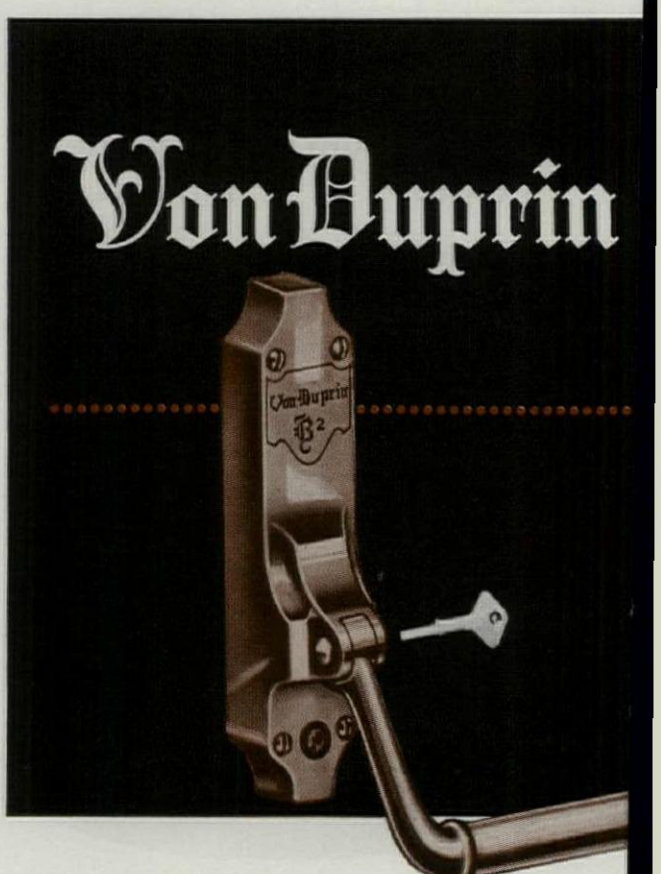


"THE SAFE

Increasing numbers of architects and other safety-minded officials the country over specify Von Duprin exit devices to provide "the safe way out!" And for good reason: Von Duprin's unequalled record of performance! Even under the most adverse conditions, these devices operate efficiently . . . with only normal maintenance.

Since originating fire and panic exit devices in 1908, Von Duprin has consistently paced the field in new designs, incorporating new materials and production methods.

Whether effectively handling the daily flow of traffic . . . or standing ready for that "once-in-a-lifetime" emergency, Von Duprin-equipped doors are your answer to safe, sure exit.



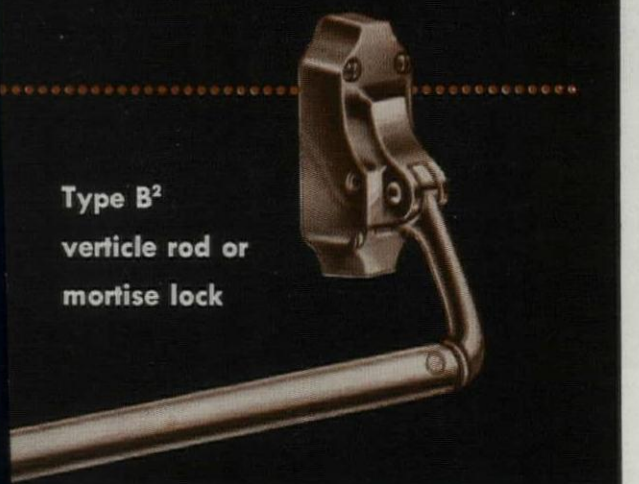
WAY OUT!"

The vertical rod Type B² device, illustrated here, is a part of the complete Von Duprin line of exit devices and auxiliary hardware designed to meet every exit requirement.

For complete information, or for expert advice on specific exit needs, call on your Von Duprin "Exit Specialist"—either a factory representative or a selected builders' hardware distributor.

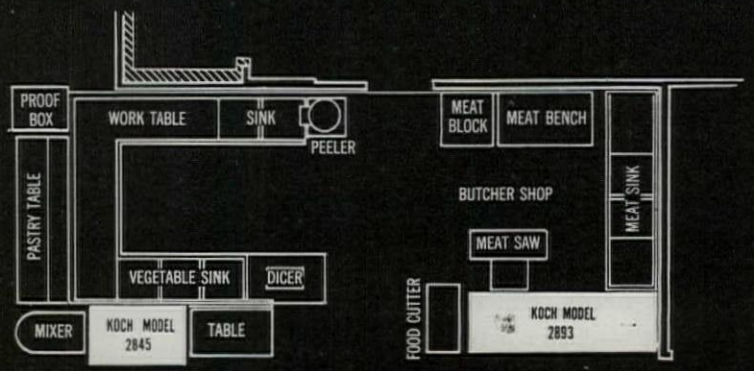
VONNEGUT HARDWARE CO.
VON DUPRIN DIVISION
Indianapolis 9, Indiana

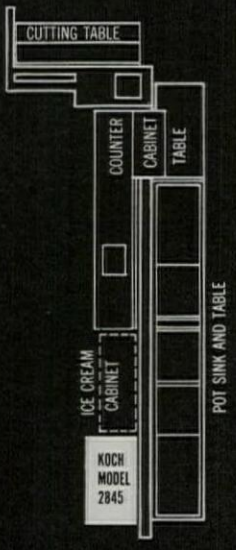
FIRE AND PANIC EXIT DEVICES

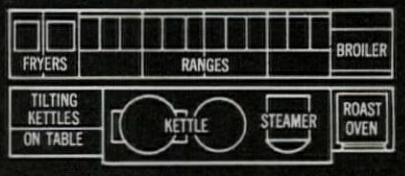


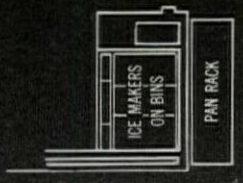
Type B²
verticle rod or
mortise lock

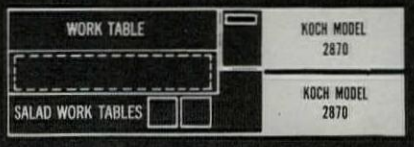
a good layout demands good equipment *











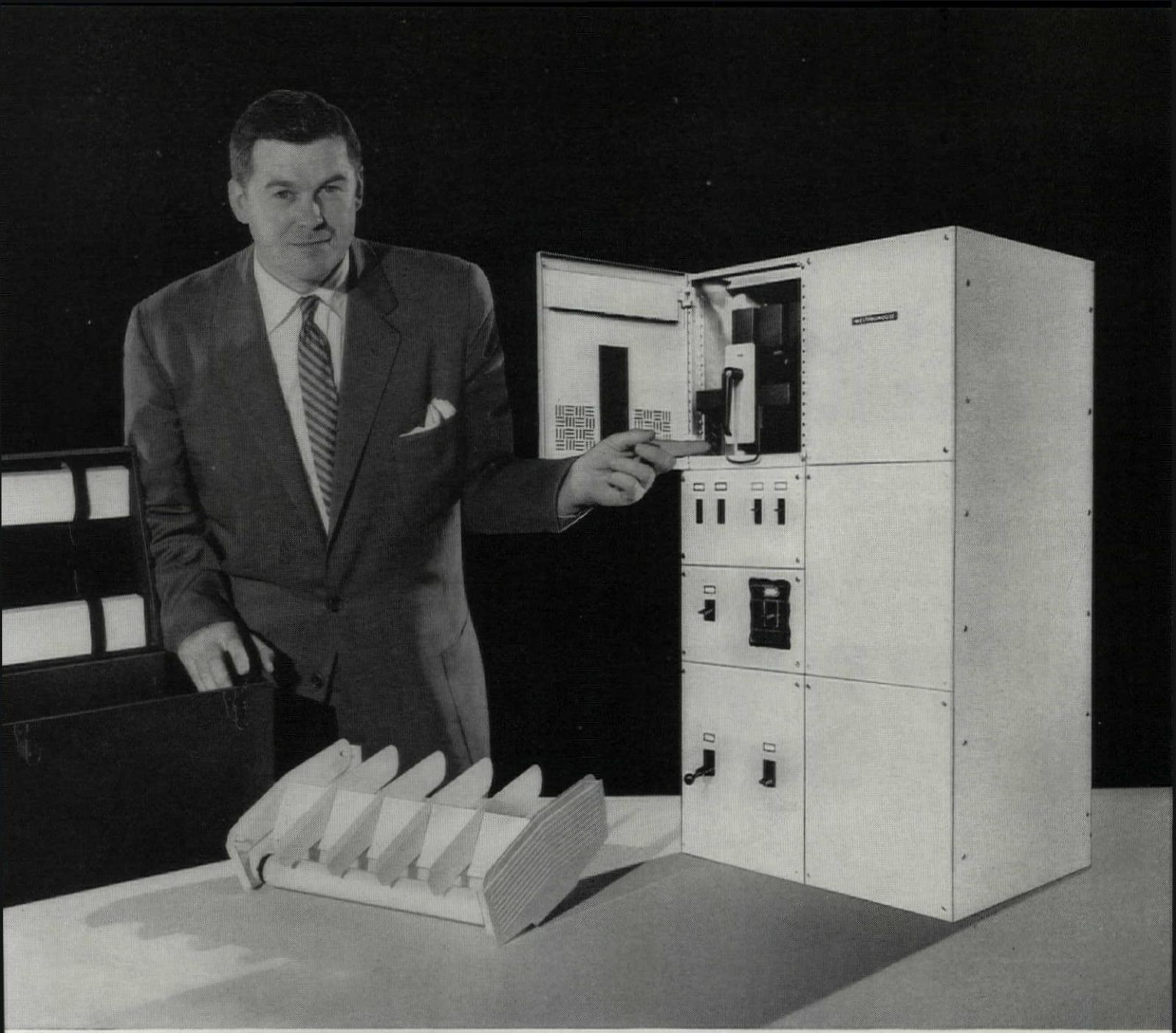
The New Piedmont Hospital
Atlanta, Georgia
By The Wright Co., Atlanta

Shutze, Armistead & Saggus
Architects and Engineers
Herman Smith, M.D., Consultant

**Good equipment means KOCH in mass feeding establishments all over the world*

SINCE 1883 **KOCH refrigerators, inc.**

401 FUNSTON ROAD • KANSAS CITY 15, KANSAS



WHATEVER YOUR ELECTRICAL PROBLEM, WE ARE READY TO SERVE YOU

This man is the construction sales engineer in your nearby Westinghouse office.

He's an electrical specialist.

His job is to help you solve electrical problems on the kind of projects you handle.

In fact, from preliminary design through electrical system planning . . . from product demonstrations through operational proof . . . he and his team of Westinghouse engineers will work with you.

DP-5019-A

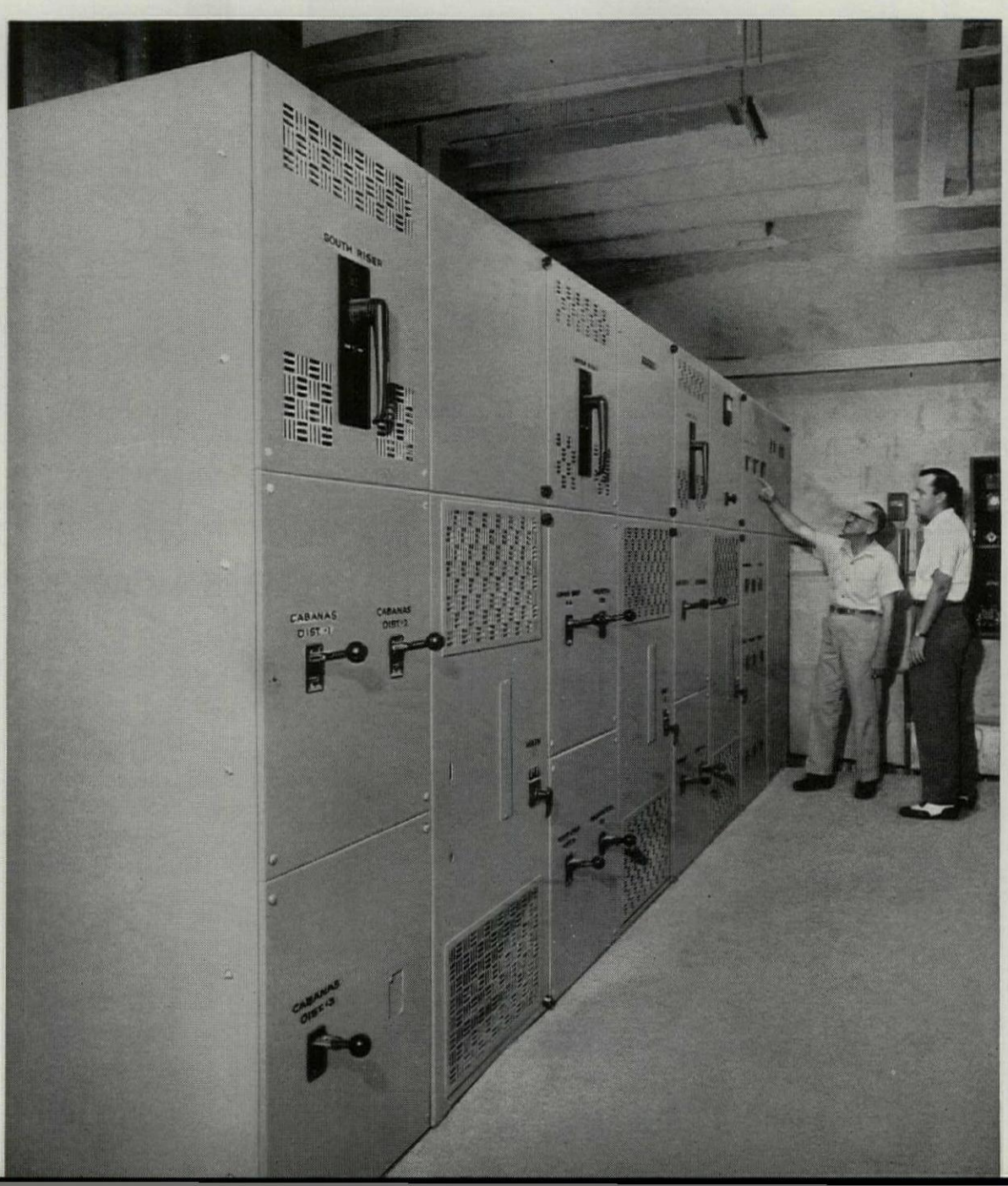
CHECK THE EXAMPLES
ON THE FOLLOWING PAGES . . . →

YOU CAN BE SURE...IF IT'S

Westinghouse

Fontainebleau Hotel, Miami Beach, Florida. Architects: Morris Lapidus & Associates, Miami Beach. Consulting Engineers: Sasnett & Bennett Engineering Company, Miami. General Contractor: Taylor Construction Co., Miami. Electrical Contractor: Max Belin Electric Co., Miami.

Westinghouse building-type switchboard, one of two installed, contains modern circuit breaker protective devices that minimize outages on the entire electrical system. DP-5019-D



ELECTRICAL EQUIPMENT, MATCHED WITH THE FINEST IN HOTEL CONVENIENCE, ASSURES RELIABLE POWER SERVICE

Since many of its guest services are electrically operated, the new 15-million-dollar Fontainebleau Hotel demands completely reliable power distribution.

Called during the planning stages, Westinghouse engineers helped select an electrical system that virtually assures continuous service. The base: two Westinghouse building-type switchboards—providing circuit breaker protection for the entire system.

In case of electrical interruptions, both switchboards permit quick restoration of service. A flip of the breaker handle does it.

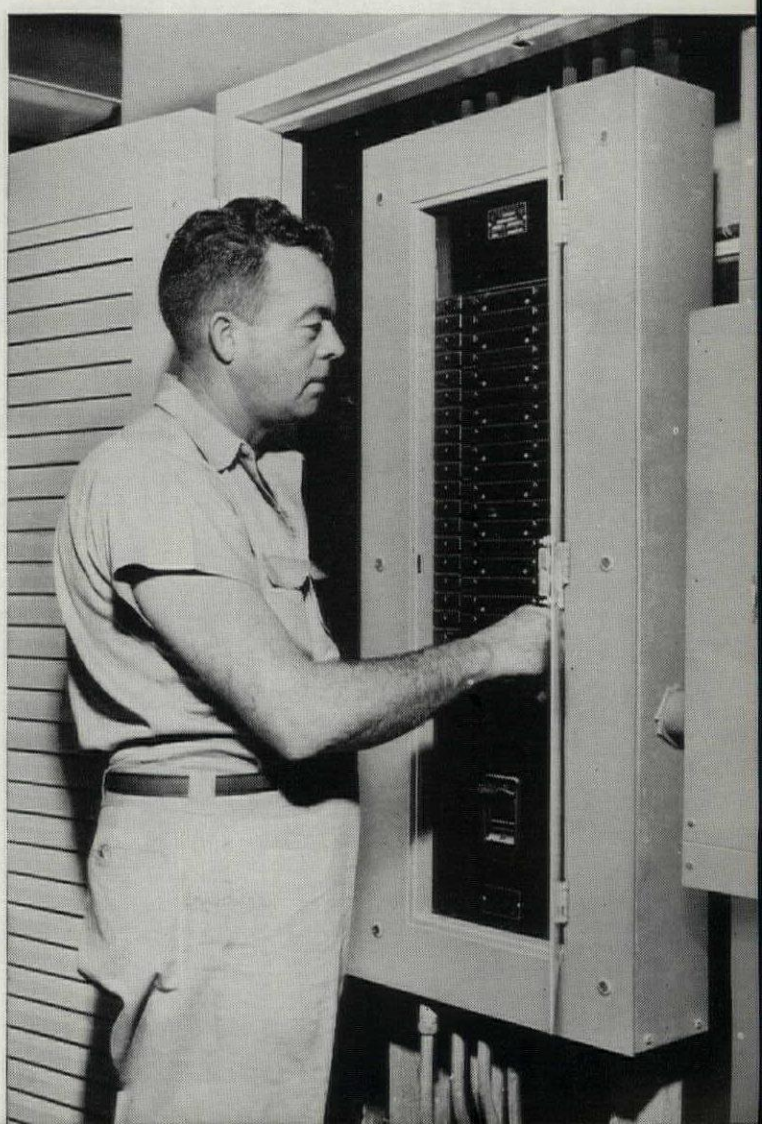
BRANCH CIRCUIT PROBLEMS ... VIRTUALLY ELIMINATED

Branch circuit protection is provided by Westinghouse De-ion® circuit breaker panelboards.

Especially designed into the hotel's corridors, these power and lighting boards guarantee protection of the equipment they serve. They will not trip on harmless overloads. When a fault does occur, the tripped breaker can be spotted easily. By flipping it back, service is restored quickly and safely.

Why not call your Westinghouse construction sales engineer to help you solve similar problems?

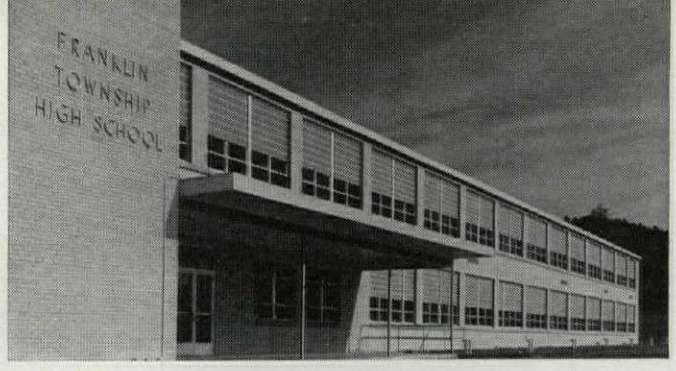
Westinghouse NLAB circuit breaker panelboard is one of 65 protective lighting circuits—consisting of 140 miles of wire that feeds 9,000 lamps in the hotel. DP-5019-E

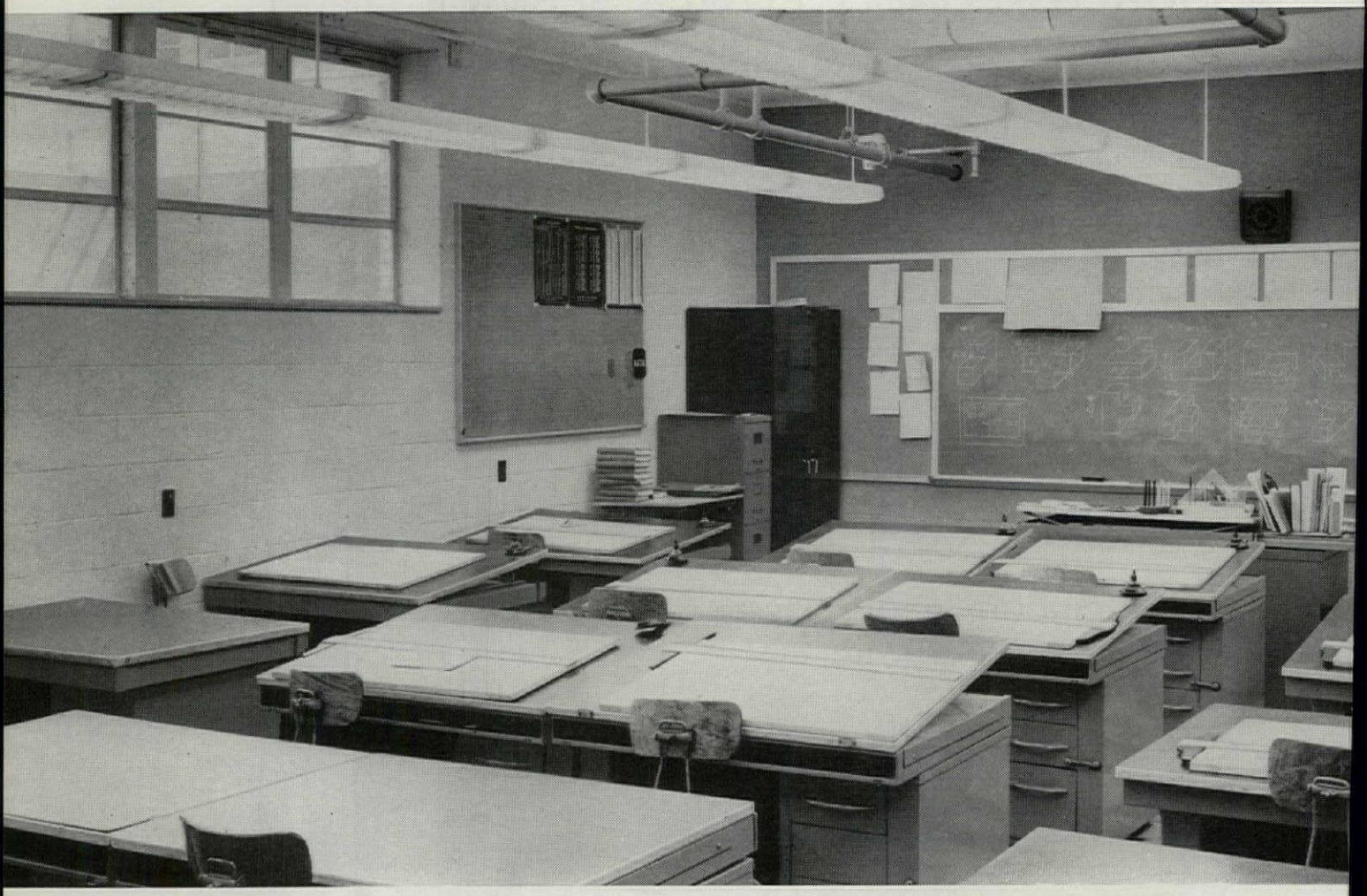


YOU CAN BE SURE...IF IT'S

Westinghouse

Franklin Township High School
Newlonsburg, Pennsylvania





LIGHTING TAILORED TO SCHOOL ACTIVITIES

SOLVES THE PROBLEM OF VARIED CLASSROOM NE

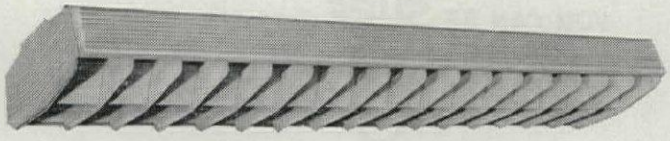
Low ceiling heights . . . and a need to match seeing conditions to academic programs. These made *controlled* lighting a basic consideration here.

The answer: Westinghouse LC fluorescent luminaire. A direct-indirect type, it provides high illumination in all parts of the room . . . gives a diffused, efficiently utilized light.

Whatever the school lighting problem, the Westinghouse construction sales engineer stands ready to help you solve it.

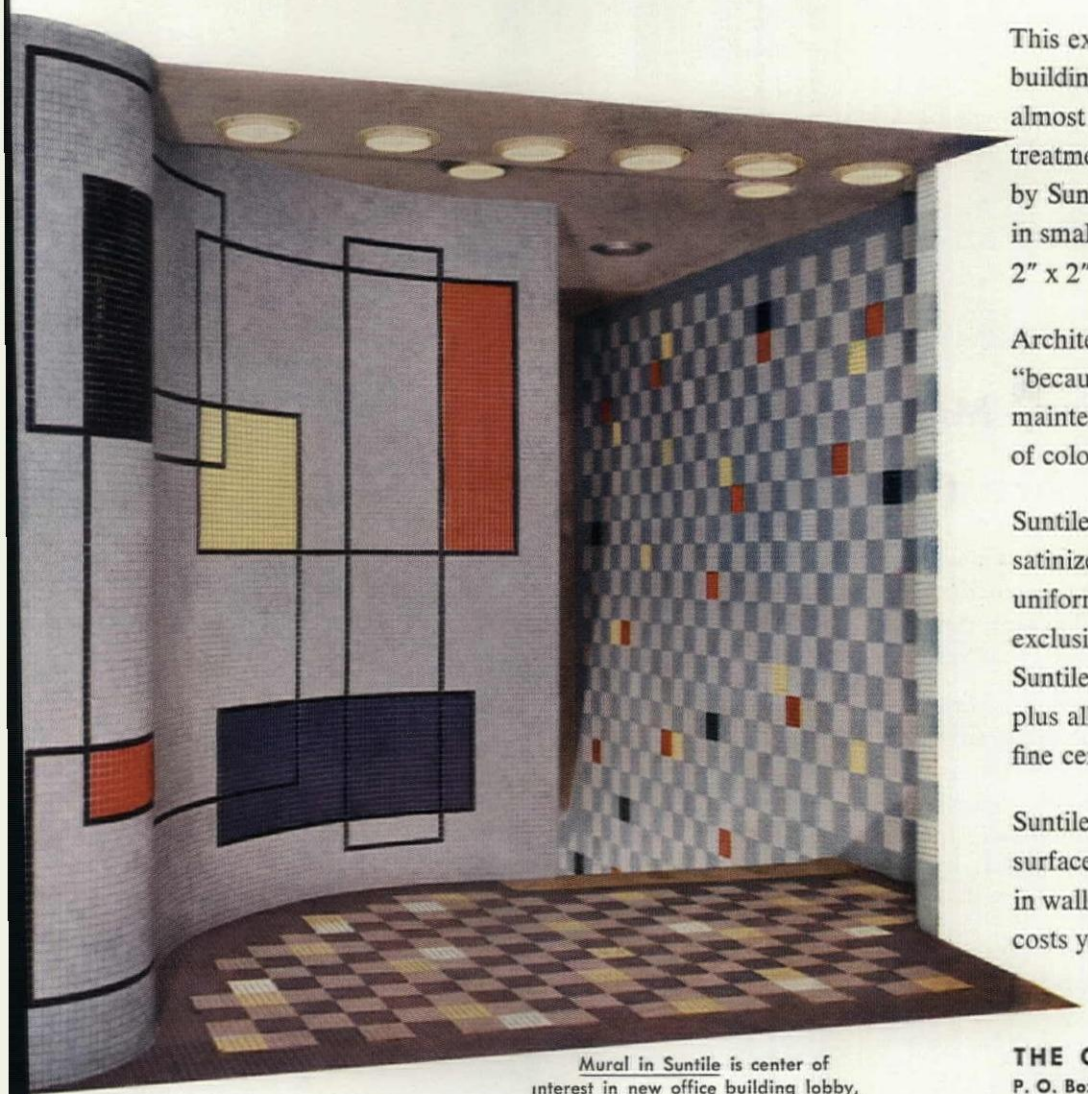
DP-5019-G

LC Fluorescent Luminaire—
A direct-indirect fixture for general classroom use.



YOU CAN BE SURE...IF IT'S Westinghouse

bold pattern in Suntile ceramics GIVES AN OLD LOBBY new life



Mural in Suntile is center of interest in new office building lobby, 1201 N. Dearborn Street, Chicago, Illinois. Alper & Alper, Architects.

This exciting remodelling of an old office building lobby is just one example of the almost unlimited variety of decorative treatments made available to designers by Suntile Ceramics—durable ceramic tile in smaller sizes (½″ x ½″, 1″ x 1″, 1″ x 2″, 2″ x 2″).

Architect Max Alper selected this material "because of its permanence, ease of maintenance, flexibility, range and depth of color, and design possibilities."

Suntile Ceramics combine attractive satinized finishes and soft colors in both uniform and mottled shades. Used exclusively, or in combination with glazed Suntile, they offer you new design freedom plus all the practical advantages of fine ceramic tile.

Suntile Ceramics have an especially tough surface which serves equally well in walls or floors, saves maintenance costs year after year.

THE CAMBRIDGE TILE MFG. CO
P. O. Box 71, Cincinnati 15, Ohio
The Cambridge Tile Mfg. Co.,
470 Alabama Street, San Francisco 10, Calif.
The Cambridge Tile Mfg. Co.,
1335 South LaBrea, Los Angeles 19, Calif.

SPECIAL DESIGN SERVICE

Our staff of trained ceramic specialists is ready to help you with design or layout problems—and your local Suntile dealer guarantees proper installation. For full information, just write us, Dept. PA-115

Better, More Economical Hospitals Are Built with *CONCRETE*

More and more designers and builders are turning to concrete construction for hospital buildings. That's because concrete offers greater durability, safety and economy.

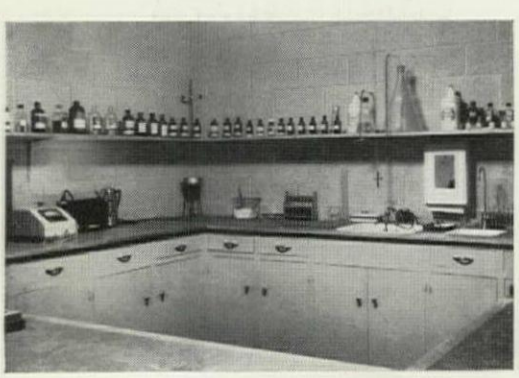
Concrete meets every structural requirement for hospitals. It has great strength and unexcelled resistance to destructive forces. Durable concrete protects patients and hospital staff against violent storms, 'quakes, explosions, atomic blasts and fire. *Remember, concrete can't burn.*

In addition to its structural advantages, concrete's neat, clean appearance, both inside and out, symbolizes the cleanliness associated with hospitals. And its enduring beauty makes concrete hospitals a source of community pride.

Hospital boards and administrators like concrete's moderate first cost, low upkeep cost and long life. They result in ***low annual cost.***

Concrete construction is versatile. It can be used in single or multi-story hospitals designed to meet the needs of any community. For more information, ask for free illustrated booklet. It is sent only in U.S. and Canada.

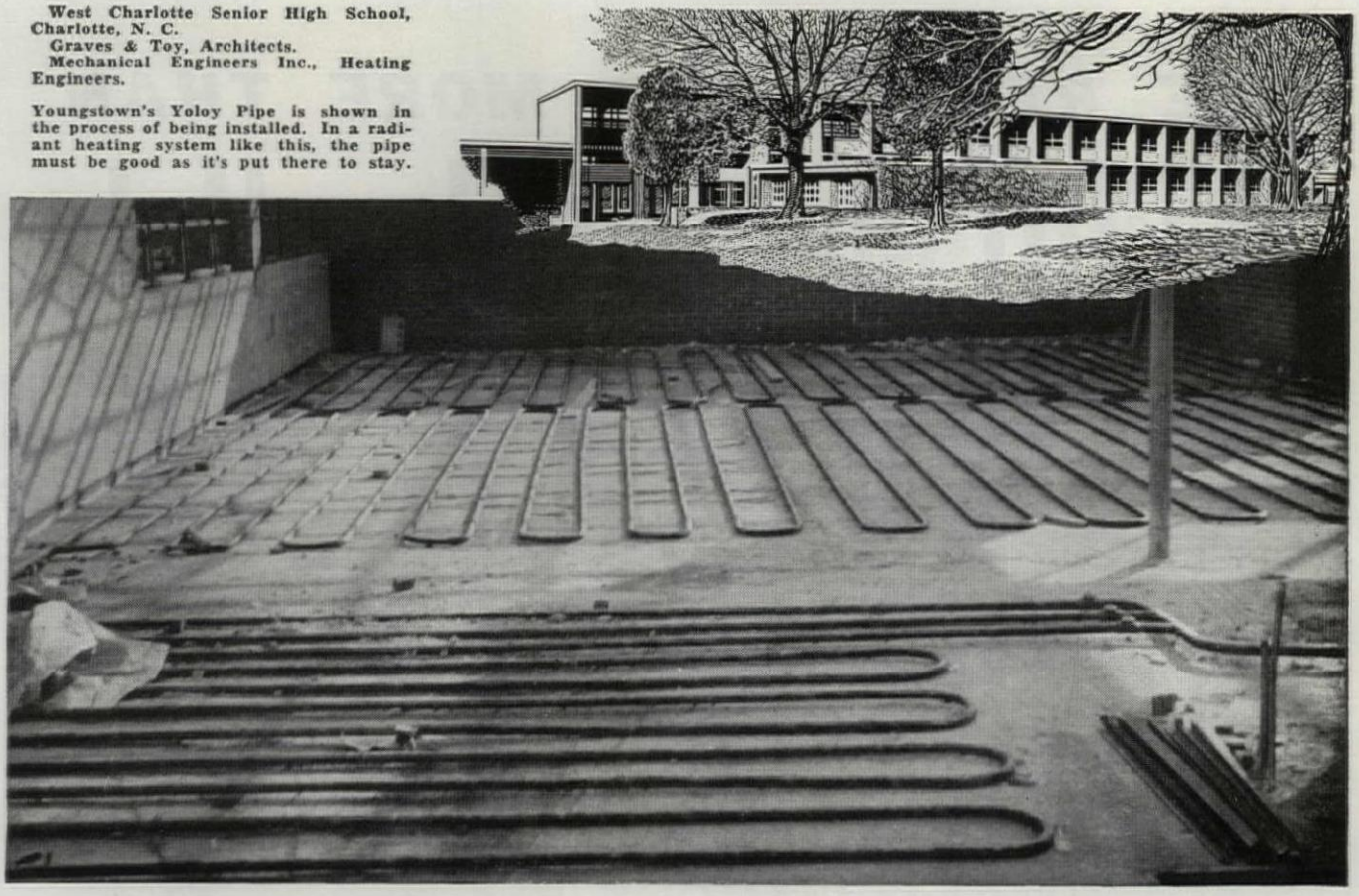
PORTLAND CEMENT ASSOCIATION
33 West Grand Avenue, Chicago 10, Illinois
A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work



Many hospitals are using concrete masonry for interior walls and partitions. These concrete masonry walls have great durability and can be painted in any of a wide variety of colors with portland cement paint. The photos show a reception room and laboratory which are built with concrete masonry walls.

West Charlotte Senior High School, Charlotte, N. C.
Graves & Toy, Architects.
Mechanical Engineers Inc., Heating Engineers.

Youngstown's Yoloy Pipe is shown in the process of being installed. In a radiant heating system like this, the pipe must be good as it's put there to stay.



YOUNGSTOWN YOLOY PIPE chosen for radiant heating system at West Charlotte High School

This handsome school won a First Award in the 1955 School Executive magazine competition. It also won an A.I.A. Award of Merit. Justifiably, too, as it is the result of years of planning by a group of Charlotte's educators and architects.

How fitting that far-sighted civic leaders like this chose Youngstown's Yoloy Pipe for the radiant heating system. For, Youngstown Yoloy is a low alloy steel that is especially resistant to corrosion and shock. Made only of the finest steel, with additions of nickel and copper to give it those desirable extra qualities. Youngstown's Yoloy Pipe is controlled by its sole producer from ore mine to the final operation. Yoloy Continuous Weld Pipe is used most economically in many industrial and snow removal systems as well as in train pipe installations.

Having problems?

For further information write for our free booklet "The ABC of Yoloy Continuous Weld Pipe and its corrosion resistance".

Youngstown

QUALITY V YOUNGSTOWN SERVICE

THE YOUNGSTOWN SHEET AND TUBE COMPANY *Manufacturers of Carbon, Alloy and Yoloy Steel*

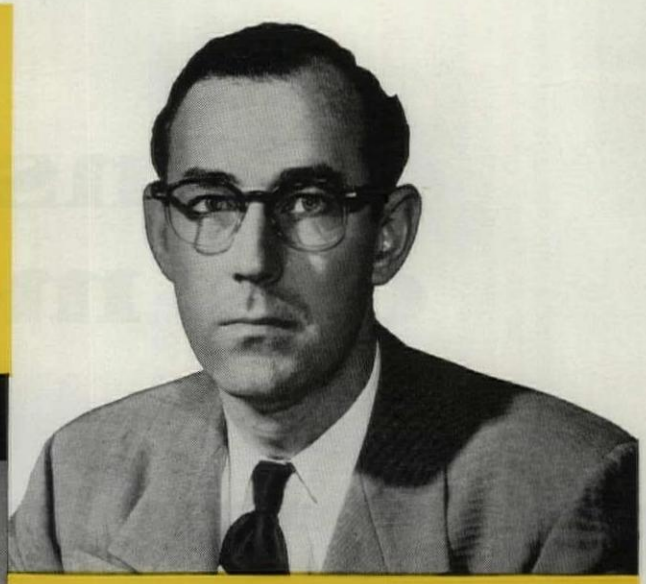
General Offices Youngstown, Ohio District Sales Offices in Principal Cities.

SHEETS - STRIP - PLATES - STANDARD PIPE - LINE PIPE - OIL COUNTRY TUBULAR GOODS - CONDUIT AND EMT - MECHANICAL TUBING - COLD FINISHED BARS - HOT ROLLED BARS - WIRE - HOT ROLLED RODS - COKE TIN PLATE - ELECTROLYTIC TIN PLATE - BLACK PLATE - RAILROAD TRACK SPIKES - MINE ROOF BOLTS

in 4 years..."

Home Office, Columbus, O.

Typical office. Increased use of electric office machines has more than doubled their electrical requirements in the past four years.



Mr. F. D. Schaaf, Superintendent of Properties, Nationwide Insurance, Columbus, Ohio.

"...plus doubling our electrical capacity... all without ripping up or drilling through floors and ducts"

When Nationwide Insurance undertook a decentralization program, they found it necessary to relocate 2500 electrical and 1500 telephone outlets already installed in the R/C Duct Floors.

Because of the flexibility of R/C Duct Floors, they had no difficulty in handling these major changes. As a result of this experience, Nationwide Insurance has specified R/C Duct Floors for several new regional offices.

R/C DUCT FLOORS

(ELECTRIFIED CONCRETE JOIST FLOORS)

PROVIDE 100% ELECTRICAL FLEXIBILITY AT LOW COST

R/C Duct Floors provide a complete network of underfloor electrical ducts for power and communication systems. Outlets can be connected to convenient risers in a matter of minutes without ripping up or drilling through floors and ducts.

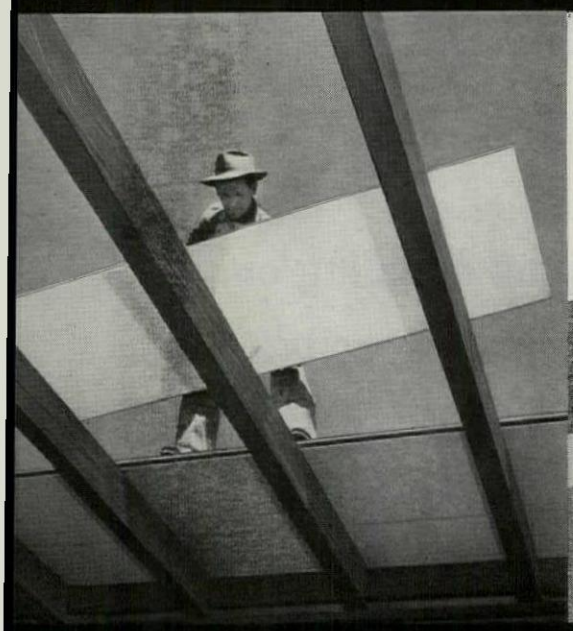
R/C Duct Floors, which meet code requirements, consist of *standard* steel electrical distribution ducts set in reinforced concrete joist floors. No expensive fill or topping is needed. Average costs show that R/C Duct Floors cost 19% less than cellular steel floors!

CONCRETE REINFORCING STEEL INSTITUTE C.R.S.I. FOUNDED 1924

CONCRETE REINFORCING STEEL INSTITUTE

38 S. Dearborn St. • Chicago 3, Illinois

Insulite's Roof cut motel costs to



1. It's roof deck—Two-by-eight foot units cut application time as much as 45%. Only one material to handle. New Insulite Roof Deck eliminates need for separate roof boards, insulation, lath and plaster and ceiling finishing. Insulite Roof Deck can save 12 man-hours per 1,000 sq. ft. of surface compared with 2"x6" D&M roof sheathing.

2. It's insulation with vapor barrier—No need for other insulation. Two-inch Roof Deck is comparable to 2" wood deck plus 1" fiberboard insulation. Available in 3 thicknesses to meet insulation requirements in any climate. Absorbs sound better than wood or plaster. Exclusive vapor barrier protects against condensation within the unit.

3. And finished ceiling—The underside of Insulite Roof Deck is finished with flame-resistant surface at the factory. Lay Roof Deck over pre-finished beams and ceiling is done. No need to plaster, paint, stain or wax. Cuts labor and material costs. In 2'x8' units, 1½", 2" or 3" thick with or without vapor barrier membrane depending on climate.

Build better and save with

INSULITE

Made of hardy Northern wood

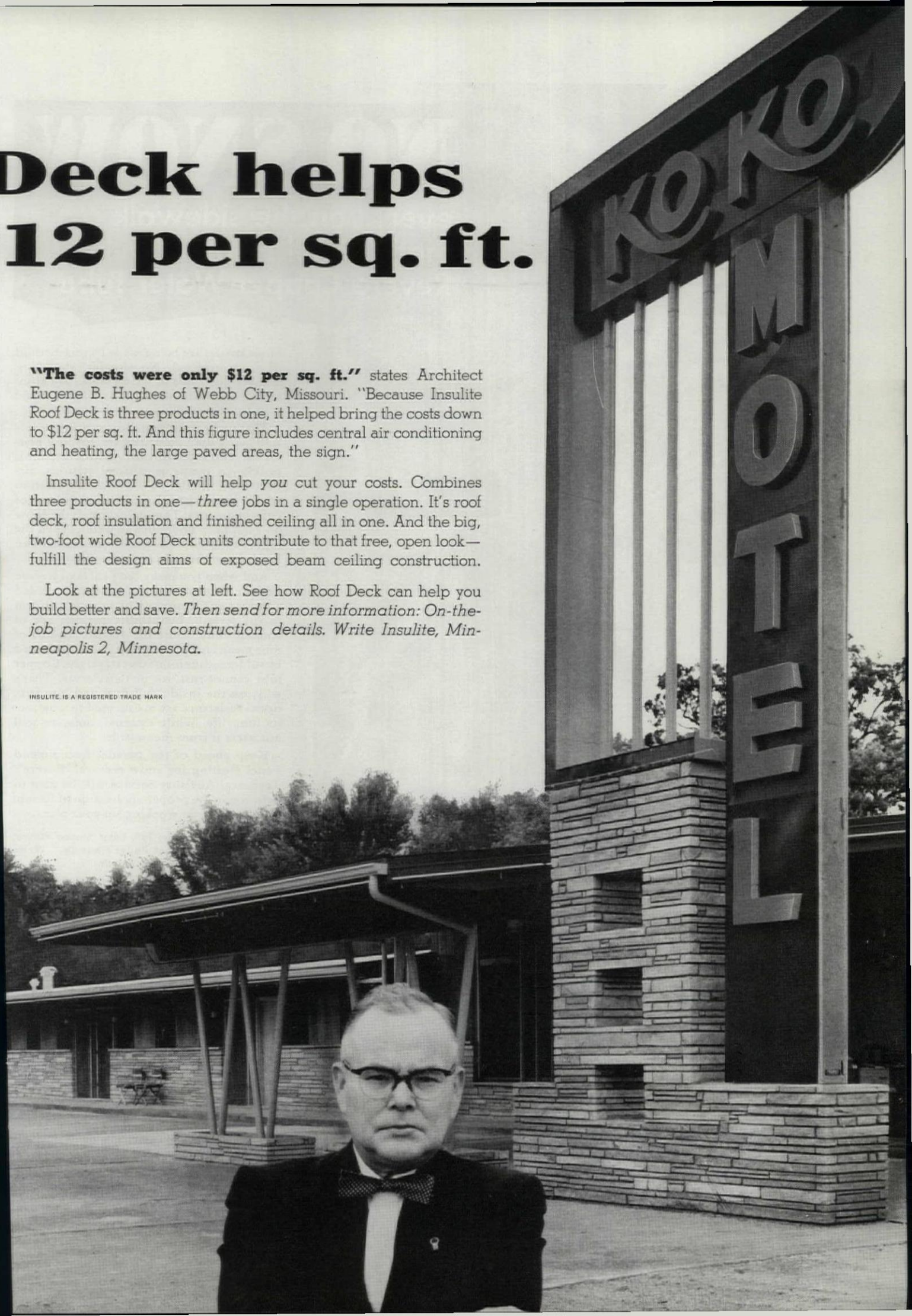
INSULITE DIVISION, Minnesota and Ontario Paper Company, Minneapolis 2, Minnesota

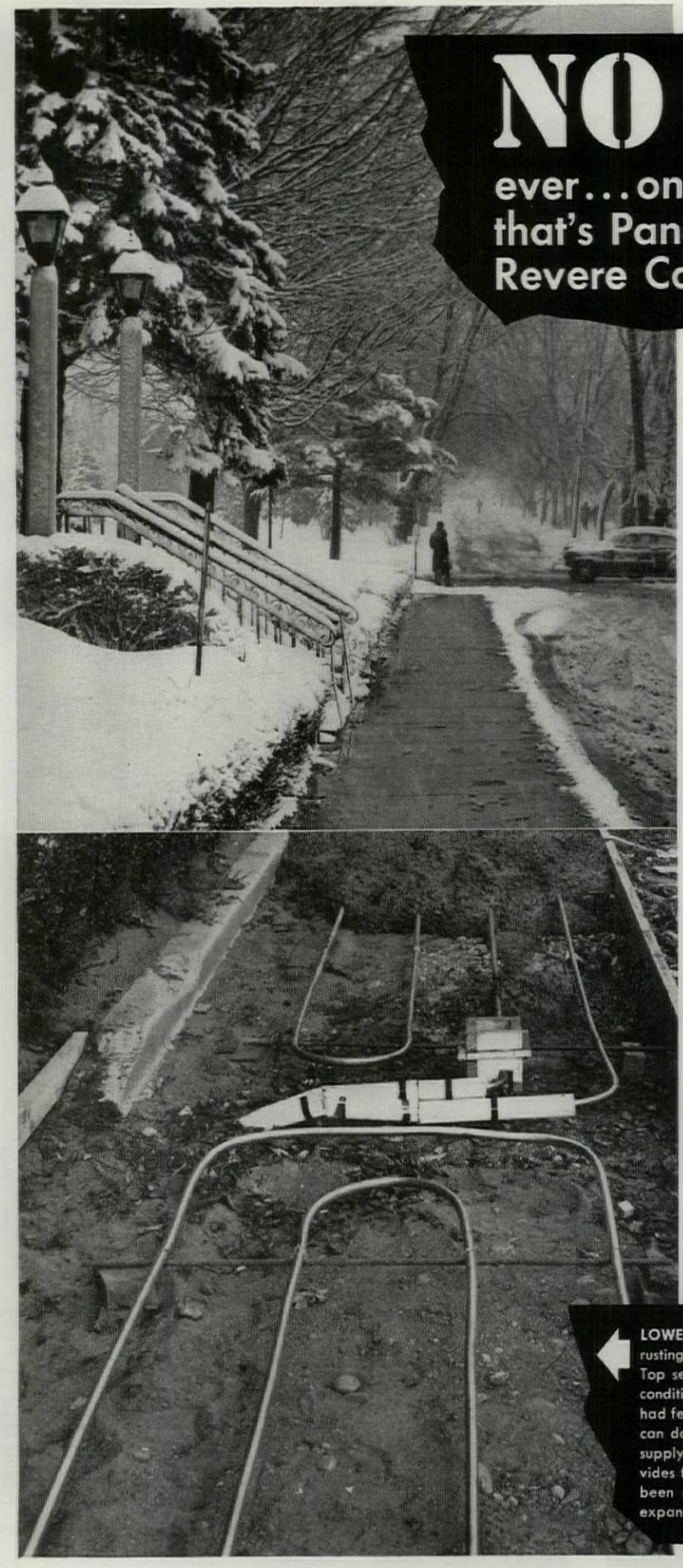
Deck helps $12 per sq. ft.

"The costs were only $12 per sq. ft." states Architect Eugene B. Hughes of Webb City, Missouri. "Because Insulite Roof Deck is three products in one, it helped bring the costs down to $12 per sq. ft. And this figure includes central air conditioning and heating, the large paved areas, the sign."

Insulite Roof Deck will help *you* cut your costs. Combines three products in one—*three* jobs in a single operation. It's roof deck, roof insulation and finished ceiling all in one. And the big, two-foot wide Roof Deck units contribute to that free, open look—fulfill the design aims of exposed beam ceiling construction.

Look at the pictures at left. See how Roof Deck can help you build better and save. *Then send for more information: On-the-job pictures and construction details. Write Insulite, Minneapolis 2, Minnesota.*





NO SNOW

ever...on the sidewalk that's Panel Heated with Revere Copper Water Tube

Huge strides are being made by this method of snow removal. No wonder, shoveling and accidents due to snowy walks are eliminated . . . while the time and labor saved pays for the installation in short order.

That's why you'll find snow melting panels also being used on driveways, loading platforms, entrance aprons, service stations, pedestrian ramps at railroad stations, airports and similar spots. One application which bears special mention is the use of coils in garages. They quickly melt the snow on cars, keep floors dry as well as keep the repair shop floors warm so mechanics can lie right on the bare concrete in comfort.

And when you make the panels of Revere Copper Water Tube you have these added advantages: Copper can be bent to conform to the terrain. Bendability permits use of sinuous coils, while the 60-foot lengths of tube mean fewer fittings which, when joined by solder means joints that stay tight. Copper tube cannot rust, rot or deteriorate. That's why, on the inside, full flow and low frictional resistance are maintained throughout its long life. While external moisture will not harm it from the outside.

Keep ahead of the parade. Recommend Panel Heating for snow removal. Revere's Technical Advisory Service will be glad to help you in the proper application of Revere Copper Tube in working up your plans.

FREE! Instructive 16mm Full Color Motion Picture, "The ABC of Radiant Panel Heating." Write Advertising Department for details.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Brooklyn, N. Y.; Chicago, Clinton and Joliet, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Newport, Ark.; Rome, N.Y. Sales Offices in Principal Cities, Distributors Everywhere.

LOWER SECTION OF PHOTOGRAPH shows how non-rusting Revere Copper Tube was imbedded in concrete slab. Top section of photo shows same walk under actual snow conditions. Note bends. Think of all the joints necessary had ferrous pipe been used. And think, too, of what seepage can do to rustable materials. Note insulation used on each supply and return line to the coils from the mains. This provides flexibility in the take-offs from the mains, which have been run below the slab, to allow for movement due to expansion and contraction.

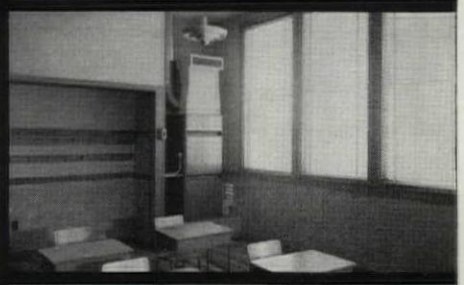
How to Conserve School Budgets with Multiple Heating Units

Packaged gas-fired units provide low-cost, zoned comfort with forced warm air heat.

1. unit room conditioner

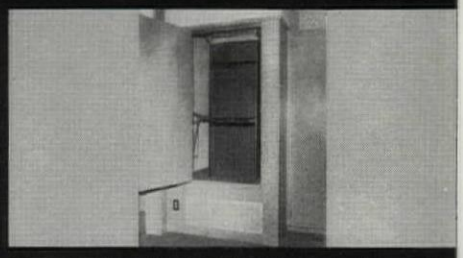
The conditioner, sitting on a plenum, is located along an outside wall and backed up to a partition wall. Warm air is discharged from the top outlet grille across the outside wall and windows. Fresh air and recirculation air enters through the floor plenum.

This is a very inexpensive application. If desired, ducts can be extended into adjoining classroom and both rooms heated by one unit.



2. enclosed room conditioner

A deluxe type of installation with the same design features as one above. A ventilated closet completely encloses the conditioner. Combustion air is ducted into closet from outside. This concealed tamper-proof installation is extremely quiet in operation.



3. overhead room conditioner

A Janitrol Horizontal Conditioner is suspended from the ceiling. Warm air is directed parallel to outside walls and across glass areas. A built-in centrifugal blower provides quiet air circulation. This unit is also approved for installation with duct system.

This particular unit requires no floor space and is installed without duct work. Capacities available from 65,000 to 150,000 Btu/hr. inputs.

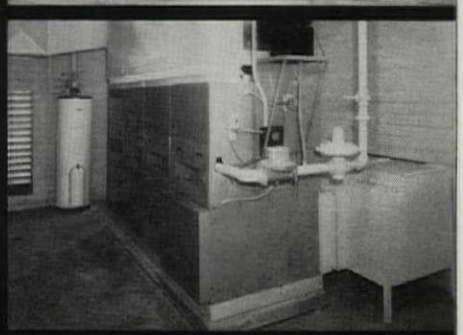
4. suspended heaters

Small, economical propeller-type heaters are installed overhead in this gymnasium. The small amount of propeller fan noise is not a factor here. An ideal system for intermittent occupancy areas, where installation cost is of prime importance. During unoccupied periods, minimum temperatures can be maintained automatically . . . an advantage common to all these models.

5. central forced warm air system

A heavy duty, forced warm air furnace distributes heat from a central furnace room through a duct system. In larger schools, remote rooms occupied intermittently, and less economically heated by a central system, may be efficiently handled by individual room units.

A central-type system of proven success. Temperature control can be zoned for different activity areas. Furnaces are factory assembled and tested . . . 250,000 to 1,750,000 Btu/hr. input capacities.



MORE INFORMATION ?

These are just a few of the successful installations on file at Janitrol. If you would like additional ideas on low cost installations of Counter-flow Conditioners in perimeter heating systems, or specifications, please write. There's no obligation.

®Janitrol

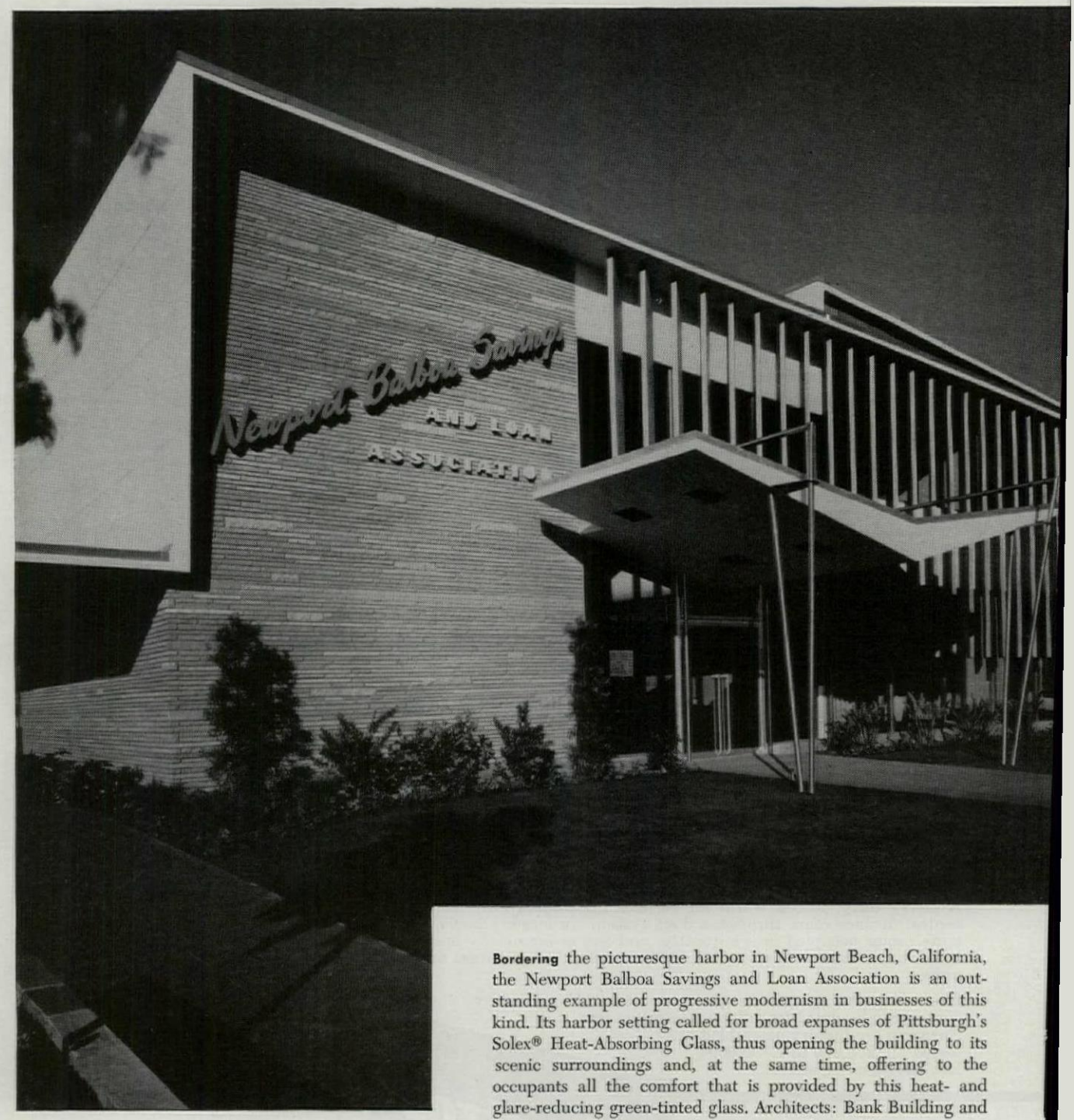
Janitrol Heating & Air Conditioning Division
Surface Combustion Corporation, Columbus 16, Ohio
In Canada: Alvar Simpson Ltd., Toronto 15

ALSO MAKERS OF *Surface* INDUSTRIAL FURNACES AND *Kathabar* HUMIDITY CONDITIONING

New savings and loan building utilizes

. . . to heighten

. . . accent its modernism



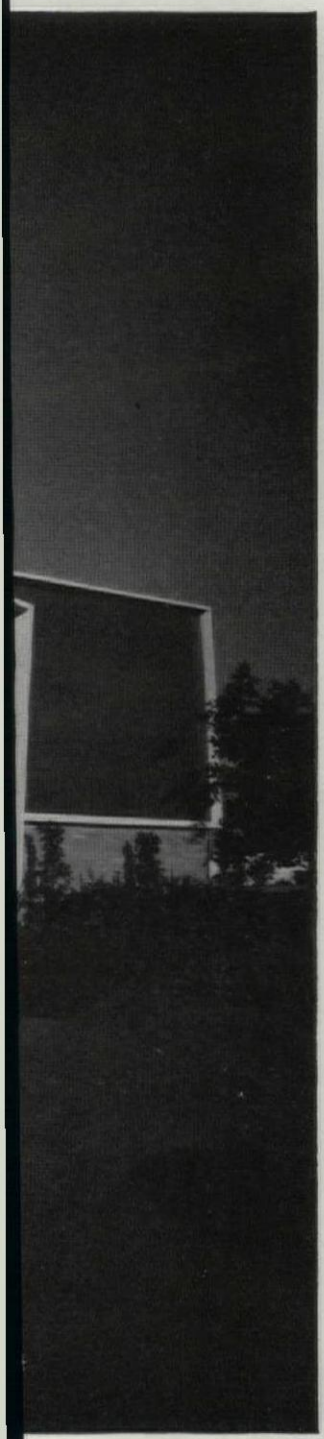
Bordering the picturesque harbor in Newport Beach, California, the Newport Balboa Savings and Loan Association is an outstanding example of progressive modernism in businesses of this kind. Its harbor setting called for broad expanses of Pittsburgh's Solex® Heat-Absorbing Glass, thus opening the building to its scenic surroundings and, at the same time, offering to the occupants all the comfort that is provided by this heat- and glare-reducing green-tinted glass. Architects: Bank Building and Equipment Corporation of America, St. Louis, Mo.

Design it better with **PITTSBURGH GLASS**

PITTSBURGH materials

its architectural appeal

. . . bring it practical advantages



Pittsburgh's Pittcomatic® . . . "the nation's finest automatic door opener" . . . operates the Herculite® Doors at the entrance to the building, as well as on the side entrances. With the Pittcomatic Hinge, doors open automatically—at the lightest touch and with complete safety.

Here is a view of the employees' cafeteria, located on the second floor of the building, facing the harbor. This entire west wall is glazed with Solex, which makes it possible to take full advantage of the natural beauty of the outdoors while keeping room interiors cooler and glare at a minimum.

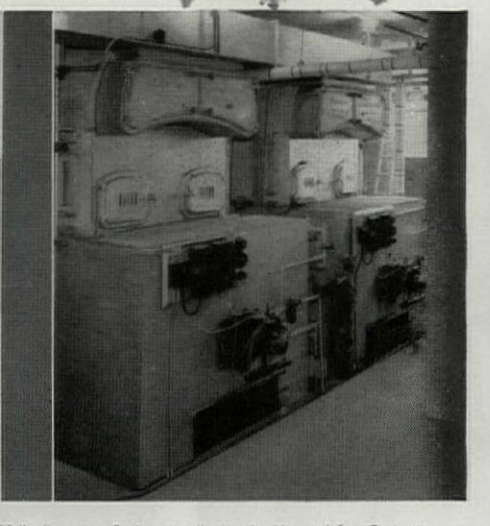
Your Sweet's Architectural File contains detailed information on all Pittsburgh Plate Glass Company products...Sections 6a, 15d, 20, 12e, 15a.

PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

Wherever Disaster Strikes...



The beautiful Hospital San Carlos, Bogota, Colombia, one of the finest in South America, is equipped with Kewanee Boilers.

Architect: Cuellar, Serrano, Gomez & Co. Ltd.; Consulting Architect: Smith, Erickson & Garden; Engineer: Cuellar, Serrano, Gomez & Co. Ltd.

Two No. 588, 125 lb. Kewanee Boilers installed in the Hospital San Carlos in Bogota, Colombia. They assure power expansion when needed—an important factor when the lives of patients are at stake.

HOSPITALS THE WORLD OVER DEPEND ON

KEWANEE reserve plus rated boilers

WITH 50% EXTRA POWER

WHEN steam power may mean life or death to hospital patients . . .

WHEN emergencies demand maximum temperature, split-second sterilization of instruments . . .

WHEN unfailing power is needed to bring light to the delicate techniques of modern surgery . . .

WHEN the operating rooms of hospitals are theatres of extreme urgency . . .

That is when Kewanee Reserve Plus Rated Boilers become a necessity—because they have the reserve power for additional capacity requirements.

With a rating plan based on the commercial code of the Steel Boiler Institute, Kewanee Boilers certify 50% or more extra built-in power. This extra power assures the ability to treat more sufferers when epidemics or disaster strike. Modern hospitals must have the foresight to prepare for major disasters such as earthquakes, tornadoes, fires and accidents which bring masses of emergency cases to the operating rooms.

Kewanee Boilers, rated on nominal capacity with built-in reserve, can take care of expanding loads created through disaster. They offer "cruising speed" operation which means savings on fuel and repairs. Choose Kewanee and be prepared if disaster strikes.

KEWANEE BOILERS

KEWANEE-ROSS CORPORATION, Kewanee, Illinois
Division of American Radiator & Standard Sanitary Corporation
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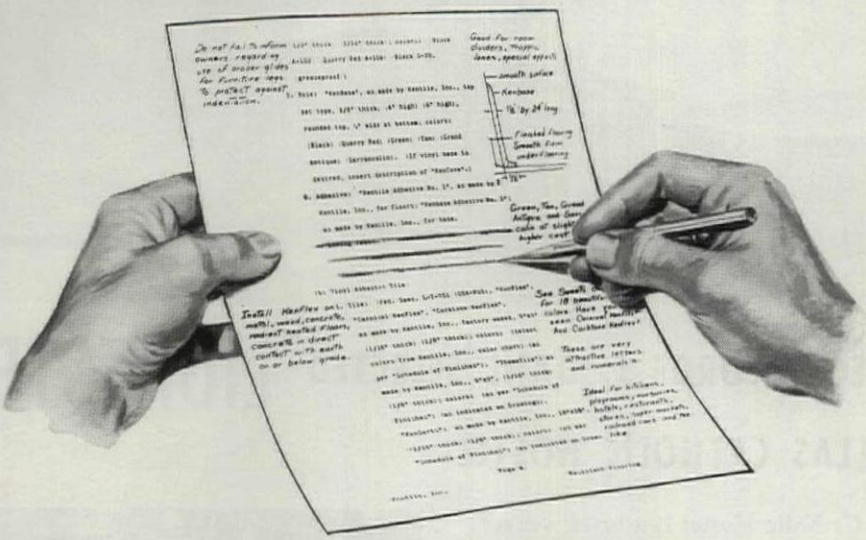

Just mark off section or paragraphs you need, editing to suit the requirements of the particular problem at hand. Then . . . give to your typist. That's all! Lots quicker and more efficient than the old way.

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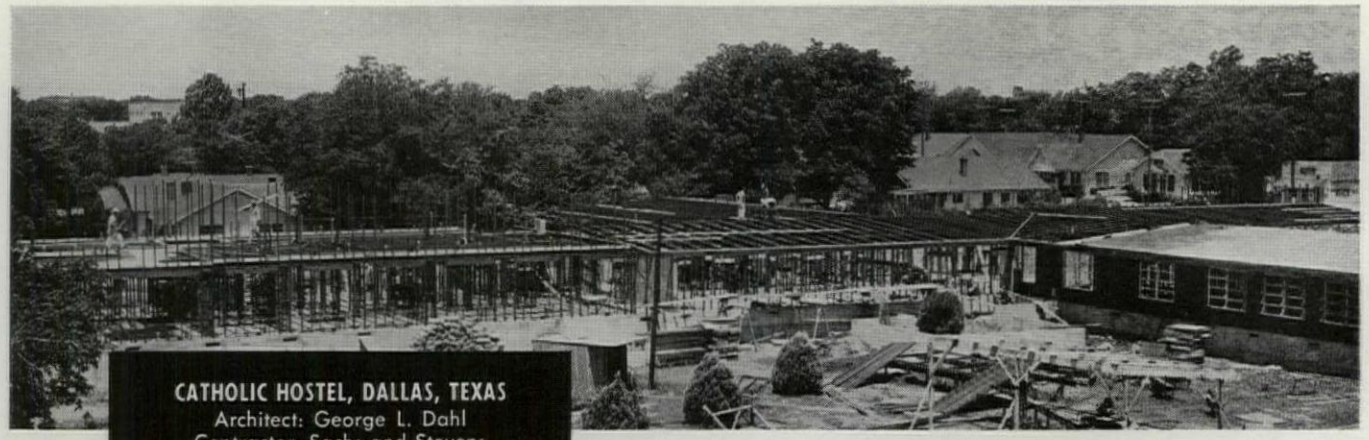

CATHOLIC HOSTEL, DALLAS, TEXAS
Architect: George L. Dahl
Contractor: Sachs and Stevens
Steel Fabricator: Macatee, Incorporated
Steel Erector: Dallas Lightsteel Framing Co.

WHY ARCHITECT GEORGE L. DAHL SELECTED LIGHTSTEEL FOR DALLAS CATHOLIC HOSTEL

Dallas' new Catholic Hostel is a brick veneer building, with lightweight concrete roof deck on 3/8" rib lath. Framing: Penmetal LIGHTSTEEL.

The architect, George L. Dahl, selected LIGHTSTEEL structural sections because they offer all the benefits of conventional steel framing. LIGHTSTEEL sections are fabricated from structural grade steel by cold forming and are designed for maximum economy strength-to-weight ratio.

They cut costs of erection, too. Sections are designed to fit together for ease of assembly and welding in the shop or at the job site. Because of their light weight, complete wall panels and roof trusses can be readily trucked to the job site and quickly erected.

Send for 16-page illustrated catalog.

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General Sales Office: 205 East 42nd Street, N. Y. 17, N. Y.
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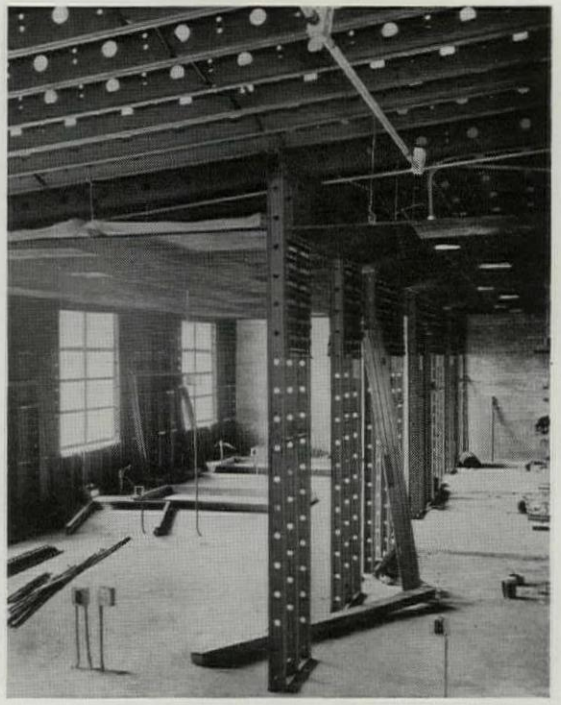
METAL MARK Penmetal 1869 OF QUALITY

PM-89



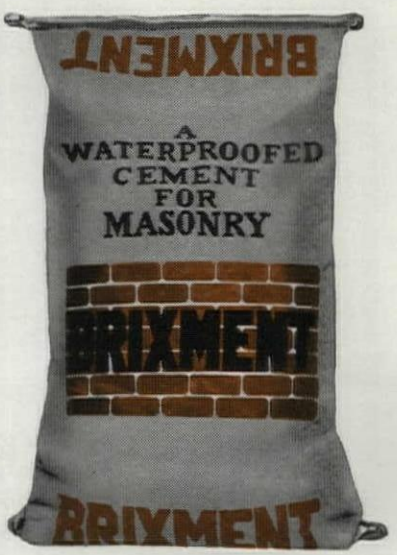
Load bearing partitions consist of Penmetal LIGHTSTEEL structural studs, fastened at top and bottom to LIGHTSTEEL track, and braced with LIGHTSTEEL bridging. Metal lath is wire-tied to both sides of the studs, and then plastered. This provides a light-weight, fire-safe construction that has an excellent sound transmission loss rating.

BRIXMENT

Better Mortar for Blocks

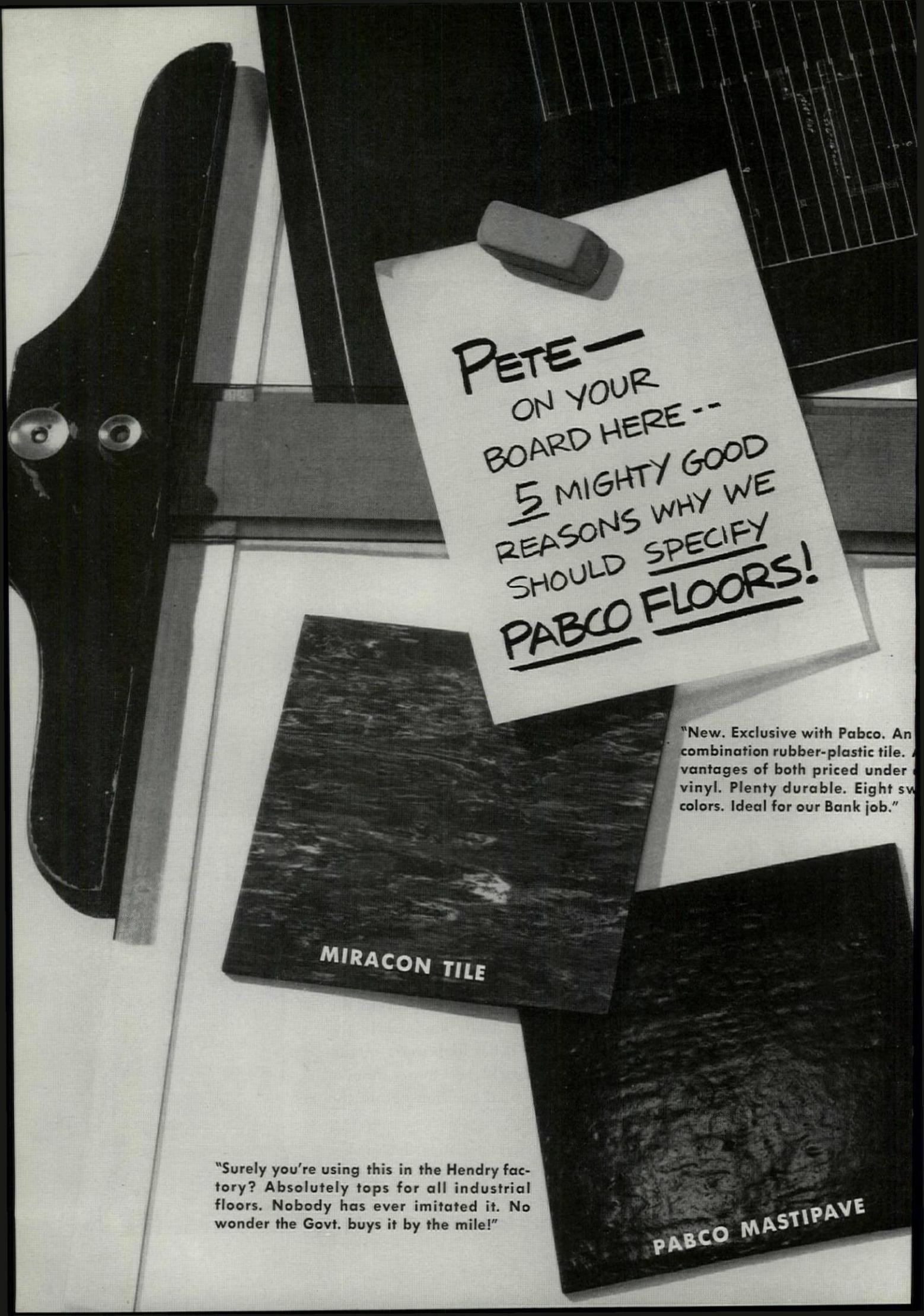
WHY IS GOOD MORTAR IMPORTANT?

Because of their size and weight, concrete blocks require mortar with "body", plasticity and water-retaining capacity. Brixment meets all these requirements. It has the *body* necessary to support the weight of the unit and hold it up to the line. It has the *plasticity* necessary to prevent the mortar from falling off the long head joint, while the block is being placed in the wall. It has high *water-retaining capacity*, which gives the bricklayer more time to shift and adjust the block to its final position before the mortar stiffens.



It is the combination of these characteristics that makes Brixment the leading masonry cement for concrete block as well as for brick.

Louisville Cement Company . . . Louisville 2, Kentucky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BOARD HERE--
5 MIGHTY GOOD
REASONS WHY WE
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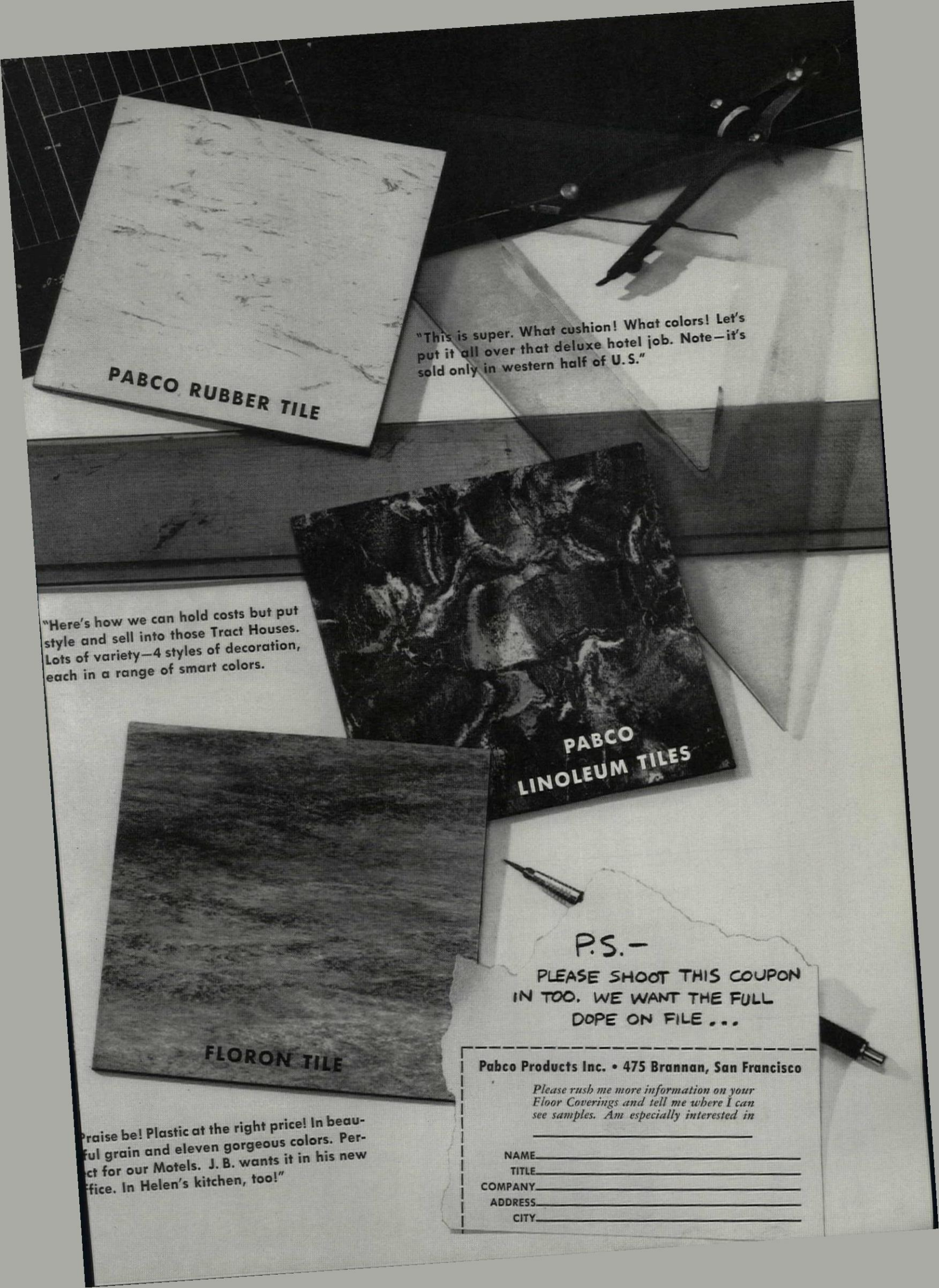
PABCO FLOORS!
"New. Exclusive with Pabco. An
combination rubber-plastic tile.
vantages of both priced under
vinyl. Plenty durable. Eight sw
colors. Ideal for our Bank job."
MIRACON TILE
"Surely you're using this in the Hendry factory? Absolutely tops for all industrial floors. Nobody has ever imitated it. No wonder the Govt. buys it by the mile!"
PABCO MASTIPAVE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"Here's how we can hold costs but put style and sell into those Tract Houses. Lots of variety—4 styles of decoration, each in a range of smart colors.
PABCO LINOLEUM TILES
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raise be! Plastic at the right price! In beau- ful grain and eleven gorgeous colors. Per- ct for our Motels. J. B. wants it in his new ffice. In Helen's kitchen, too!"
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PLEASE SHOOT THIS COUPON IN TOO. WE WANT THE FULL DOPE ON FILE...
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Please rush me more information on your Floor Coverings and tell me where I can see samples. Am especially interested in
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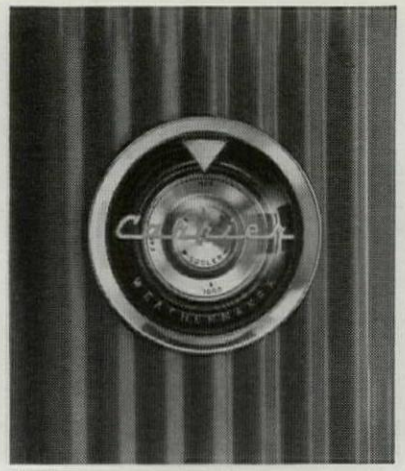
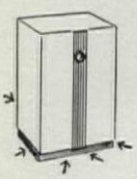


New Golden Aerodial. It's 22-karat gold-plated and beautiful . . . the focal point and control center of the new Weathermaker. Lucite dome hinges over main control, thermostat knob and reset button.

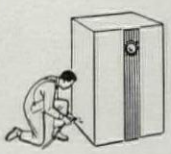
the all-new, all-around air conditioner designed for lower installation costs!

NEW CARRIER WEATHERMAKER

Here's the first self-contained air conditioner that you can apply to a variety of plans without increasing installation costs. Check these exclusive new features designed for fast, neat, low-cost installation:

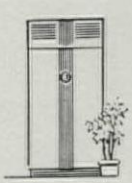


ADAPTABLE five-way air return. Where plan calls for ductwork, air returns through bottom or back of unit. Or matching return air intake base can be added so air returns at front or sides.

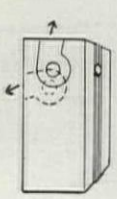


PRE-WIRED electrical center. Unit is pre-wired at the factory. All connections are made in one outlet box on left side of unit. Accessories can be wired to special terminal block eliminating complicated internal electrical work.

EXCLUSIVE solid front panel. No return air openings mar its appearance. You can locate furniture directly in front of unit without danger of dirt or drafts. Snap locks release panel.

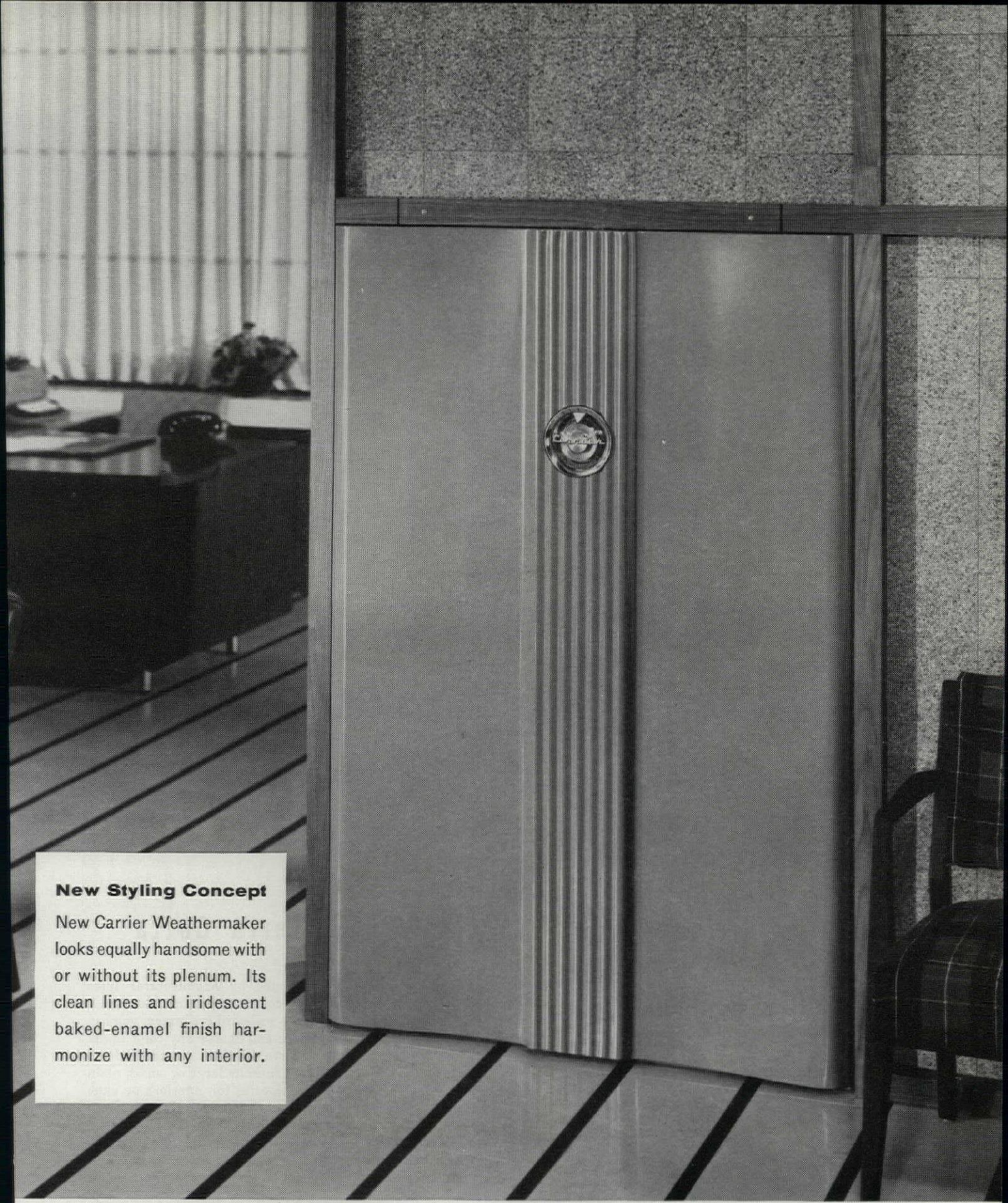


EXTRA-LARGE add-on plenum. Matching plenum is easily mounted for installations not requiring ductwork. Hinged grille panel is counterbalanced for easy access. Full directional control of air flow.



ALTERNATE fan discharge. L-shaped fan platform easily inverted for rear discharge where headroom is low. This saves costly alteration of the cabinet. Saves space and ductwork, too.

BUILT-IN PROVISION for heating coil. Unit need not be altered to add matching heating coil inside the unit. Coils use steam or hot water to heat same area cooled by unit. Can be thermostatically controlled.



New Styling Concept

New Carrier Weathermaker looks equally handsome with or without its plenum. Its clean lines and iridescent baked-enamel finish harmonize with any interior.

WANT COMPLETE DETAILS AND SPECIFICATIONS? We'll be glad to see that you get all the information you want on the new Weathermaker. Just call your local Carrier Dealer or Distributor. Or mail the coupon at the right.

CARRIER CORPORATION, 320 S. Geddes Street, Syracuse, New York

I'm interested in the application possibilities of the new Weathermaker. Please send me complete details and specifications.

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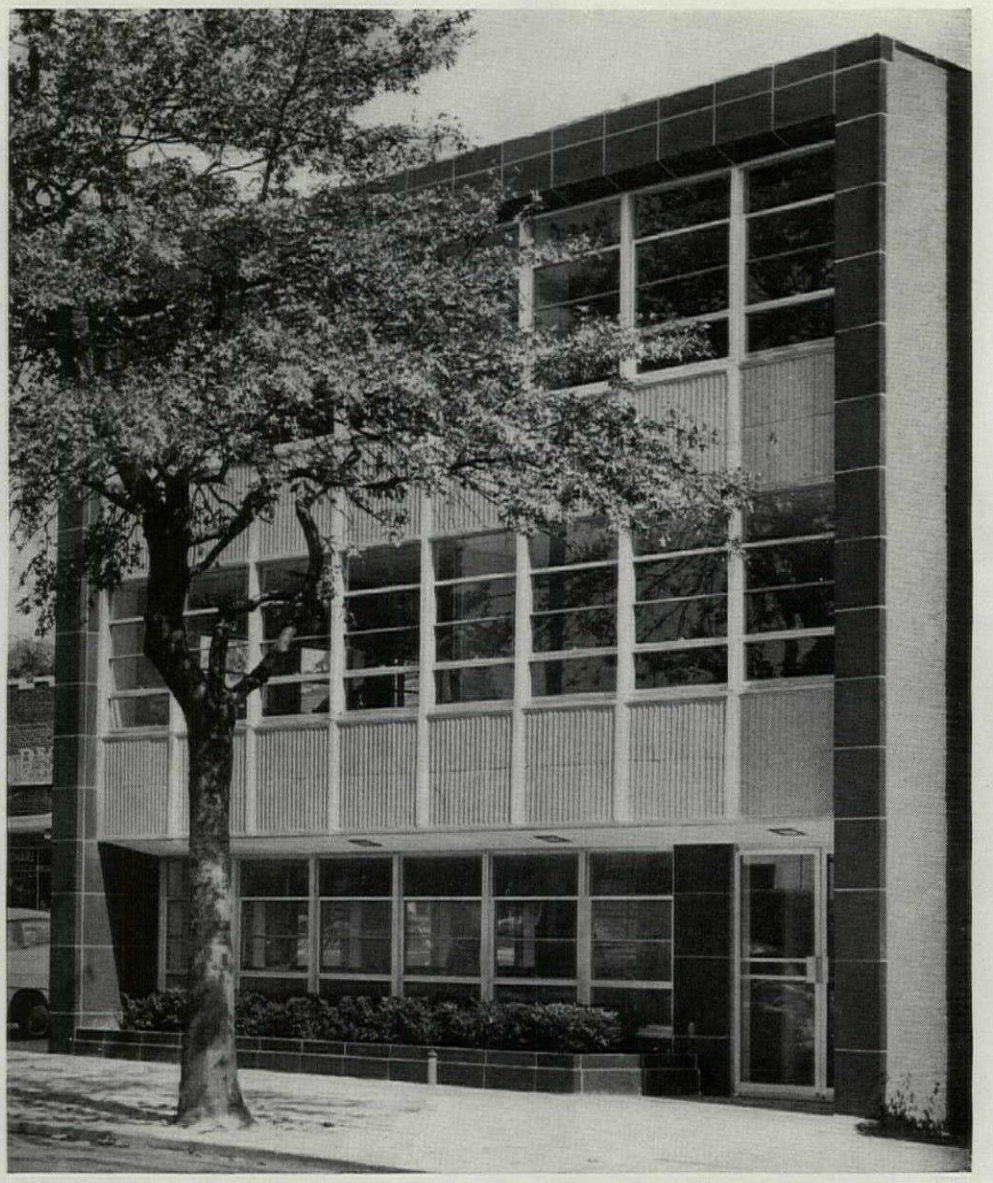


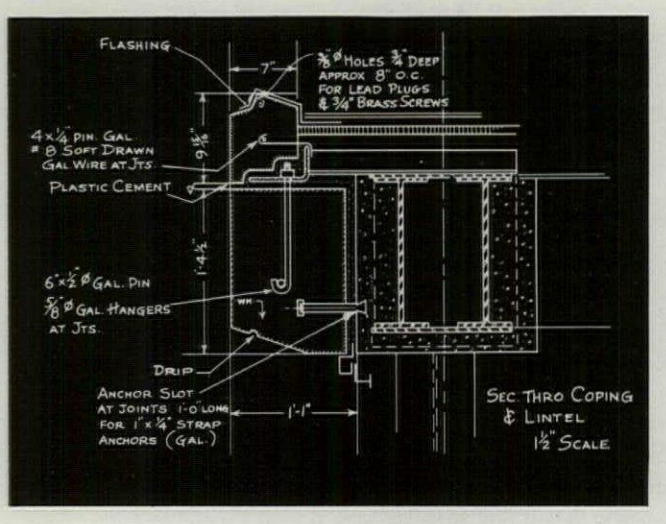
OFFICE BUILDING
WASHINGTON, D. C.

Ronald S. Senseman
—Architect

Bainum Construction Co.
—Builder

For fluted spandrel panels, light blue Architectural Terra Cotta was chosen for pleasing contrast to the rich burgundy of sills, coping, and window surrounds.

Give small buildings colorful individuality with Architectural Terra Cotta



Creative design is stimulated by Architectural Terra Cotta's plasticity of form, color and texture. Because it is custom-made by Federal Seaboard craftsmen, you can select just the right texture and choose any color under the sun. Architectural Terra Cotta is custom-made to your precise specifications, in units large or small, plain surfaces or decorative sculpture, for interiors or exteriors. To these advantages of Architectural Terra Cotta add still another—minimum maintenance. Simple soap and water washings retain indefinitely the original richness and beauty of this time-proved building material.

Construction detail, data, color samples, estimates, advice on preliminary sketches, will be furnished promptly without charge on Ceramic Veneer and Architectural Terra Cotta.

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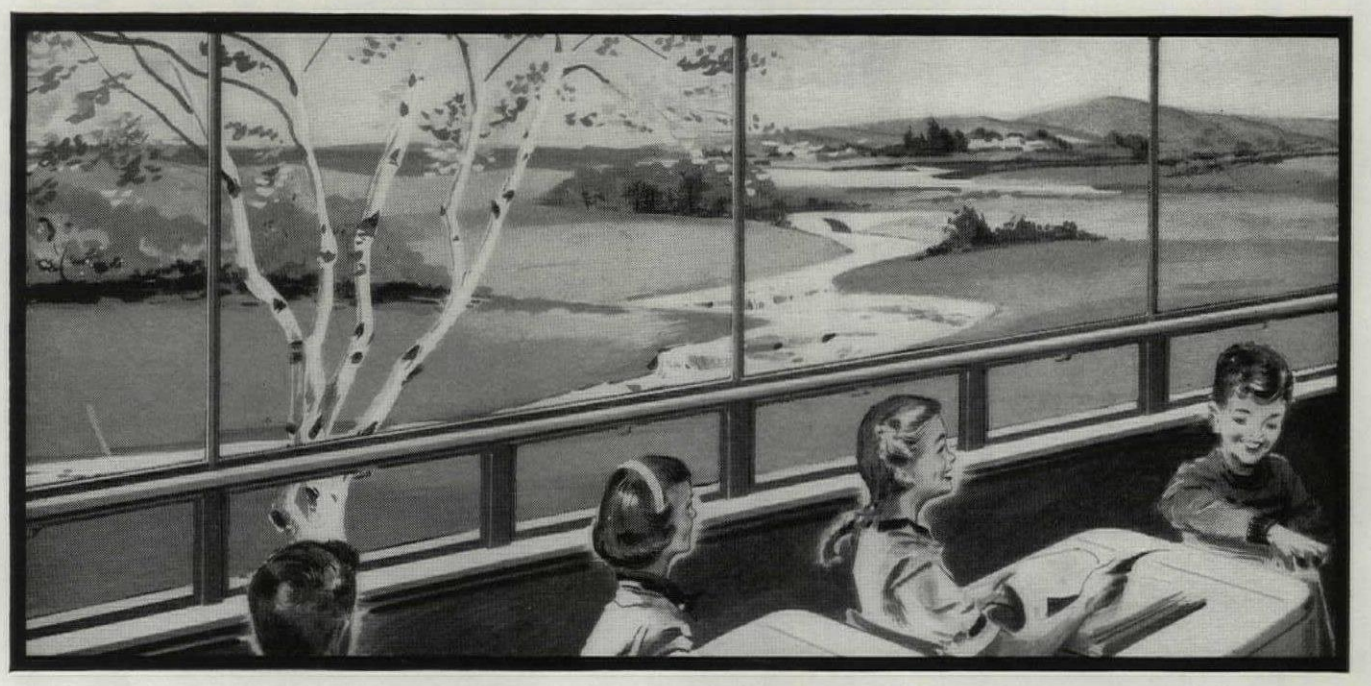
PLANT AT PERTH AMBOY, NEW JERSEY

bring the outdoors



indoors to make your school a happy place

Aren't children happiest when they're outside? And unhappiest when they're penned up? That's why they seem to learn more—and like it better—in a "Daylight Wall" classroom. Clear glass from sill to ceiling brings in the grass and the trees, the sun and the sky.

Saves money, too. Artificial lighting isn't needed so much. Less wall area to paint and maintain. Lower construction costs. In cold climates your daylight walls should be *Thermopane** insulating glass.

For your free copy of "How To Get Nature-Quality Light for School Children", write Department 45115, Libbey·Owens·Ford Glass Company, 608 Madison Avenue, Toledo 3, Ohio.

Or call your L·O·F Distributor or Dealer (listed under "Glass" in yellow pages). *®

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adds visible value to any home...

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Introduced only last year, Texture One-Eleven has already stirred the imagination of countless architects and builders. Here are a few of the ways it's being used—for accent or feature . . . outdoors or in . . . for residential or commercial buildings.

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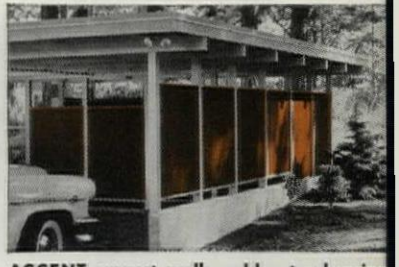
ACCENT your homes with Texture One-Eleven patio fences and outdoor storage units. Adds sales appeal at little extra cost.



ACCENT carport walls, add extra bracing strength with Texture One-Eleven. Panels weather well, made with waterproof glue.

ACCENT residential or commercial interiors with Texture One-Eleven. Deep parallel grooves create striking shadowline pattern.

ACCENT lines created by bold grooves add high style to strength, durability and economy of Exterior fir plywood.

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See your lumber dealer. He stocks Texture One-Eleven or can get it for you.

HOLMES *Contract* CARPET

protects and decorates

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Architects: Waasdorp and Northrup, Rochester, N. Y. Interior Designers and Decorators: Hospital Furniture, Inc.

PROTECTION is a *bonus benefit* of carpet for a hospital lobby floor or lounge area. Hospital Furniture, Inc., put this bonus benefit to work when they specified HOLMES wilton contract carpet for the new Highland Hospital lobby to reduce trackage of outside dirt to corridors and rooms and to minimize costly maintenance . . . important to the sterile cleanliness of every hospital. HOLMES carpet also helped Highland Hospital achieve floor beauty, warmth and quiet. The striking Highland monogram woven into the carpet further distinguished the overall decorator motif of the lobby.

The Highland Hospital installation is another example of how HOLMES Contract Staff works hand-in-hand with architects and designers to effect a custom wilton weave, pattern and color in accordance with anticipated traffic, soiling, wear and, of course, budget.

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- Prices to fit any competitive picture without sacrifice of quality.

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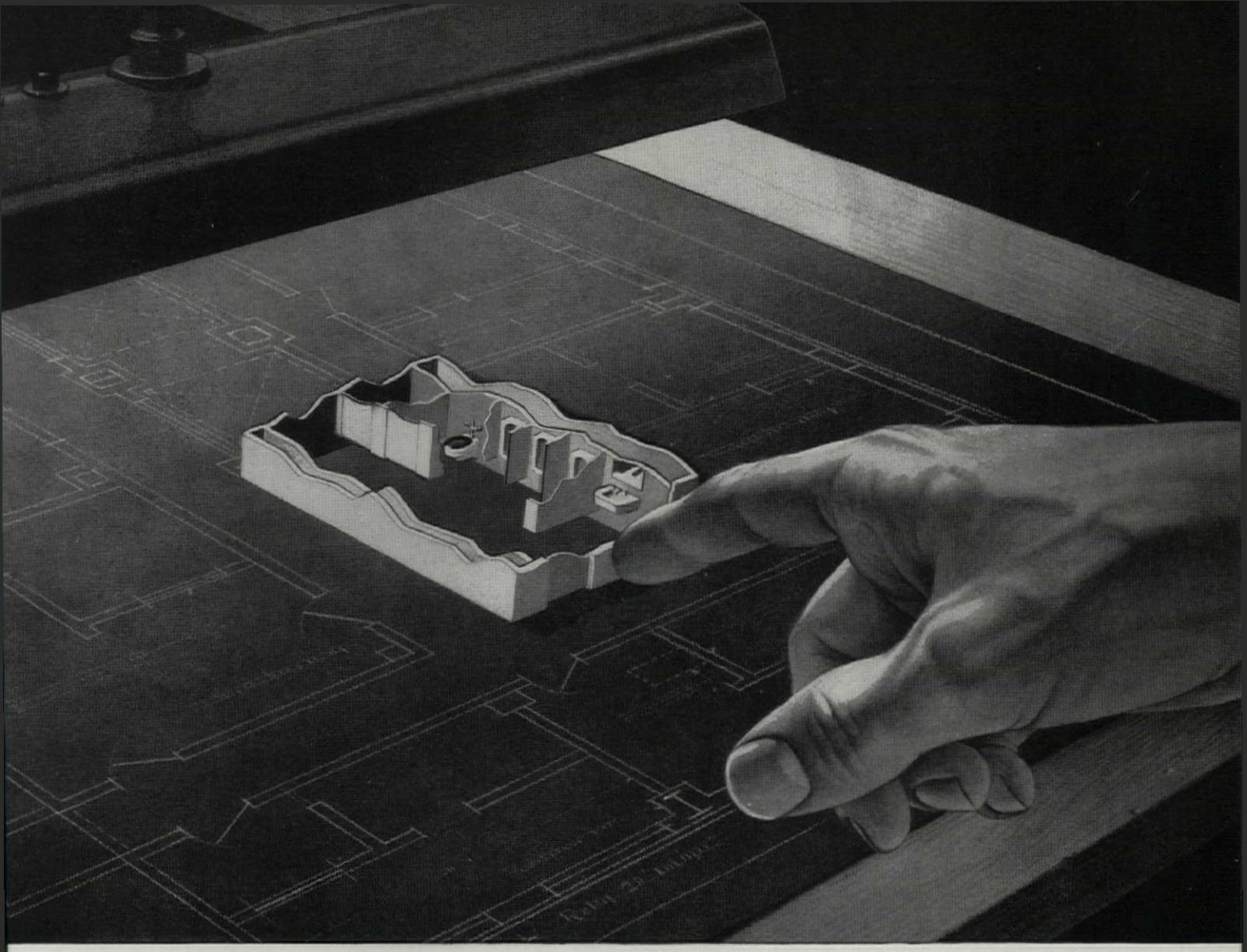

ut what about the rooms that everybody sees?

rd rooms and presidential suites get t of attention in the plans . . . but thoughtful architect knows that they ittle in forming tenant and public ion of his buildings. Only a handful eople ever see them.

he places that EVERYBODY sees he rest rooms. They are usually the areas where the architect can dictate appearance down to the last detail. ntion devoted to making the rest s completely modern, sparkling clean, attractive in appearance pays off in oyee morale. . . in tenant approval and in continuing prestige for the ner.

Off-the-floor" fixtures are one major ns of creating modern, clean, attrac- rest rooms . . . and they are used in t of the nation's newest major build- . It is significant that all such plumb- fixtures are supported by the ZURN TEM®. The special, engineered fea- s of the ZURN SYSTEM assure that all stresses will be carried by the system and none by the wall—make it simple and easy to install, align, and replace plumbing fixtures . . . and permit changes in floor or wall treatment to be made at any time. There are no regrets when ZURN SYSTEMS are selected, as over 800,000 successful installations already serving can testify.

"Off-the-floor" fixtures carried on ZURN SYSTEMS help to attain the latest and finest in wash room and rest room appearance . . . permit hospital-like standards of cleanliness and sanitation to be easily maintained . . . and play a tremendously important part in making and keeping the building "young." For more complete details on the increasingly important part modern rest room design is playing in modern building fields, ask for our new booklet "Behind Closed Doors." 110-2

The Zurn Zero Zone® is created by mounting off-the-floor plumbing fixtures on behind-the-wall ZURN SYSTEMS. This permits the highest degree of rest room sanitation to be attained and maintained. All major plumbing manufacturers make fixtures to fit this system.

See our catalog in Sweet's Architectural File and Industrial Construction File.

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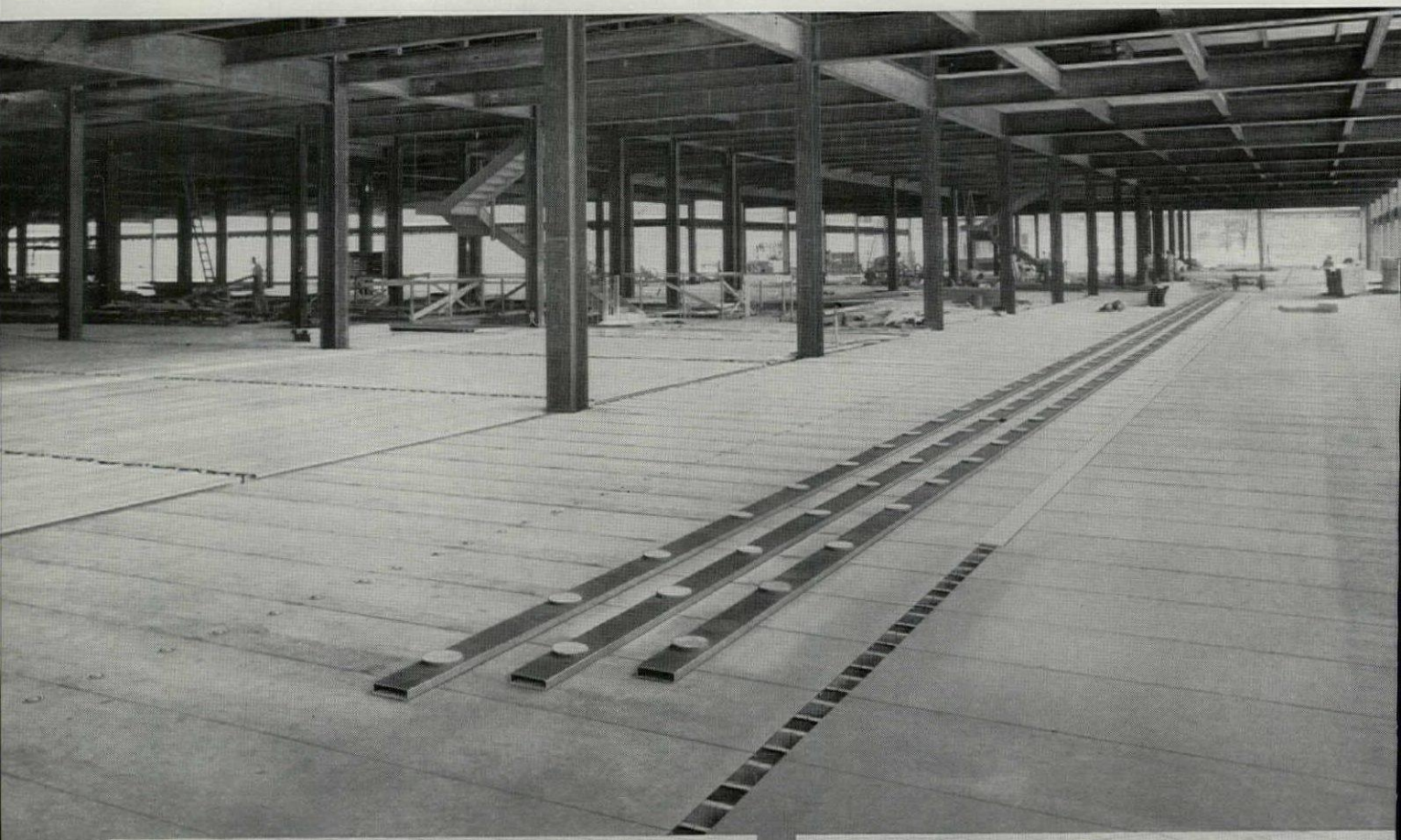
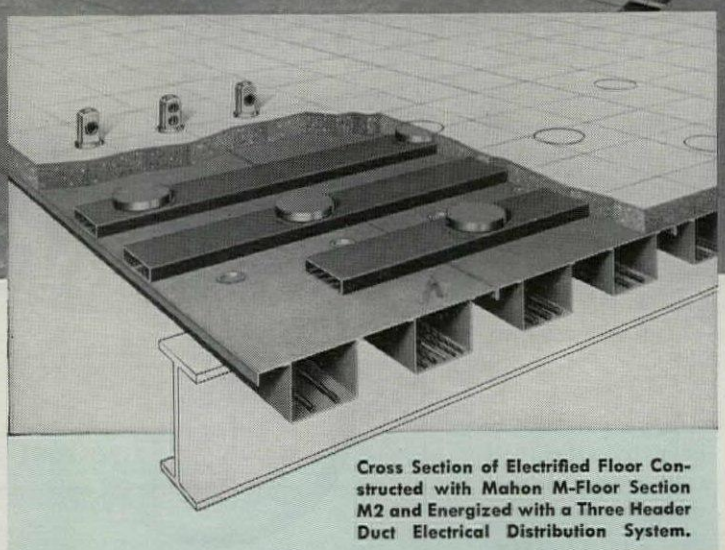
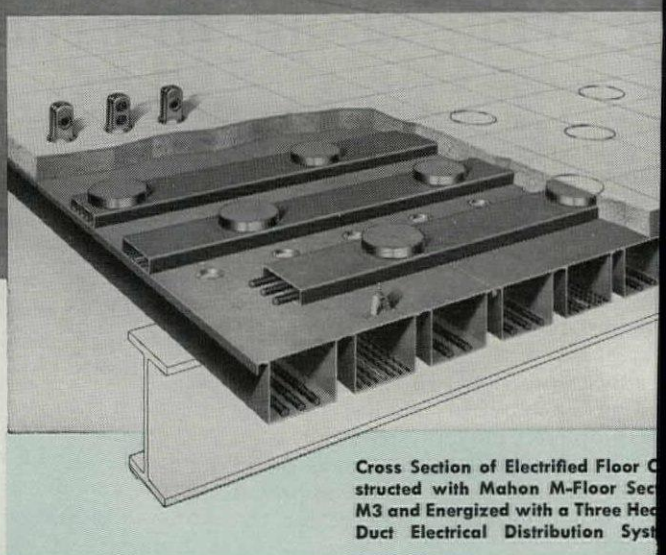
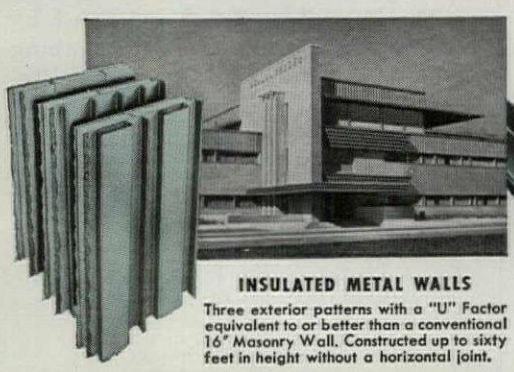




Cross Section of Electrified Floor Constructed with Mahon M-Floor Section M2 and Energized with a Three Header Duct Electrical Distribution System.



Cross Section of Electrified Floor C
structed with Mahon M-Floor Sec
M3 and Energized with a Three He
Duct Electrical Distribution Syst



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Three exterior patterns with a "U" Factor equivalent to or better than a conventional 16" Masonry Wall. Constructed up to sixty feet in height without a horizontal joint.

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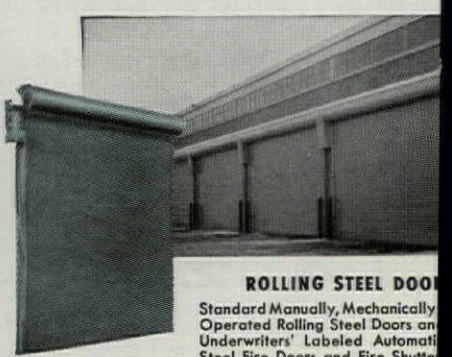
Standard Double Rib, Wide-Flange Double Rib, and Long Span Cel-Beam M-Decks with or without perforations and sound absorbing material for acoustical purposes.



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Standard Manually, Mechanically
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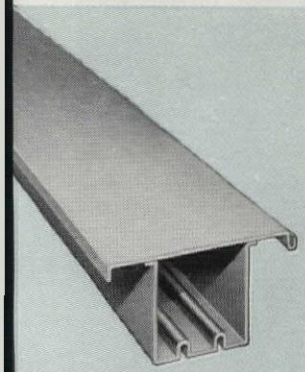
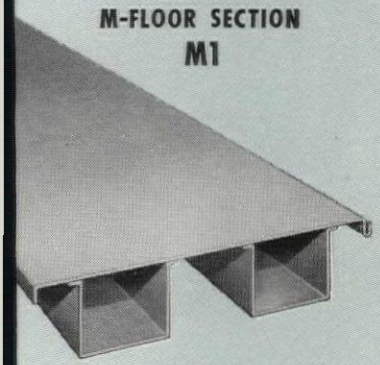
M-FLOORS

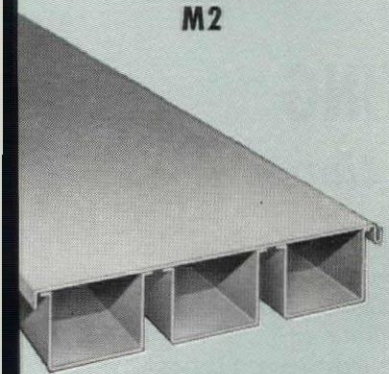
Mahon Electrified CEL-BEAM Floor Systems and Long Span M-DECKS



MAHON
M-FLOOR SECTION
M1



MAHON
M-FLOOR SECTION
M2



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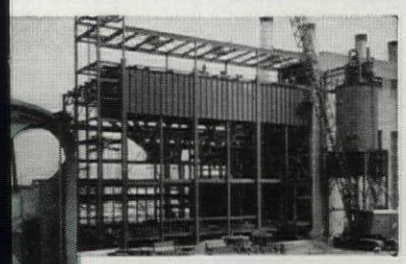

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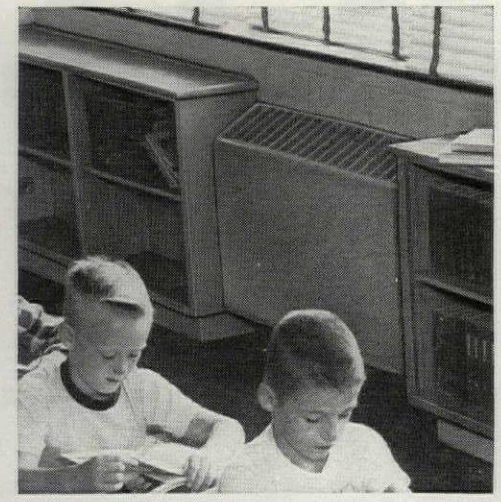
Dunham Convectors *inside all doorways and corridors cut down hall drafts . . . help maintain even, healthy temperatures throughout the building.* Architects, *Barry and Kay, Chicago.* Consulting Engineer, *William T. Brookman, Chicago.*



Dunham Convectors *under today's large windows help counteract chilling downdrafts, circulate warmed air throughout rooms, stand up to rough usage.*

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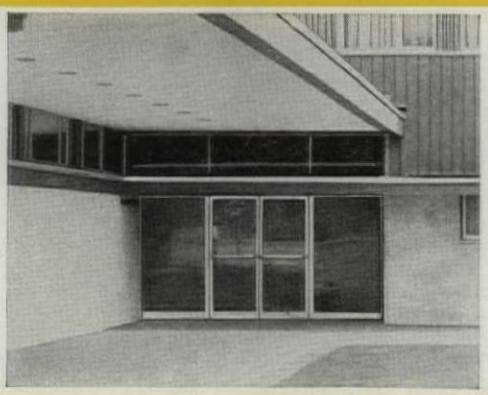

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Architects
Mac Kie & Kamrath

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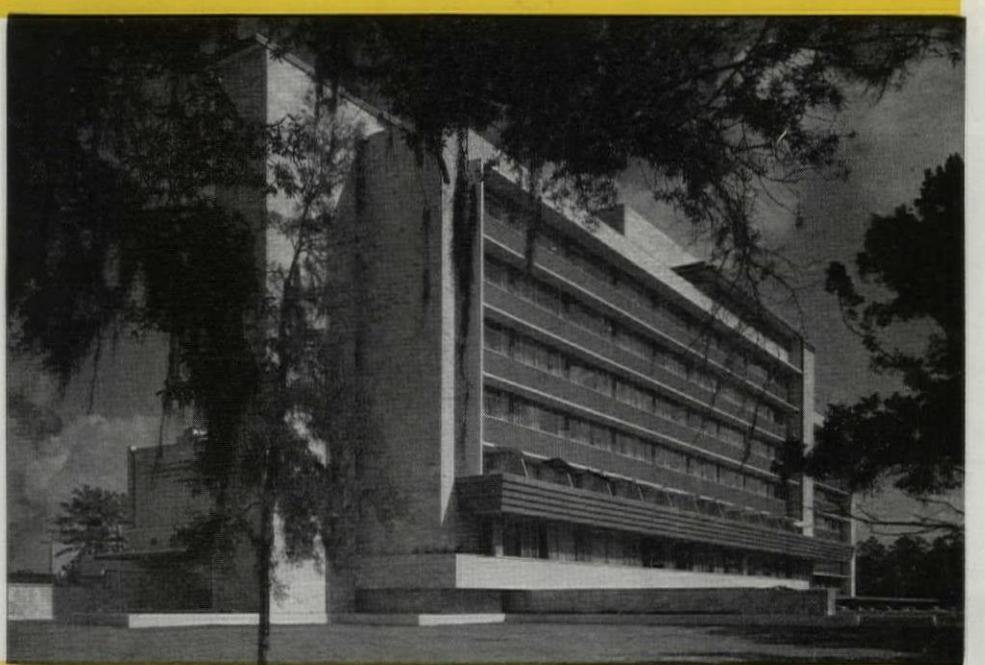

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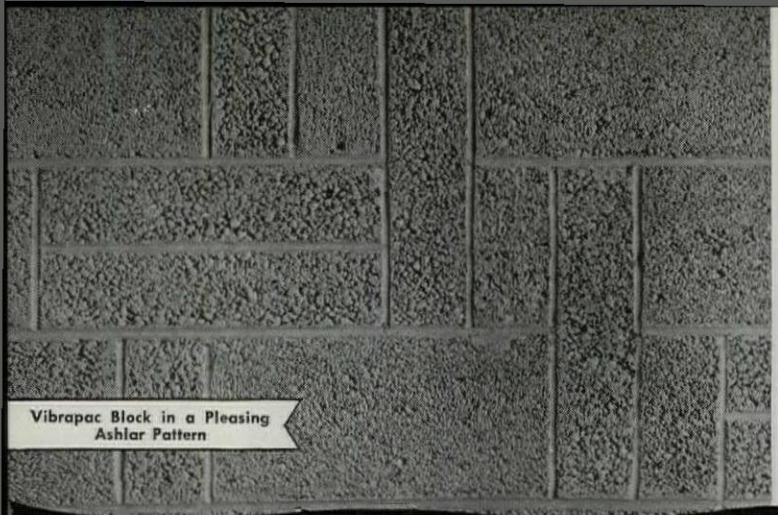

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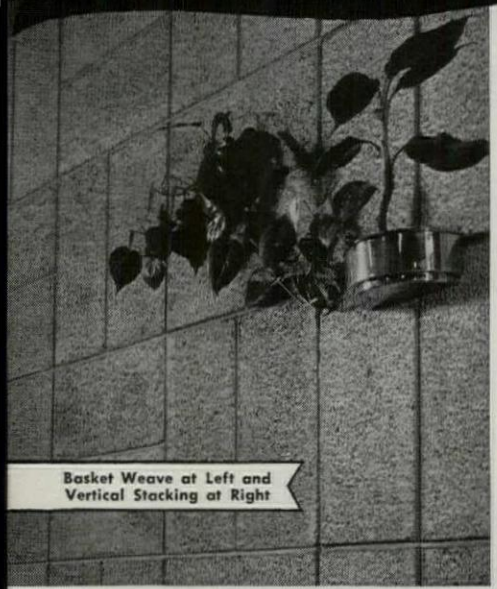

Basket Weave at Left and Vertical Stacking at Right

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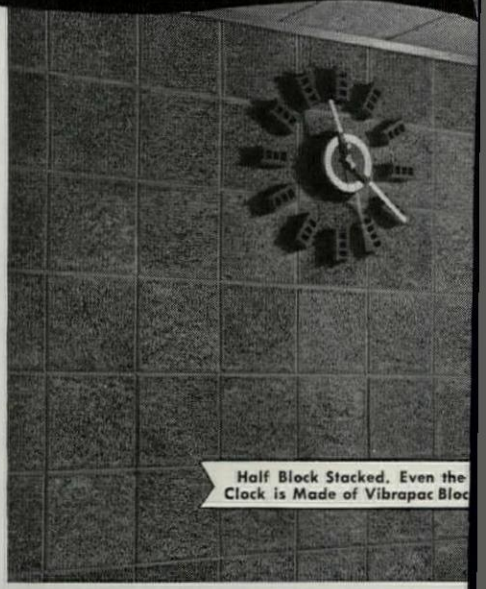
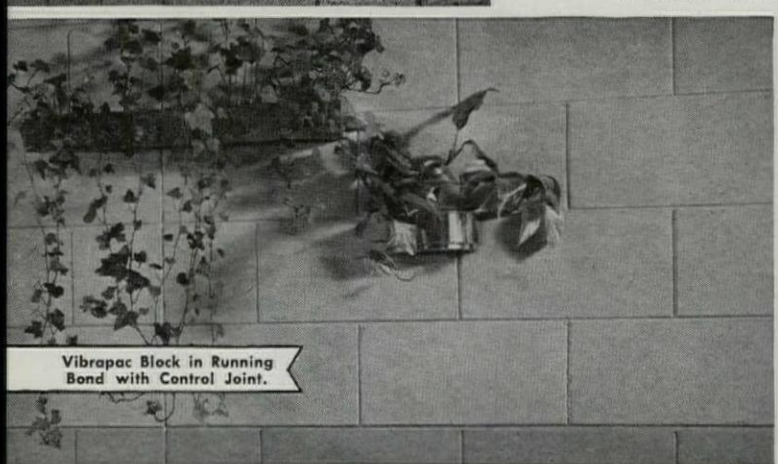
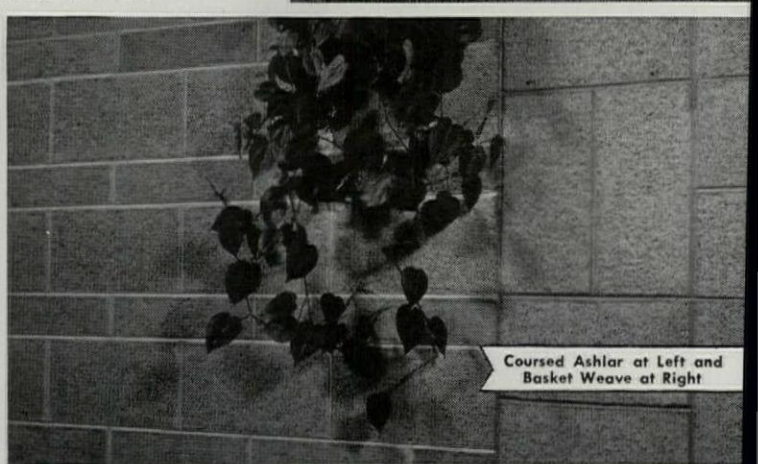


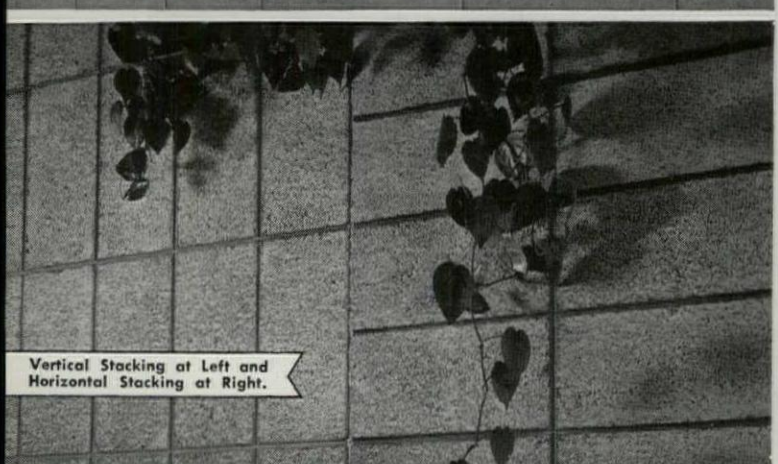
Half Block Stacked. Even the Clock is Made of Vibrapac Bloc



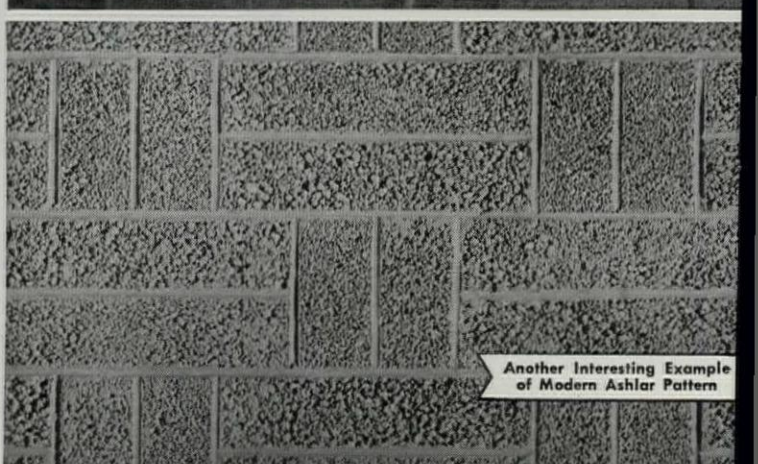
Vibrapac Block in Running Bond with Control Joint.



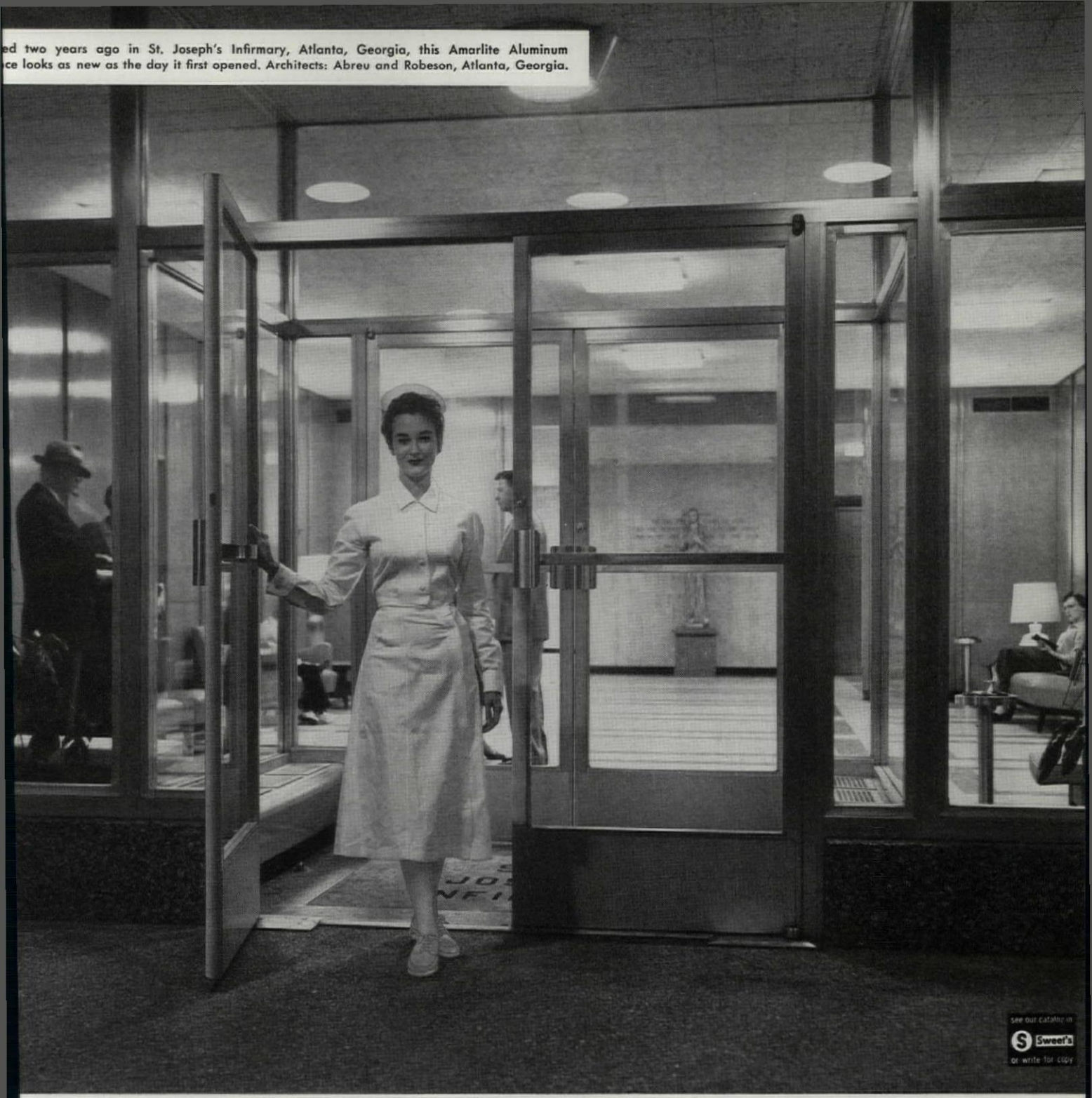
Coursed Ashlar at Left and Basket Weave at Right



Vertical Stacking at Left and Horizontal Stacking at Right.



Another Interesting Example of Modern Ashlar Pattern



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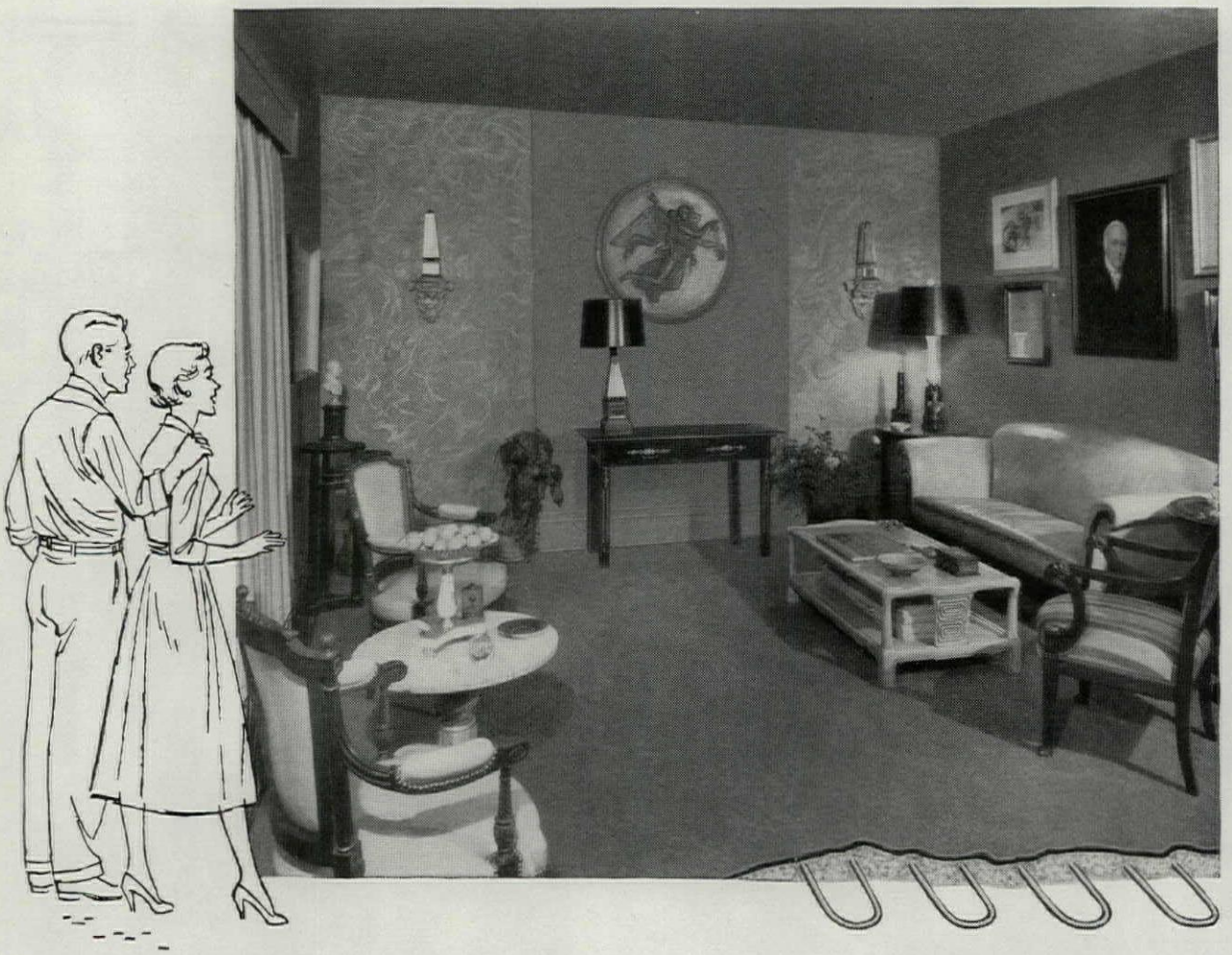
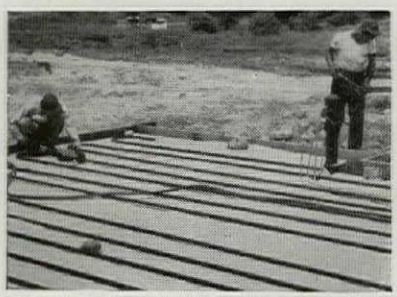


with "invisible" radiant panel heating

A typical radiant heated suburban development home.



Typical installation of steel pipe radiant heating coils on slab.

As the song says, "little things mean a lot" . . . to a woman.

She chooses an automobile by its color, selects a television set for its cabinet . . . and may insist on a radiant panel heating system solely because it gives her *complete* freedom of decoration in her home. The *only* heating system that does, because every inch of floor and wall space remains *usable*. Why should a mere man object to her whims as long as there's horsepower under the hood, a clear picture from the T.V. set, and the heating system gives clean, healthful, draft-free comfort!

It *is* a fact that *women* have helped make radiant panel heating increasingly popular for individual homes, multiple dwellings and housing developments . . . up significantly last year among wet heat installations.

And, as in other wet heat systems, the *men* who design, specify and install, know that reliable steel pipe is first choice for heat transmission. Time tested through more than 60 years of hot water and steam applications, it also has the qualities of economy, durability, weldability and formability required for successful "invisible" radiant panel heating. In fact it's the most widely used pipe in the world!

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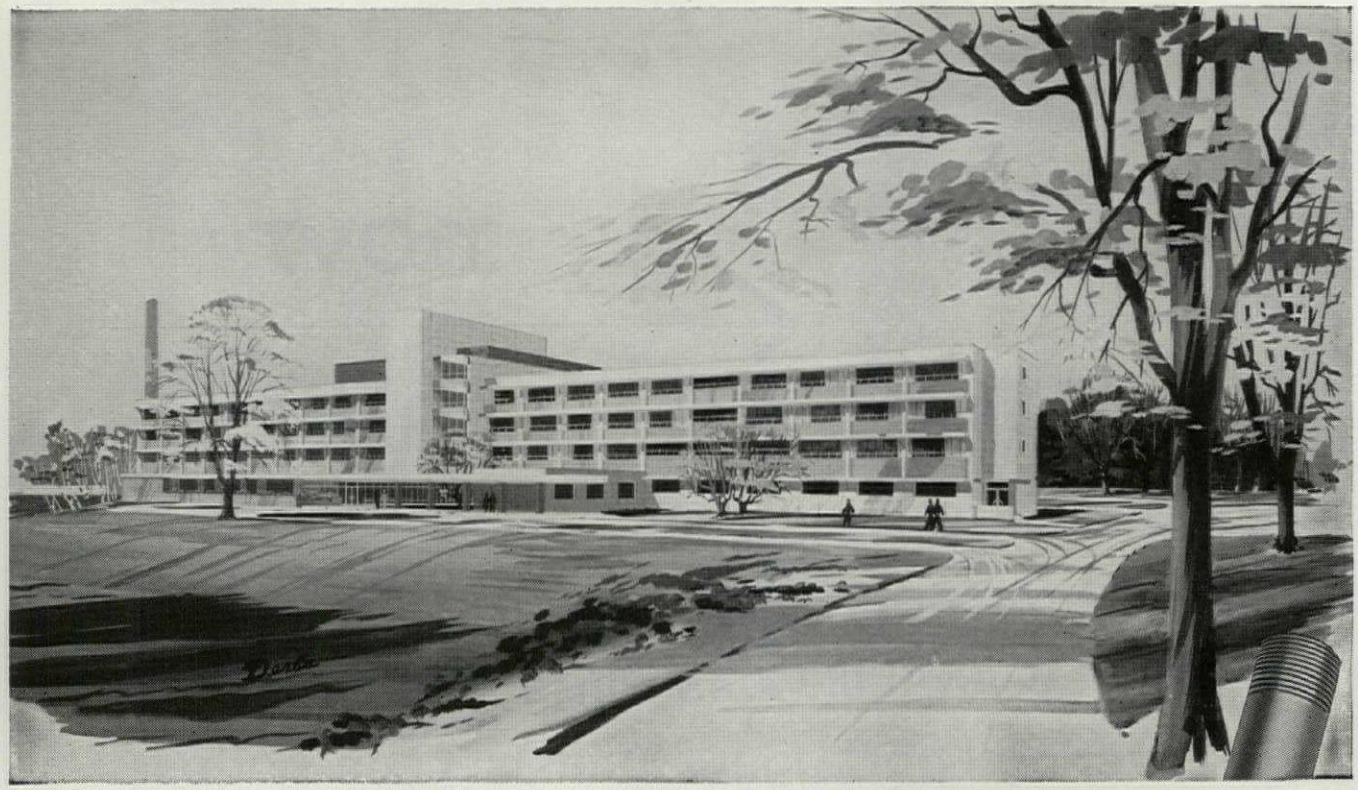

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meets every need for lasting service

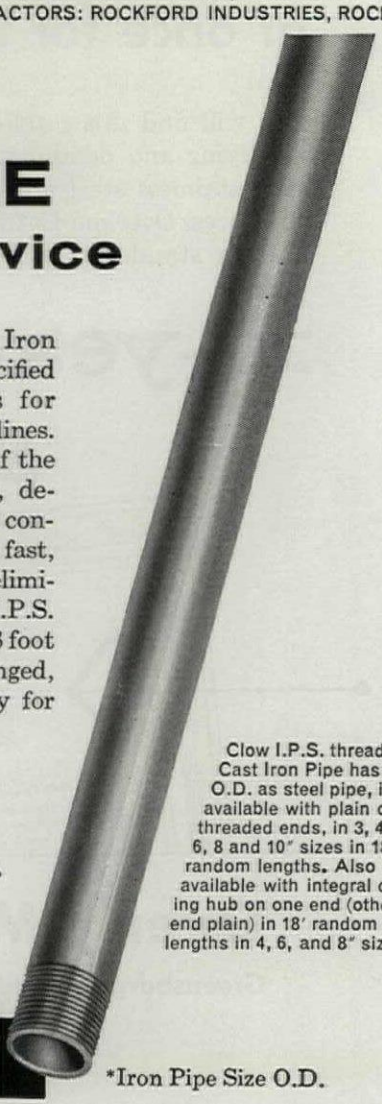
The modern 237-bed Rockford Memorial Hospital, at Rockford, Illinois, is typical of institutions dedicated to the safeguarding of community health. Nowhere is the demand for fast, sure elimination of waste more important than in hospitals and institutions set apart for the service of mankind.

In this new hospital, Clow I.P.S. threaded Cast Iron Pipe is used throughout for downspouts, drains, and waste lines. Corrosion-proof Clow I.P.S. Pipe assures long lasting, trouble-free service.

Clow I.P.S. threaded Cast Iron Pipe is constantly being specified by architects and engineers for downspouts, vent and waste lines. They know it will last the life of the building and will give lasting, dependable service. Plumbing contractors know installation is fast, economical and, once installed, eliminates maintenance costs. Clow I.P.S. Cast Iron Pipe is available in 18 foot random lengths; threaded, flanged, hub or plain end. Write today for complete information.

Clow Cast Iron Pipe can be . . .

on the job, with ordinary tools of the piping trade.



Clow I.P.S. threaded Cast Iron Pipe has same O.D. as steel pipe, is available with plain or threaded ends, in 3, 4, 5, 6, 8 and 10" sizes in 18' random lengths. Also available with integral calking hub on one end (other end plain) in 18' random lengths in 4, 6, and 8" sizes.

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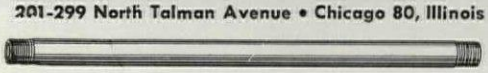

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In the three operating rooms of the newly-renovated St. John's Hospital, ceramic tile was chosen for both wall and floor surfaces. "It is so easy to clean and keep clean," reports the Operating Room Supervisor.

"We are particularly proud of the floors," she adds. American-Olean is proud, too, because these floors are Conduct-O-Tile. In each of the three new operating rooms, Conduct-O-Tile now eliminates the main cause of static-sparked explosions. No waxing or special treatment is needed to keep it permanently conductive.

TILE SPECIFICATIONS: Operating Room, St. John's Hospital, Salina, Kansas. Color Plate No. 346. Walls: 14 Spring Green. Floor: Caneweave; Jet Conduct-O-Tile and Green Granite.

CONDUCT-O-TILE® eliminates main causes of static-sparked explosions. Newly-developed impervious ceramic tile dissipates dangerous charges of static electricity. Permanently conductive; no free carbon to bleed out or track to other areas; stain resistant and fireproof. Send for complete technical data.

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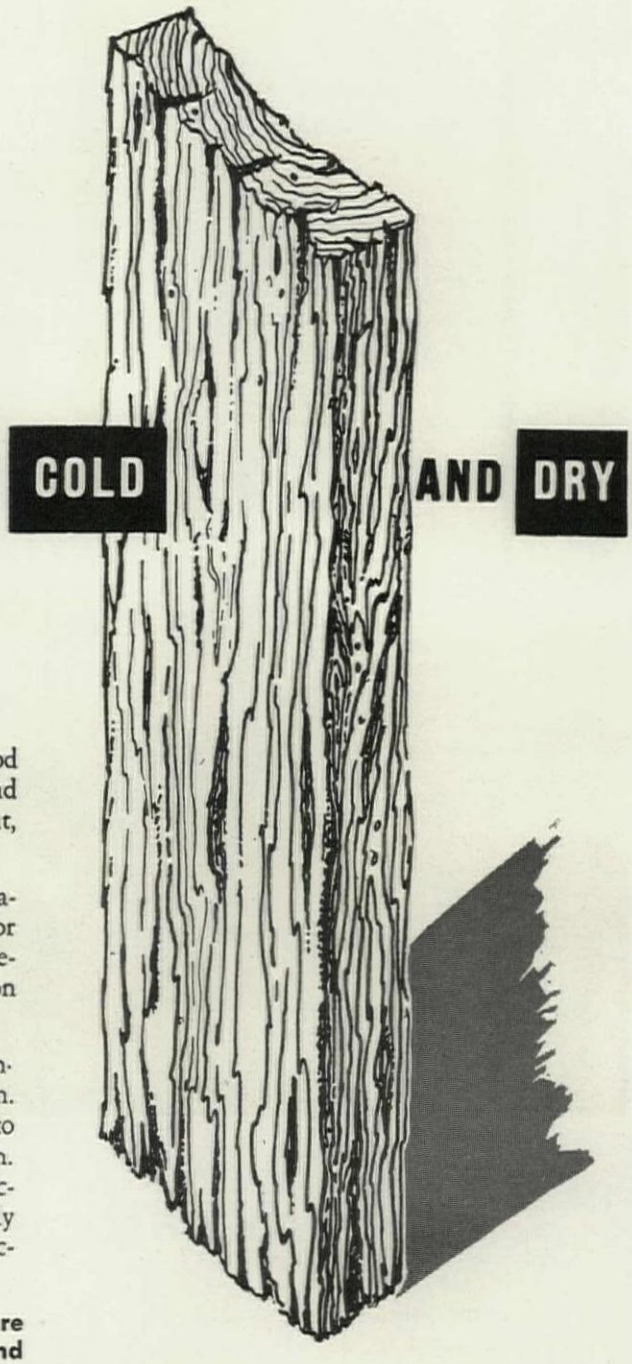
WOOD WON'T ROT WHEN IT'S COLD AND DRY



Living fungi, which break down the substance of wood are microscopic and abundant. But they need WARMTH and DAMPNESS to develop. Dampness will also peel off paint, crumble plaster, cause iron and steel to rust.

Some insulations can promote and retain destructive condensation inside walls and other structural spaces. Warmth and vapor can flow through asphalt, paper, plaster and most building materials, including ordinary insulations. Vapor condenses when, upon striking a colder surface, the air reaches a dew-point.

An empty space, the best insulator against heat flow by Conduction, does not prevent heat flow by Radiation and Convection. Of all heat transferred through structural spaces, about 50% to 80% is by Radiation; all but about 7% of the rest is Convection. The surfaces of multiple accordion aluminum sheets have a reflectivity for heat rays of 97%; absorptivity and emissivity of only 3%. The aluminum and fiber layers retard Convection. Conduction is slight through the preponderant low density air spaces.

The tough aluminum sheets in multiple accordion aluminum are almost completely impervious to water vapor, and are long and continuous. Infiltration under flat, stapled flanges is slight.

Where multiple accordion aluminum is used, fortuitous vapor and water (for instance rain) which intrude into wall and similar spaces will gradually flow out as vapor through exterior walls and roofs as pressure develops within, because vapor flows from areas of greater to less density. The vapor cannot back up through the continuous, almost completely impervious aluminum, so it flows out because exterior walls and roofs have substantial permeability in comparison to aluminum, far greater than the required 5 to 1 ratio.

To obtain maximum uniform depth protection against heat loss and condensation formation, it is necessary to use **edge-to-edge** multiple aluminum, **each** sheet of which automatically stretches from joist to joist.

The U.S. NATIONAL BUREAU OF STANDARDS brochure: "Moisture Condensation in Building Walls," discusses vapor and heat flow, and the causes and prevention of condensation. Use the coupon. Get a copy at our expense.

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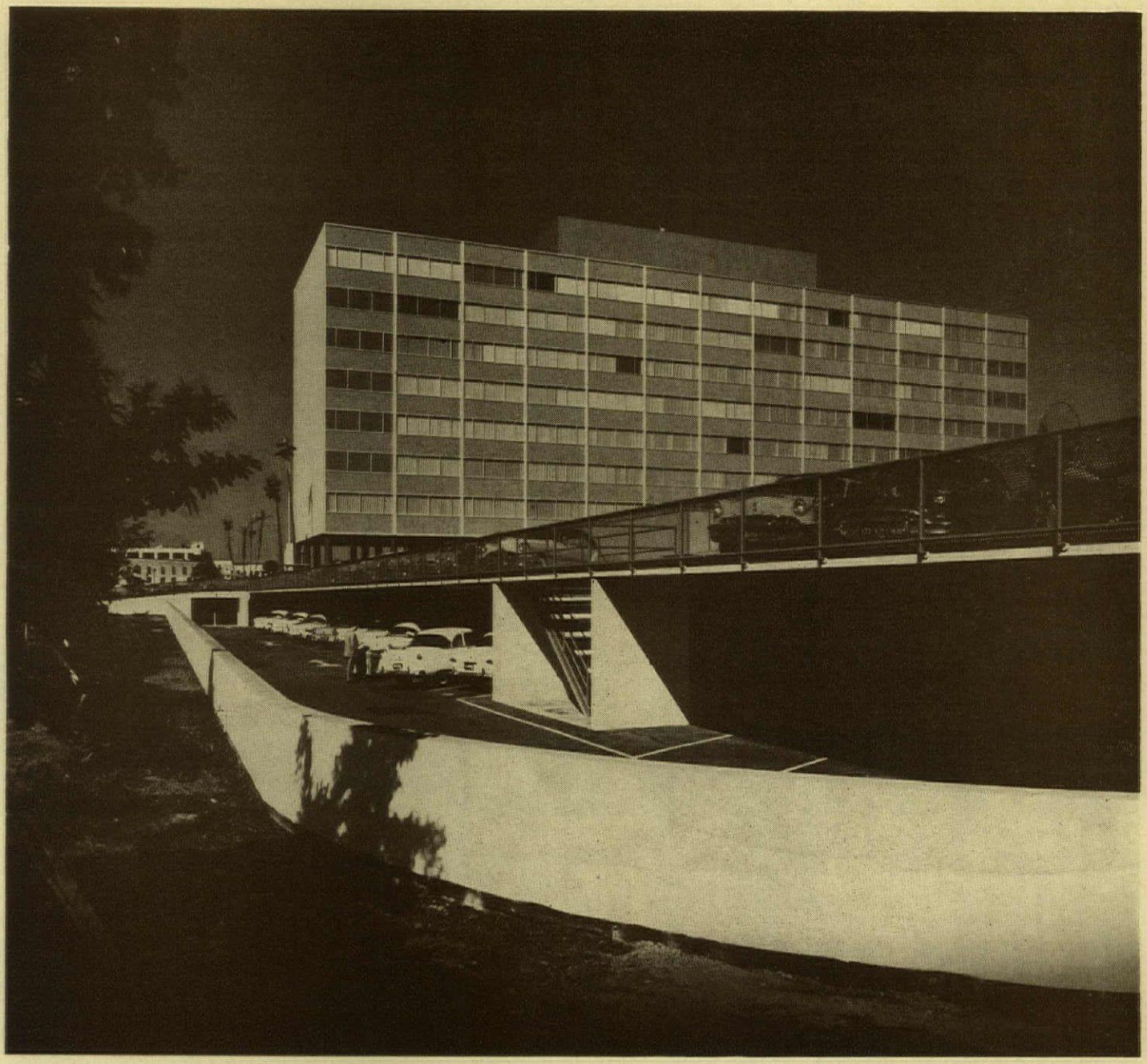
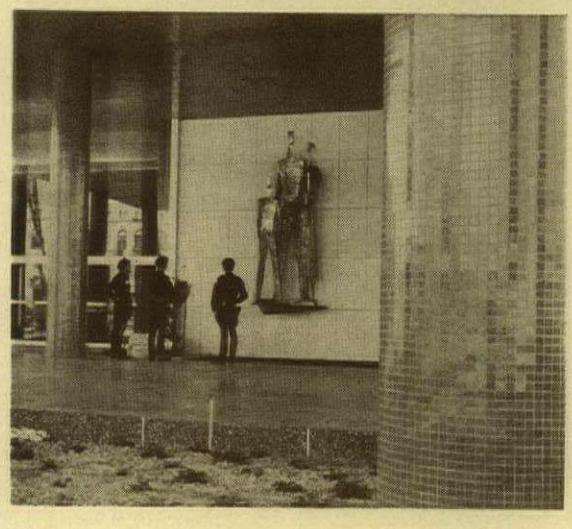


Julius Shulman



NEW HQ FOR L. A. POLICE

LOS ANGELES, CALIF.—This city's splendid new Police Administration Building, to be presented fully in P/A early in 1956, was designed by Welton Becket & Associates and J. E. Stanton, Associated Architects. The $6-millions reinforced-concrete structure is 8 stories high, air conditioned, and has parking for 850 cars. Most controversial element of the design is Bernard Rosenthal's striking sculpture of "The American Family" *(left)* that has stirred the no-uncertain views of art critics and laymen throughout the nation.

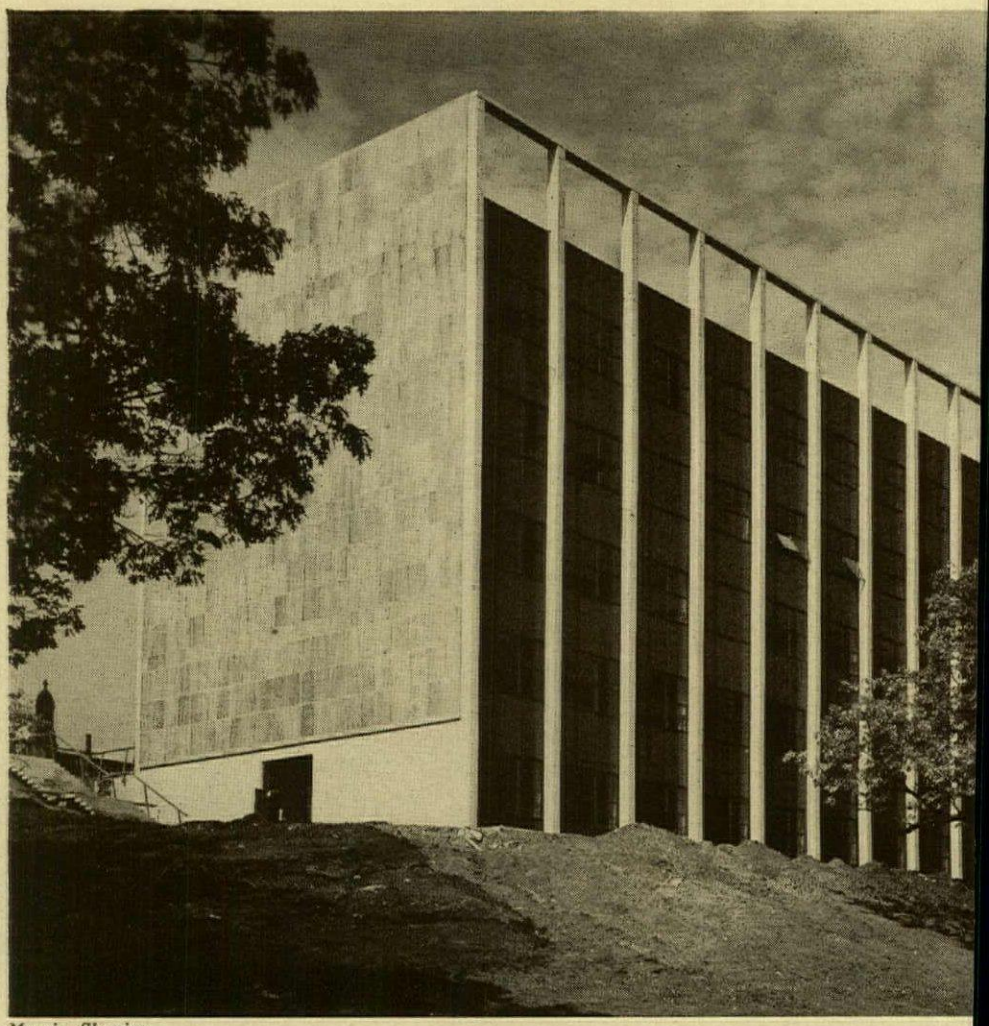
ADVANCED BUILDINGS DEDICATED

by George A. Sanderson

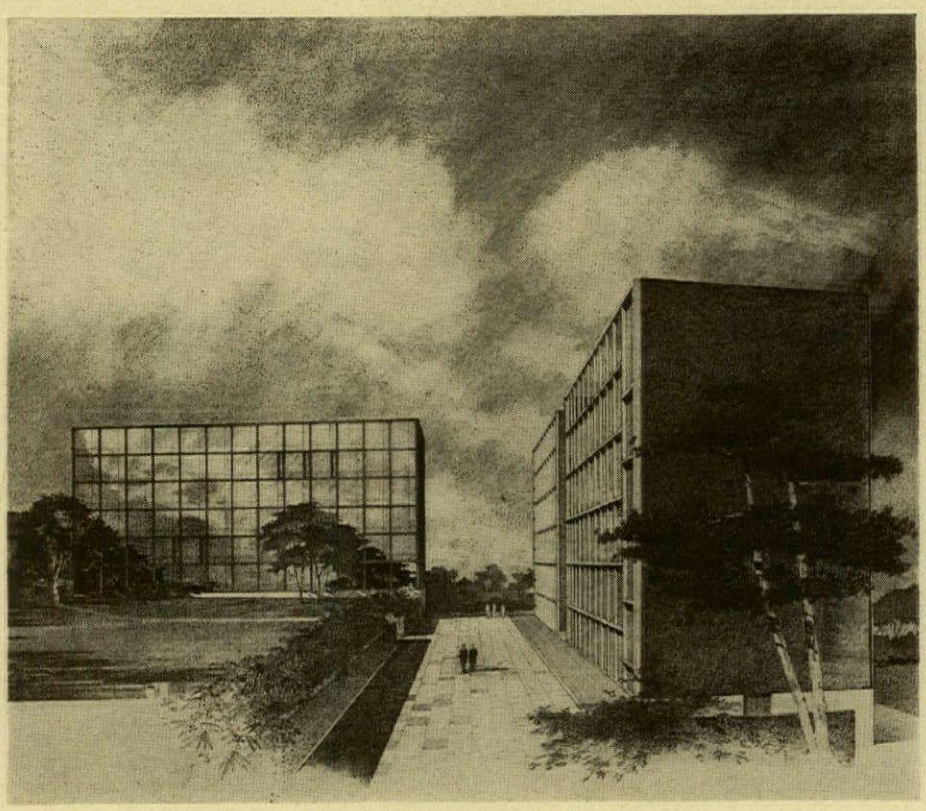
The following news items are two of the most recent announcements of fine new buildings that have taken their places on major U.S. campuses:

NEW HAVEN, CONN., Oct. 28—First unit of Yale University's new Research Center (*right*) was dedicated here today. The rendering shows the total scheme, with the completed building, housing biology and physics labs at right, and the future, chemistry-research laboratory, in the background. The finished structure is composed of 12'x20' laboratory modules, each module having easy accessibility to all mechanical services, which are distributed horizontally in the labs from exposed, vertical risers in corridors. Removable partitioning provides further flexibility. Associated Architects are Douglas Orr and Paul Schweikher.

CHICAGO, ILL., Nov. 3—Dedication this afternoon of two new 9-story residence halls at the Illinois Institute of Technology (the two at left, *photo acrosspage*) marked not only completion of the planned group of 9-story buildings but also the half-way mark in IIT's campus housing program. Like other new buildings on the campus, the new halls were designed by Architect Ludwig Mies van der Rohe, Director of Tech's architecture department. The two residence halls are the 17th and 18th new buildings constructed at Technology Center in the past decade.



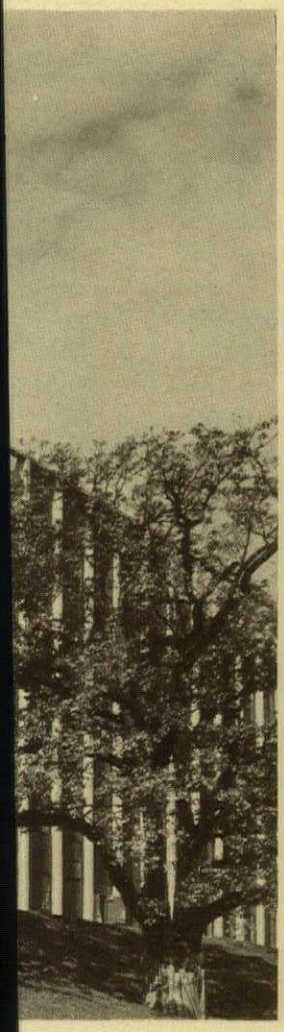
Morris Shapiro



A happy coincidence has conspired to bring progressive architecture to more and more of the once ivied cloisters of our institutions of higher learning. For one thing, of course, contemporary architectural thinking has advanced to a maturity that enables an increasing number of architects to understand it, believe in it, and employ it. The shift from romantic enclosures to efficient clean-cut buildings may also be partly explained by the cost savings that can be demonstrated to money-conscious Boards of Trustees. Nor should it be overlooked that a constantly growing number of university officials have come to feel that a center of learning has an obligation to broaden its architectural horizons, precisely as it does those of the subjects in its curriculum.

With the current insistent demand for more technically trained men to meet the needs of this day of atomic power, automation, and speeded industrial efficiency, it is heartening to realize that these fresh minds are to be housed in buildings that should further, rather than hinder, their forward-looking activities.

FOR ADVANCED EDUCATION

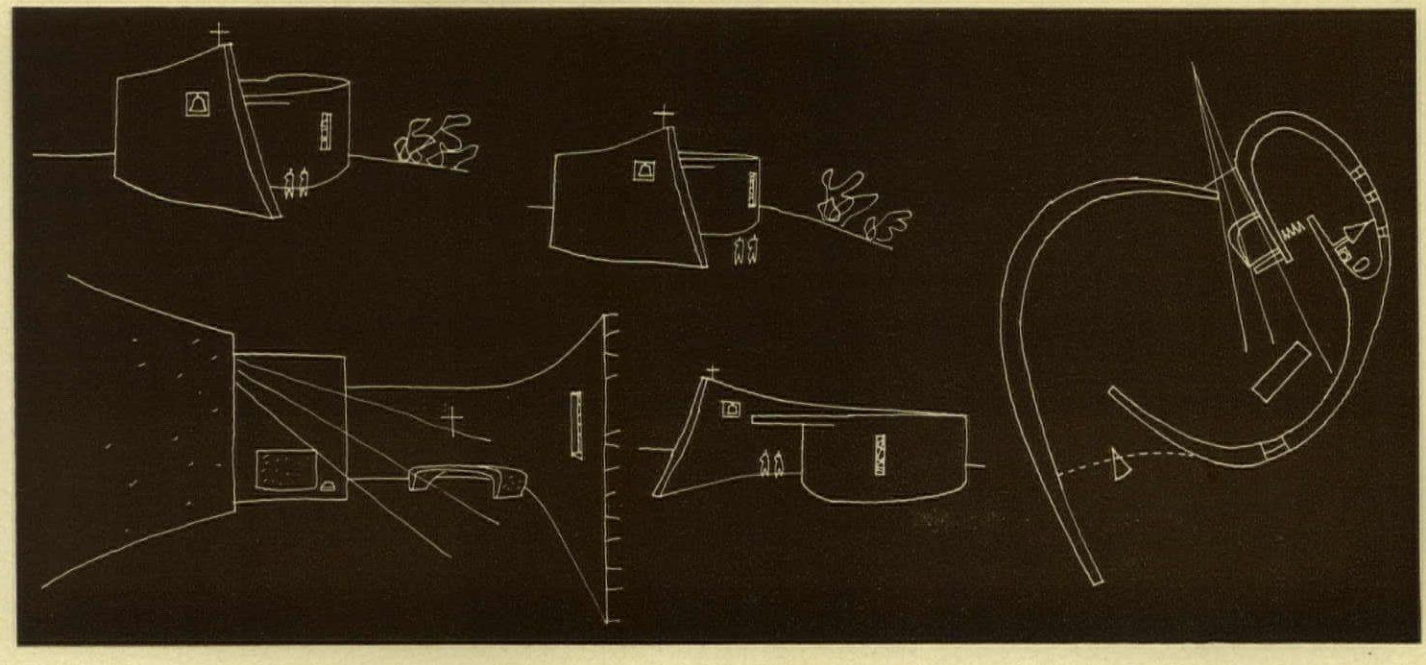


Hube Henry, Hedrich-Blessin

Illinois Tech's two new residence halls, "Bailey" and "Cunningham" (*above*, left), and the two earlier, companion buildings are generously disposed on a full city block.

Yale's new "Josiah Willard Gibbs Research Laboratories" (*acrosspage*) are planned for use by faculty as well as graduate research students.

Oscar Niemeyer Designs Chapel



Washington Report

by Frederick Gutheim

No one who appreciates the difficulties which face the designer of public works projects, or who has experienced the waste in badly planned public works, will belittle the recent establishment of the position of Public Works Plannning Co-ordinator in the Executive Office of the President. This is not the first effort to stimulate and co-ordinate advance planning of public works at all levels of government. Earlier attempts were made by the National Resources Planning Board and by the Federal Works Agency. But the present movement, which appears to have the support of all major construction interests, because it attempts to reach more modest goals and because it is more strongly supported at the Presidential level, is more likely to succeed. Not a little of these bright prospects is due to the assignment of the new post to Maj. Gen. John S. Bragdon, a former Assistant Chief of Army Engineers, who has been serving as a Public Works Consultant to the President's Council of Economic Advisers.

General Bragdon's efforts are sharply divided between public works on the Federal level, and the Federal concern with state and local public works. In the case of Federal activities, public works planning deals with the specific programs of operating departments in such fields as roads, community facilities, or housing. Administrative powers, especially through the Budget, can influence the scope and nature of these activities. In the case of state and local public works, Federal influences tend to be persuasive and indirect—except in grant-in-aid programs or such influence as may be exercised by manipulating the availability of Federal Loans or other construction money. Here the language of the President's letter to General Bragdon, outlining the work of his office, wisely talks of co-operation rather than co-ordination.

A staff of 14 persons will be at work on this program. The office has been organized to reflect its varied activities in Federal, state, and local public works; in an over-all stand-by emergency program; and in the field of public works economics. Its formal duties include advising the President on public works; devising and recommending public works policies; developing Federal long-range public works programs; developing long-range planning; and exploring a program of stand-by emergency public works. This is not an operating department but a staff agency. It has no funds for advance planning, and will do none itself. It will have to find ways to stimulate advance planning. Precious little of it is now being done—yet never was it more needed.

• It is always surprising to find that although construction amounts to some $40 billions annually—making it the largest industry—the only means by which the many different programs are ever brought together is by an adding machine—on paper. The important position of construction in the national economy is everywhere conceded; but nowhere in the government has construction work been viewed as a whole. That strikes me as the chief potential strength of this new activity. We are still far distant from any steps to unify public works. Little effective co-ordination of projects will be undertaken. General Bragdon will not be that "voice of the construction industry" which has been so long desired at the top levels of government (i.e., a single point within the Federal structure where the industry can go for help, advice, support, and which can represent its interests and its point of view). This movement does not reflect even a glimmer of that Federal engineering service envisioned by Herbert Hoover a third of a century ago, or the more sharply limited type of reorganization on the model of the former Federal Works Agency, nor even the recommendations on this subject of the Hoover Commission or the Kestenbaum Commission. With all that it is not (and General Bragdon will disclaim much else) one can still find value in these beginnings.

Much of the interest in advance planning of public works hinges on the idea that in times of economic slump the economy can be stimulated by public works expenditures and employment. This was a popular depression theory. In more recent times we have suffered from the corollary argument: that we should defer construction needed now, because prices are too high, workers scarce, and inflationary pressures would be increased. But the crude idea that public works expenditures can counterbalance cyclical tendencies of the economy has just been jolted by Dr. Harold C. Taylor, director of the Upjohn Institute for Community Research. In a major address to the American Public Works Association, Taylor drily commented: "It is unnecessary for public works to accept the burden of trying to influence the economy as a whole." Instead, he urged that public works decisions be made entirely on a basis of need. The public works policies of boom or depression times should be about the same, Taylor argues, contradicting those who have asserted that public works should be undertaken chiefly during times when the economy needs help. In the perspective offered by such studies, stabilization of construction activity within a general program of economic stabilization is the goal that emerges.

• The architectural pattern on lease-purchase buildings earlier established by the General Services Administration has been continued on new work in Roanoke, Va.; Albuquerque, N. Mex.; and Kansas City, Mo. Senator Chavez (D., N. Mex.), powerful Chairman of the Senate Public Works Committee, evidently believes the one Federal building in Albuquerque is not enough. He has been complaining that the program is too small and too slow, and has called for "at least 200 or more" buildings of this sort. The box score on lease-purchase during its first year shows only 26 projects approved, as against needs GSA has reported to Congress totaling 5000 projects. So quite a case can be made out by the Senator! But this is a new program and GSA has still to determine how lease-purchase will be financed—how, in the words of one official, "we will buy the money." The outlook is for a steady increase in lease-purchase activities.

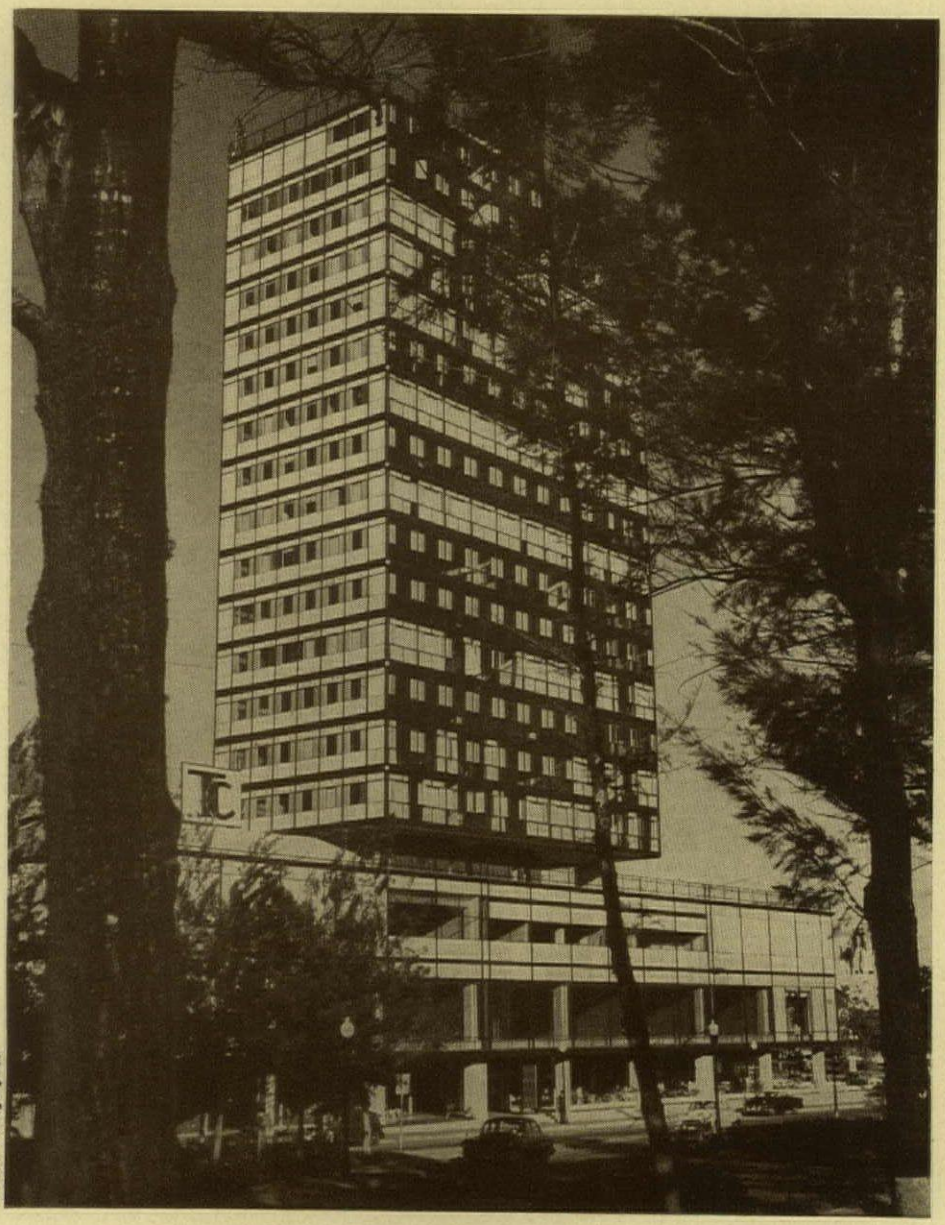


Photo: Argsfoto

One of Caracas' Newest

CARACAS, VENEZUELA, Nov. 1—In this city where multistory buildings mushroom overnight, the Polar Building—combining a commercial-office building and a theater—is one of the newest attractions. A three-story shopping center and a 15-story office tower are separated by a balcony floor with restaurant (*above*). The structure's concrete core houses mechanical services and a 200-car multilevel parking cellar lies below grade. Glass and aluminum-plywood panels, varying in design on each elevation according to orientation, enclose the building. Vegas & Galia, Arquitectos Asociados, were the designers.

BRI Confers On Metal Curtain Walls

by Burton H. Holmes

WASHINGTON, D. C., Sept. 29—"Metal Curtain Walls," one of the Building Research Institute's best attended conferences, ended here today. Architects, engineers, contractors, and all segments of the metal industry with a stake in the future of metal curtain walls were present.

Significantly, architects prepared a majority of the papers. Following an introduction by Edward X. Tuttle, Walter A. Taylor of The Octagon staff presented an AIA survey indicating widespread interest in metal curtain walls and a desire to use metal panels on practically any type of building. William H. Scheick, BRI Executive Director, reviewed a BRAB survey of owners and contractors which also indicated favorable acceptance of metal exteriors. John O. Blair, Detroit Edison architect, explained their feasibility for buildings occupied by his company.

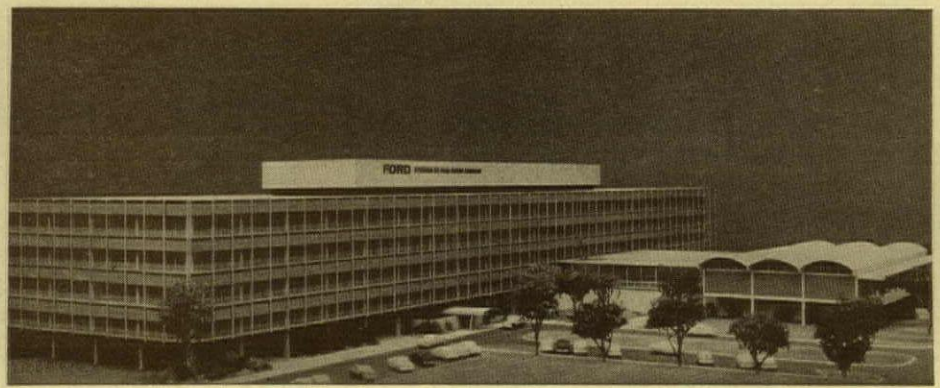
Discussing architectural design, Douglas W. Orr, Max Abramovitz, and Robert W. McLaughlin warned of pitfalls to be avoided if metal walls are to find increasing acceptance by the designer.

Tyler S. Rogers, Owens-Corning Technical Consultant, outlined performance requirements of panel design. On a structural design panel, moderated by William B. Tabler, John Hancock Callender analyzed the Princeton report "Curtain Walls of Stainless Steel" (*October 1955 P/A*), Robert K. Posey forecast a bright future for walls of composite glass and smooth surface panels, and Kawneer's J. M. Roehm reported on core materials and adhesives for sandwich-panel construction.

Harry B. Tour moderated the technical discussions in which Elmer R. Queer of Penn State spoke of insulation and condensation control, acoustics specialist Robert B. Newman cited the problems of sound transmission, and N. S. Collyer, of the F. H. Sparks Co., discussed erection problems. Alcoa's Frederick J. Close and Architect D. Kenneth Sargent summarized the conference and forecast the future of this construction method.

New Ford Offices

DEARBORN, MICH.—A strange marriage of talents—Welton Becket & Associates and Albert Kahn, Associated Architects & Engineers, Inc.—produced a five-story office building for Ford Division of Ford Motor Company. Porcelain-enamel and glass exterior of air-conditioned structure will be shaded by gold-colored aluminum louvers, hung from cantilevered floor slabs. Vaulted wing will house auditorium and dining facilities.



News Bulletins

• As was expected, drawings for Air Academy have been approved by new Air Force Secretary Donald A. Quarles—with the exception of controversial chapel design, to be given further study by Architects Skidmore, Owings & Merrill. . . . Quarles also asked Architect Welton Becket to continue as consultant to the Academy.

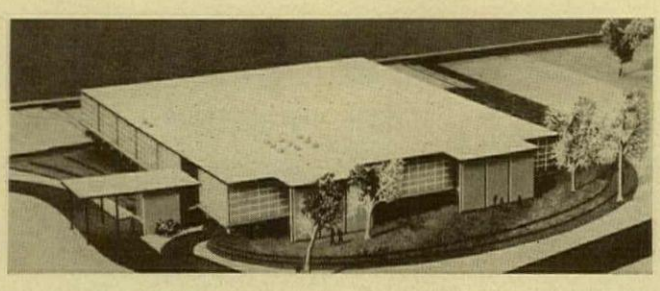
• Multimillion-dollar plan to develop recreational facilities on Chicago's northern Lake Michigan shore was recently disclosed by City Park Officials. Project would include play areas, gardens, harbor for pleasure craft, four piers, and 2½ miles of beach—all to be created on and around 800 acres of reclaimed land. Estimated cost for reclaiming of land alone is $100,000 per acre.

• Winners in AISC's 27th Annual Esthetic Bridge Competition, for the most beautiful steel bridge opened to traffic in 1954, are: Class I—Missouri River Bridge, The Paseo, Kansas City, Mo.; Class II—Little Chute Bridge over the Fox River, Outagamie County, Wis.; and Class III—Garrison School Pedestrian Bridge over The Paseo, Kansas City, Mo. No awards were given in Class IV, for movable bridges.

• American Society of Civil Engineers installed newly elected officers during National Convention held in New York City last month. President for the coming year is Enoch R. Needles, senior partner of Howard, Needles, Tammen & Bergendoff, New York; Vice-Presidents (to serve two years) are Frank A. Marston of Metcalf & Eddy, Boston, and Glenn W. Holcomb, Department of Civil Engineering, Oregon State College.

• Latest reports from U. S. Depts. of Labor and Commerce show construction expenditures climbing to the highest level in history. Total outlays during Sptember ran over the $4-billion mark set in August; commercial building activity exceeded $300 millions for the first time; and construction of churches, industrial buildings, and public-school facilities all rose to new highs.

• When main plant for Houston Technical Laboratories, Houston, Texas, is completed next spring, all research, design, and manufacturing operations for this maker of high-precision geophysical instruments will be centralized under one roof.



Completely air-conditioned building, designed by Architects Ford, Colley, & Tamminga, will feature a skylighted tropical garden opening into office area and a geophysical museum in lobby. However, major portion of 40,000 sq ft plant will be used for manufacturing purposes.

• New York's Metropolitan Opera and Philharmonic Society are both considering new theaters—to be located on Manhattan's West side. The Met's Directors, realizing difficulties of further remodeling to their present Opera House, approved a new location on Broadway between 62nd and 64th Streets. No announcement concerning design of these two halls for music has been made, but efforts will be made to bring about design competitions. . . . In Washington, AIA has just proposed a design competition for an auditorium and civic center for District of Columbia. Announcing the Institute's stand, Pres. George Bain Cummings emphasized the importance of a national cultural center—not only to local residents, but to all Americans.

• Former AIA President Ralph Walker will present the Institute's Certificate of Honorary Fellowship to Charles Herbert Aslin, President of Royal Institute of British Architects, at a special ceremony to be held in London this month.

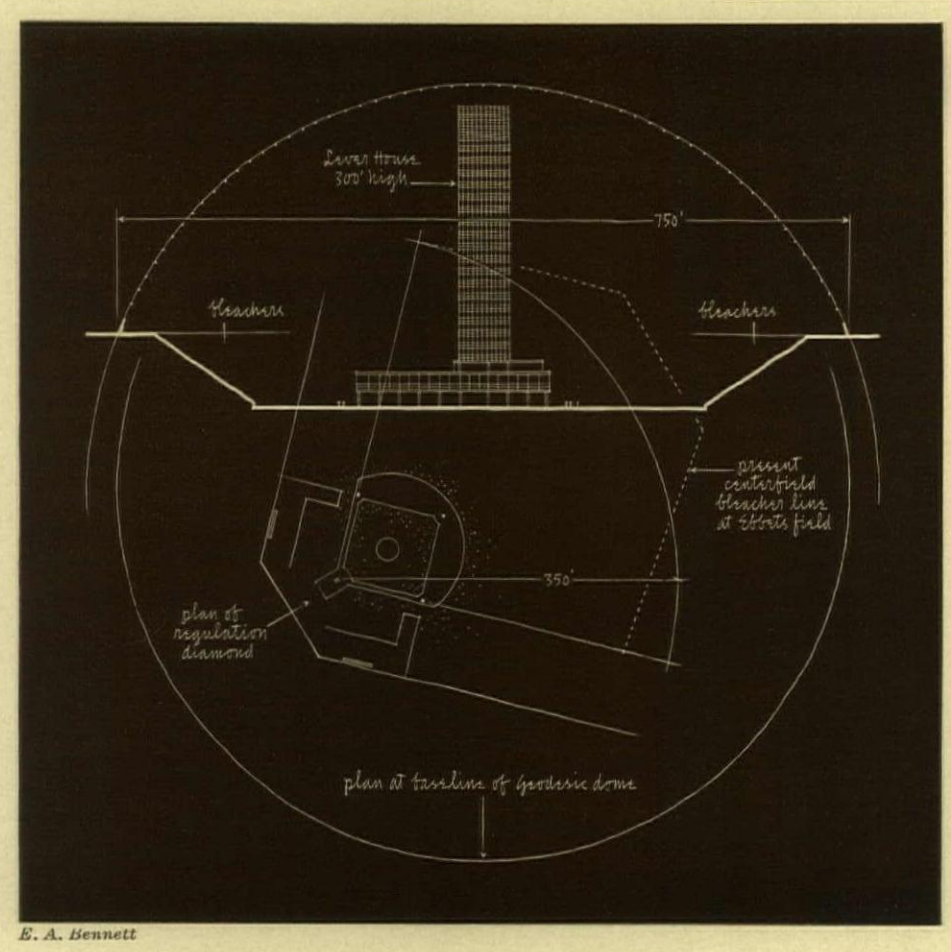
• Under reorganization program at Yale University, Charles H. Sawyer has been appointed Dean of new School of Architecture and Design. Paul Schweikher and Josef Albers will continue as Chairman of Architecture and Design, respectively. . . . Louis I. Kahn has joined faculty at University of Pennsylvania as Professor of Architecture. . . . Kenneth J. Conant, of Harvard, was named George A. Miller Visiting Professor of Architecture at University of Illinois.

• Paul Lester Wiener, José Luis Sert, and Paul Schultz, Town Planning Associates, have been retained under long-term contract to act as Chief Consultants to Cuba's Junta Nacional de Planificacion (Commission of National Planning). Junta, headed by the Minister of Public Works, Architect Nicolas Arroyo, will develop regional plans as well as master plans for Havana and other cities in Cuba.

• BRI Conference on "Design for Environment: Floor-Ceiling Structures and Service Systems for Multi-Story Buildings" will take place in National Academy of Sciences, Washington, D. C., December 7-8. Featured speakers will include Michael Harris, of Harris & Abramovitz, and Dr. Darell B. Harmon.

• The Architects Collaborative (TAC) and Utilities Engineers, both of Boston, have been retained by Corps of Engineers, Falmouth, Mass., as architects-engineers for $5.5-millions family-housing project at Otis Air Force Base. . . . Chrysler Corporation is having plans prepared by Albert Kahn Associated Architects & Engineers, Inc., for new $85-millions autobody stamping plant in Macedonia, Ohio. . . . Ferguson, Stevens & Associates and Flatow & Moore will design new Federal Office Building in Albuquerque, N. Mex., to cost over $6 millions. . . . Chicago's Pullman Building will be replaced by $12.5-millions, 20-story office structure. Plans, prepared by William Lescaze, call for gold-colored aluminum sheathing.

• Katz-Waisman-Blumenkranz-Stein-Weber: Architects Associated, have awarded a graduate scholarship in architecture to Radoslav L. Sutnar of New York City. Award is made annually to enable an exceptional student in Pratt Institute's School of Architecture to complete studies for Master's Degree.



E. A. Bennett

A Geodesic Dome For Brooklyn Dodgers

PRINCETON, N.J., Nov. 1—Those jaunty wearers of the World Series crown may also sport a geodesic dome when they play ball in Brooklyn. Research into design of a quarter-sphere dome 750 feet in diameter and high enough at center field to top a 30-story office building (*as shown in schematic section, left, containing Skidmore, Owings & Merrill's* LEVER HOUSE) has been started here by R. Buckminster Fuller, inventor and patent holder of Geodesic Structures, aided by a team of 25 graduate students in the Princeton School of Architecture.

Walter O'Malley, president of the Dodgers, asked Fuller to explore the possibility of a geodesic shelter that would make games possible all through the year. Ventilation and sun control will be considered, in the course of the studies. Records show that open fields are usable in New York only 65 days of the year, adding economic pressure to the need for a covered playing field, which also would be available for conventions, prize fights, the circus, etc. An important consideration is that the translucent dome will cast no shadows on the playing field.

Colosseum Station

ROME, ITALY—Take the new subway to "Colosseo" and you will find yourself *(left* and *below)* just outside the most gigantic of the ruined monuments of Ancient Rome. The seven-mile Metropolitana, started 13 years ago, has been completed at a total cost of approximately $40 millions and now offers direct transportation to the southwestern suburbs of the metropolis. Only a part of the system is underground, as the tracks come to the surface near the Basilica of San Paolo.

Photos: Authenticated News

Financial News

by William Hurd Hillyer

Ofttimes the biggest news fails to make headlines. Something of this nature is happening in the world of realty improvement. The Federal Reserve System has come up with figures showing that the "weekly reporting member" banks have more than doubled their stake in mortgage credit since this time last year.

Twelve months ago these banks had advanced about $600 millions to mortgage lenders with mortgages as collateral; they have since swelled that total to well beyond $1385 millions, an increase of more than 130%. In addition, they have committed themselves to purchase some $1262 millions of mortgage loans, and have augmented their direct holdings of mortgages by over $1.6 billion since mid-'54 to a better than $15 billions. Added together these three totals come to around $17.6 billions as the aggregate sums furnished or set aside by commercial member banks in the weekly-reporting category, for the benefit of realty improvement. Not included in the survey are mutual savings banks, to say nothing of savings and loan associations.

Here's what is happening: the demand for real estate improvement loans (mainly residential) is so heavy that mortgage investing concerns are lending faster than the money comes in. Consequently they are turning more than ever to commercial banks for assistance. The banks, already loaded up with mortgages of their own, don't feel justified in buying any more outright, so they either supply the lender with funds and take his mortgages as security with or without repurchase arrangement, or they agree to buy new mortgages from him according to specified schedule. Practically all the increase under repurchase deals has been with insurance companies (see April 1955 P/A, p. 75), which are currently thus obligated to the extent of some $336 millions. Realty mortgage companies enjoy the remainder of the accommodation.

There are two angles from which this situation may be viewed. The more obvious is, as editorial writers used to phrase it, "with alarm"—that is to say, as indicative of a credit overextension threatening tangible construction as well as financial structures. Less disturbing and perhaps more forward looking is the deduction that a new economic tool may be in the making, comparable at this stage to installment credit a few years back. In its early phases such credit was extended by finance and factoring concerns, using chiefly their own capitals; today the bulk of all installment funds comes from banks via finance companies, an increasing volume being furnished by the banks direct to consumer borrowers. The very bankers who shied away from rediscounting "finance" paper 20 years ago are now most avid for the steady flow of liquidating cash that such paper engenders. In like manner the installment feature of the typical modern mortgage makes it a more fluid and bankable asset than was its traditional single-payment predecessor. If an approved pattern can be worked out, as between banks and mortgage lenders, congeneric with that subsisting between banks and finance companies, money supply for sound construction will certainly gain in flexibility and perhaps in absolute volume.

Meanwhile bankers are more mortgage-minded than ever before. Bank of America, the country's biggest, announces a newly broadened 20-year home loan program with a 66⅔% maximum of appraised value and without Government aid or guaranty. The Mississippi Bankers Association is distributing to its members a message from "Fanny May" (Federal National Mortgage Loan Association) telling them how she stands ready with $1 billion of Uncle Sam's money to purchase real estate loans if they want to sell.

A major remodeling and redesigning field may be opening up in urban downtown areas. Financial men are impressed by the implications of the Richmond, Virginia, Thalhimer Department Store's $2,500,000 modernizing job ("News Survey," October 1955 P/A), where the vertically fluted aluminum façade was unwrapped mid-October. "Downtown Is Not Dead," headlines the "Wall Street Journal," linking the event to the center-urban policies of such stores as Rich's of Atlanta.

A conservative reaction to the current installment credit upsurge was evident at the American Bankers Association October clinic. That body's Installment Credit Commission went on record with a top listing of character as a prime loan requisite and as putting collateral at the bottom of a five-item roster.

• "Experts" voice such diametrically opposite opinions as to the economic outlook, that the prudent-planning architect will do well to draw a median line from these heart-warming current statistics:

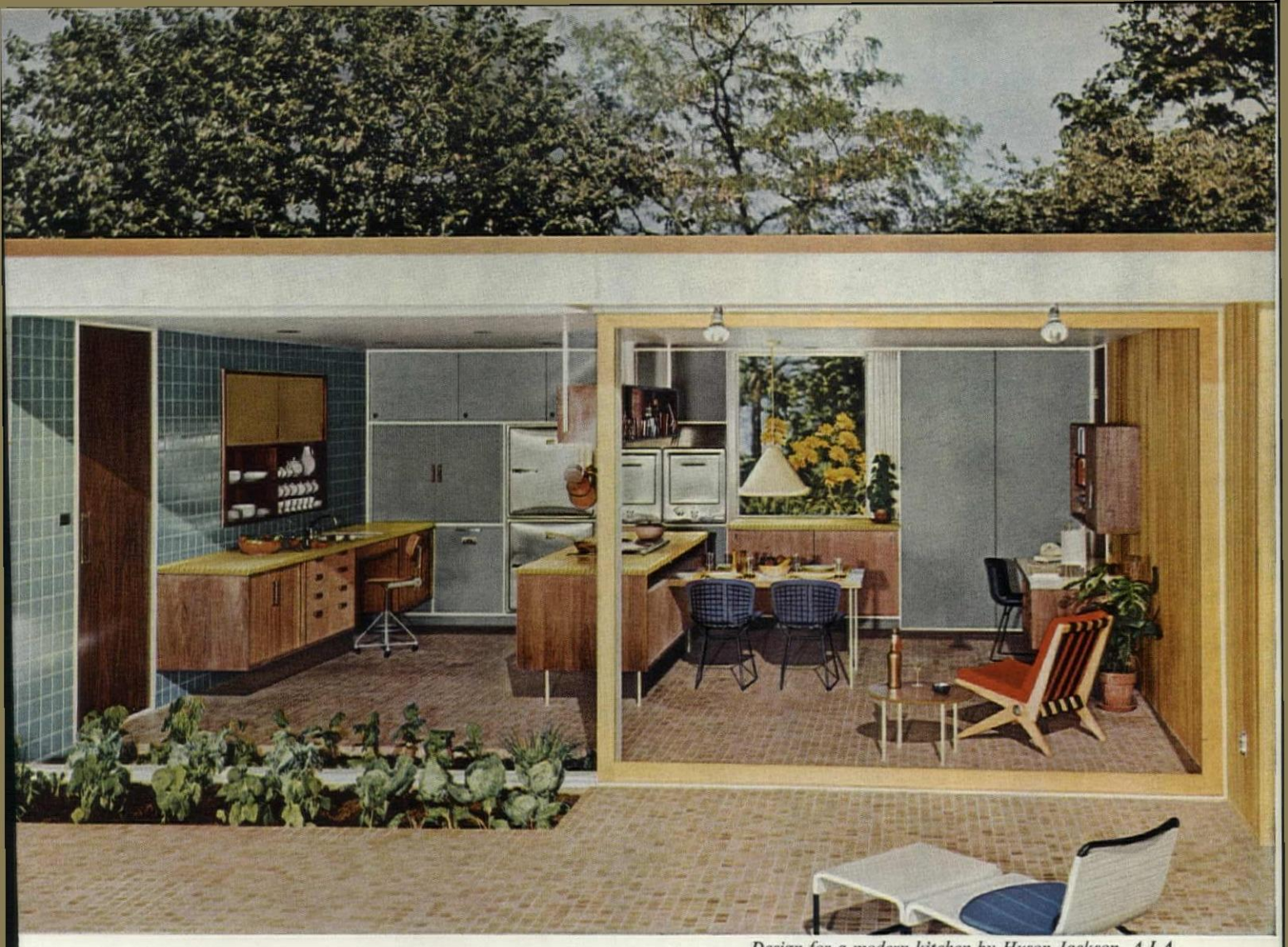
Total industrial production is up some 15% from '54 levels, but also flattening out currently;

Seasonal dip in auto production is leaving room for a 70% gain over last year's comparable figures;

Steel output continues to exceed 1954 statistics, up some 38% and reflecting 9615% capacity;

Factory orders are still high, running some $5 billions a month above last year, with an unfilled balance of $2 billions ahead;

Machine tools are in demand again—"a barometer of optimism," says Wall Street.



Design for a modern kitchen by Huson Jackson, A.I.A.

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Huson Jackson

To help create a warm functional kitchen, Architect Huson Jackson used ceramic tile . . . and captured this rare combination for work-free convenience and relaxed living.

The semi-separation of the breakfast area—to the right of the ceramic tiled cooking island—affords a pleasant place for eating and relaxation. In the kitchen section an aqua tone ceramic tile wall from floor to ceiling keynotes an easily cleaned, colorful work center. The tiled counter tops and drainboards guarantee lifelong service and economy because ceramic tile won't burn, scratch or stain.

To answer the rugged demands of family living, a ceramic tile floor is used throughout—linking kitchen and outdoor patio into a single attractive living space when the sliding window wall is open. Specify a ceramic tile floor and you give your client an easily cleaned floor that lasts the life of his home.

Ceramic tile helps you offer your clients unique benefits: custom designs from standard tiles, minimum maintenance and lifetime economy. This is true whether you specialize in residential, commercial or institutional projects. You choose from a broad range of colors, surface textures and sizes. And don't forget to explore the savings made possible by adhesive installations. This type of installation is ideal for many dry wall surfaces.

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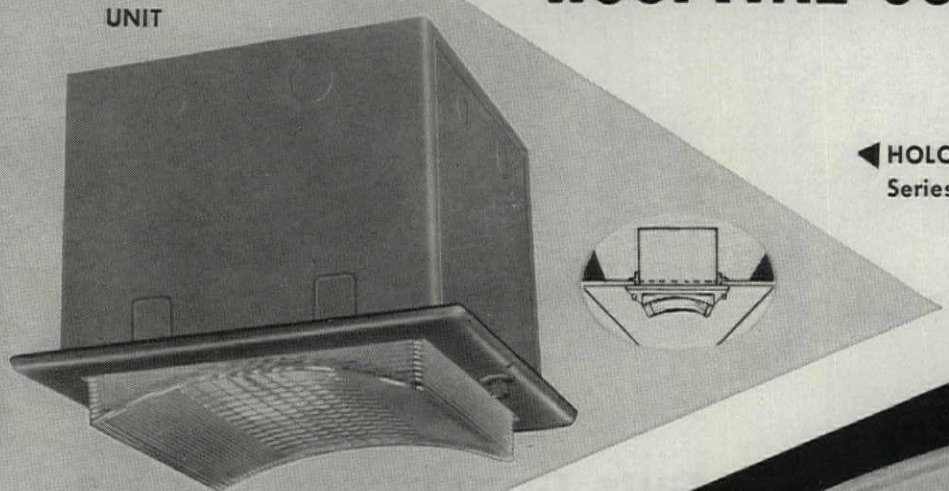

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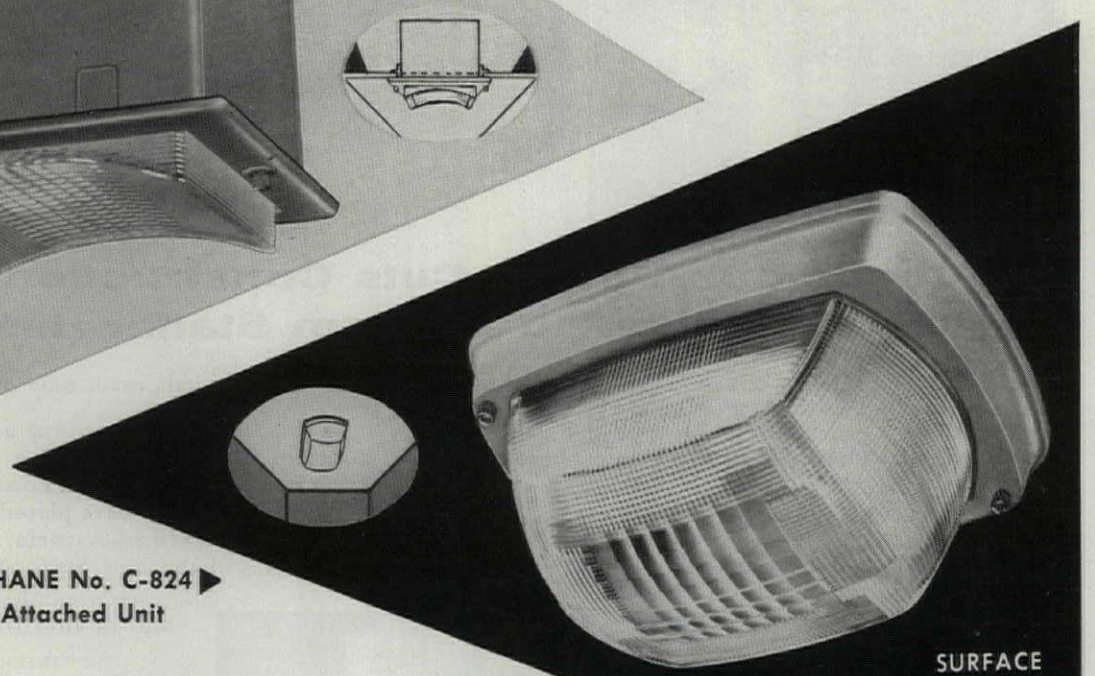
Series of In-Bilt Units



HOLOPHANE No. C-824 ▶
Surface Attached Unit

SURFACE ATTACHED UNIT

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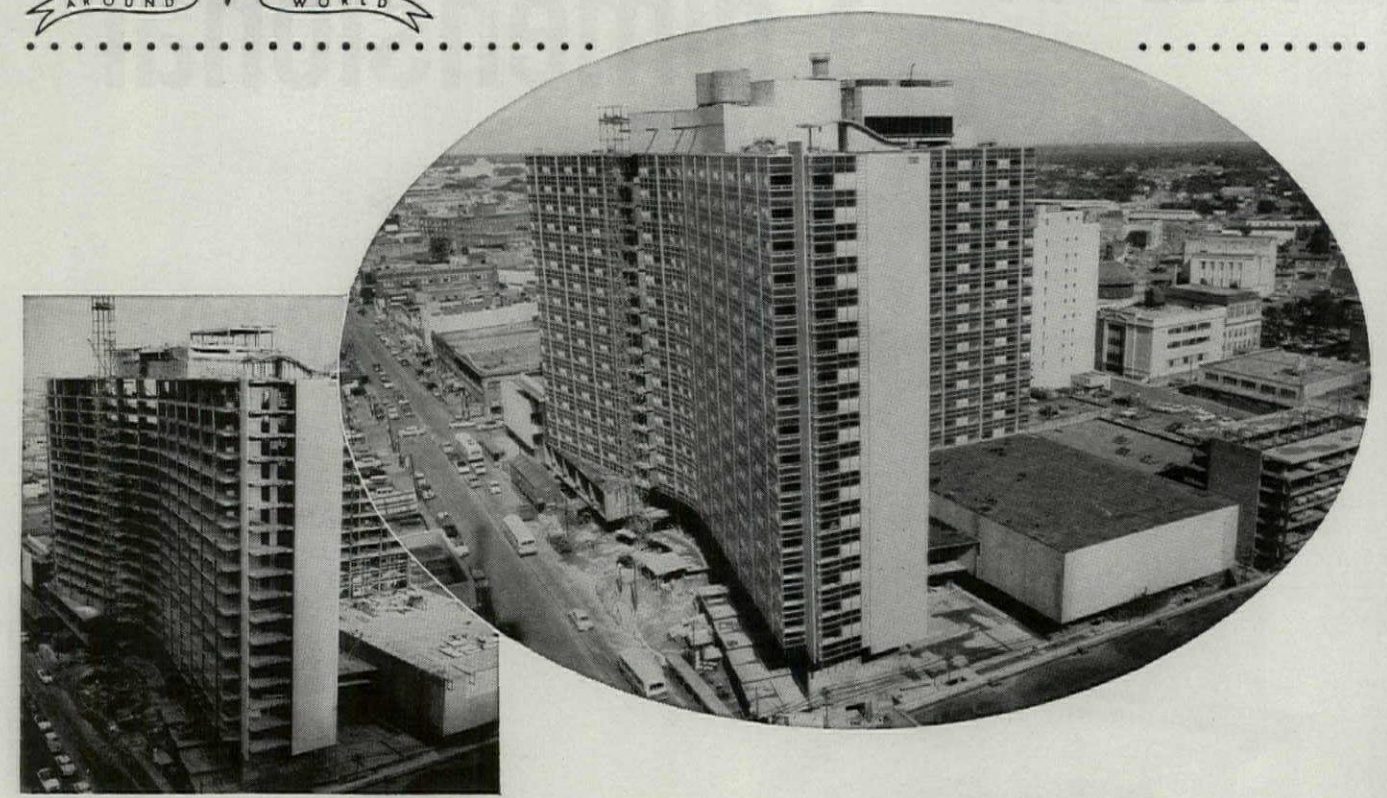
Hilton Makes Hotel History

THE HILTON AROUND THE WORLD



Ingenious Design Cuts Construction Costs on Dallas' 1001-Room Statler-Hilton

● Soon to open in Dallas, Texas, is the luxurious 18-story Statler-Hilton, one of the largest hotels built in 25 years, and latest in the group of 28 hotels welded together by Conrad N. Hilton into the world's greatest hotel organization.

Construction cost of this 1001-room hotel was $9,350. per room ($1.54 per cu. ft.), against an $11,000-per-room average for other new hotels in the system. The reinforced-concrete structural system not only saved money but contributed to the esthetic and functional development of the design.

Of flat-plate construction, the building is T-shaped, with three wings, each about 156 ft. long and 48 ft. wide, radiating from a central core. There are only two longitudinal rows of columns in each wing, with floors cantilevered 10 ft. beyond column centerlines to support the sandwich-panel walls. Floor slabs are 8 in. thick; no drop panels or column capitals used; only painting was required.

In this latest example of the advantages of reinforced-concrete frame construction, a total of 48,305 bbls. of Lone Star Cement was used. Equally proud is Lone Star of the part its products have played in other famous Hilton Hotels—the Waldorf-Astoria, the Shamrock-Hilton, Houston, and the new Statler-Hilton, Hartford, Conn.

As is so often the case, quality has a way of attracting quality.

THE STATLER-HILTON HOTEL, Dallas, Texas
Owner: HILTON HOTELS CORPORATION
Architect: WILLIAM B. TABLER, New York
Contractor:
ROBERT E. McKEE GENERAL CONTRACTOR, INC.
Dallas, Texas
Structural Engineers:
SEELYE, STEVENSON, VALUE & KNECHT, New York
Mechanical Engineers:
JAROS, BAUM & BOLLES, New York
Haydite Lightweight Block and Aggregate supplied by: TEXCRETE COMPANY, Dallas

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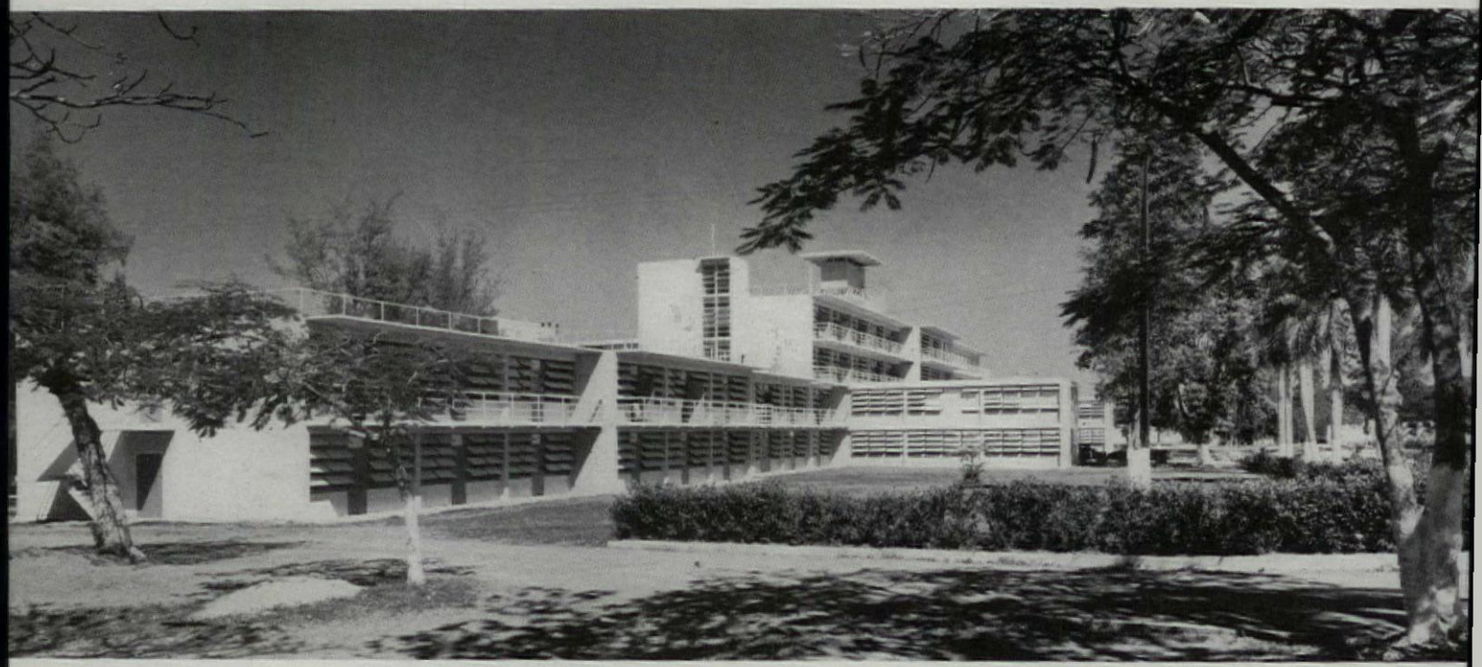
health facilities

TB HOSPITAL



TB hospital

location | Rio Piedras, Puerto Rico

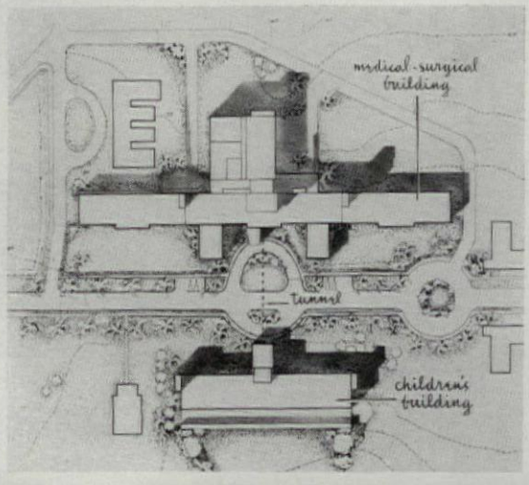
hospital consultant-architect | Isadore Rosenfield

This extensive new facility to serve TB care and treatment needs consists of two units—an Adult Building (Medical-Surgical) with 600 beds, and a Children's Building, containing 200 beds. An underground tunnel joining the two makes it feasible to concentrate common services —diagnostic, therapeutic, administrative, dietary, stores, etc.—in the Adult Building. All of the new beds are used for active cases that require intensive nursing and medical care.

Planned under the auspices of the Committee on Design of Public Works and of the Department of Health of the Commonwealth of Puerto Rico, the work was commissioned by the Department of Health and the Department of Interior of the Commonwealth. Sigman & Farkas were the Structural Engineers; Slocum & Fuller, Mechanical Engineers; and Mendez, Grillasca, Nolla, Galib & Marquez, Inc., General Contractor. Zachary Rosenfield is now his father's partner in the firm of Architects-Hospital Consultants.

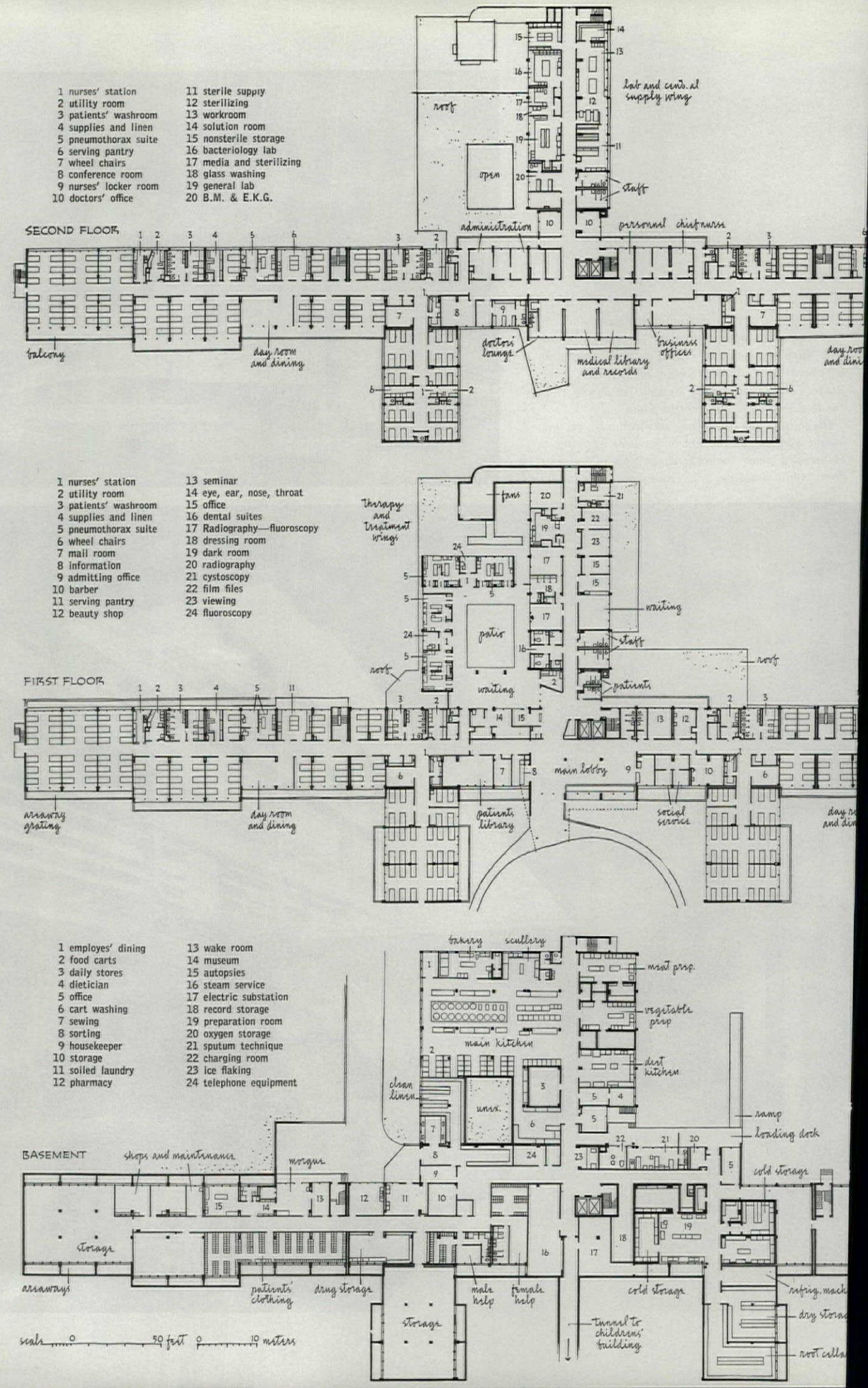
The site is an extensive tropical park on the outskirts of San Juan, and the road separating the two buildings is the principal, palm-lined road connecting all buildings comprising the hospital.

The architectural design of both the reinforced-concrete-framed units clearly reflects the tropical environment. As the architects comment, the buildings are "practically without exterior walls, except for reinforced-concrete cross walls needed for earthquake resistance. . . . Openings are protected by thin concrete walls from floor to window-sill height, but from window-sill to ceiling and from column to column, the spaces are divided into sections each holding projecting sashes 'glazed' with panels of asbestos board." Except during (infrequent) severe storms, the sash remain open.



At the rear of the Adult Building (right), *advantage was taken of the slope to place the kitchen and auxiliary services, delivery court, etc., at basement level, though these are wholly above grade. No laundry was needed, as laundry is handled at an existing, central plant.*

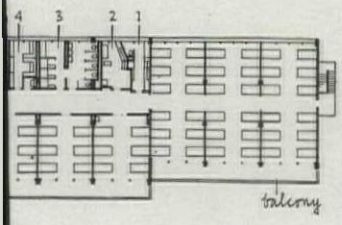
Diagnostic and treatment departments for ambulant patients of the entire hospital open off a landscaped patio (below) *at the rear of the first floor, Adult Building.* Photos: Alexandre Georges

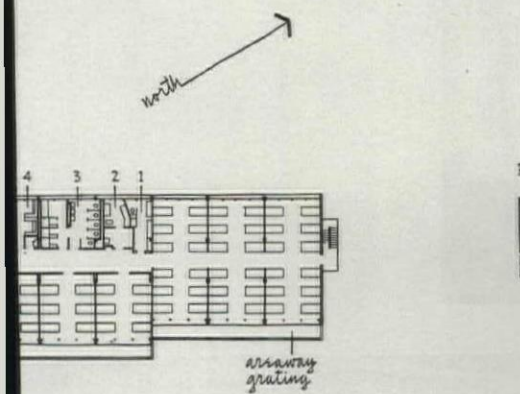

1 nurses' station
2 utility room
3 patients' washroom
4 supplies and linen
5 pneumothorax suite
6 serving pantry
7 wheel chairs
8 conference room
9 nurses' locker room
10 doctors' office
11 sterile supply
12 sterilizing
13 workroom
14 solution room
15 nonsterile storage
16 bacteriology lab
17 media and sterilizing
18 glass washing
19 general lab
20 B.M. & E.K.G.
SECOND FLOOR
roof
open
lab and cent. al supply wing
staff
administration
personnel
chief nurse
balcony
day room and dining
doctors' lounge
medical library and records
business offices
1 nurses' station
2 utility room
3 patients' washroom
4 supplies and linen
5 pneumothorax suite
6 wheel chairs
7 mail room
8 information
9 admitting office
10 barber
11 serving pantry
12 beauty shop
13 seminar
14 eye, ear, nose, throat
15 office
16 dental suites
17 Radiography—fluoroscopy
18 dressing room
19 dark room
20 radiography
21 cystoscopy
22 film files
23 viewing
24 fluoroscopy
FIRST FLOOR
therapy and treatment wings
fans
patio
waiting
staff
patients
roof
arrivals grating
day room and dining
main lobby
patients' library
social service
1 employes' dining
2 food carts
3 daily stores
4 dietician
5 office
6 cart washing
7 sewing
8 sorting
9 housekeeper
10 storage
11 soiled laundry
12 pharmacy
13 wake room
14 museum
15 autopsies
16 steam service
17 electric substation
18 record storage
19 preparation room
20 oxygen storage
21 sputum technique
22 charging room
23 ice flaking
24 telephone equipment
BASEMENT
bakery
scullery
meat prep.
vegetable prep
main kitchen
dirt kitchen
clean linen
unex.
ramp
loading dock
cold storage
shops and maintenance
morgue
storage
arrivals
patients' clothing
drug storage
male help
female help
cold storage
tunnel to childrens' building
refrig. mach.
dry stora
root cella
scale 0 50 feet 0 10 meters

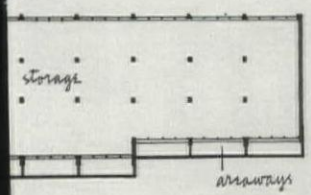
TB hospital: medical-surgical building

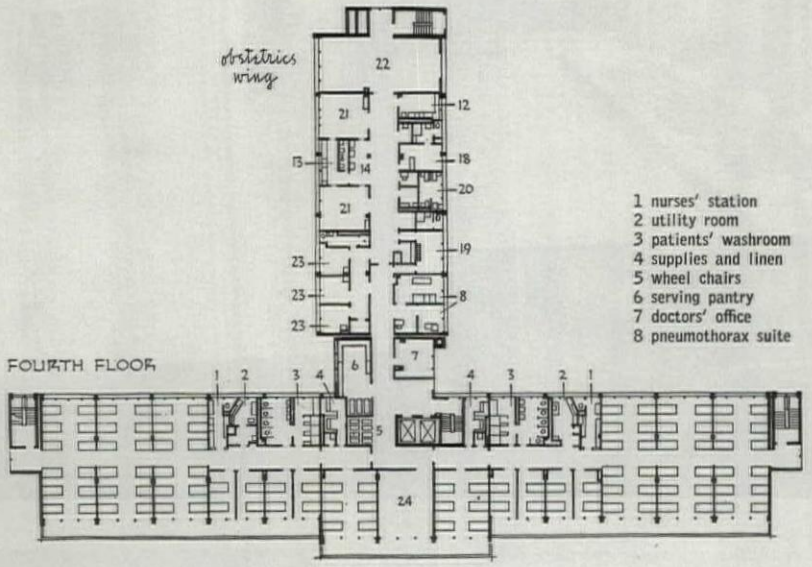
In planning the 12 nursing units of 50 beds each for the Adult (Medical-Surgical) Building, a controlling wish was to avoid a tall building that would require expensive elevator service, involve earthquake risk, and place patients too remotely from the ground.

The solution developed long, two-story wings, north and south of the main entrance area, each wing of each floor containing two nursing units. Ward portions of the two inner units are turned at right angles to the building's main axis. Thus, 33 percent of the patients are at ground-floor level and another 33 percent only one flight up, with the result that visitors, many patients, and staff have access to two thirds of the hospital without using elevators. Each of the two upper floors, placed centrally, consists of two nursing units, and these are primarily used by postoperative and postpartum cases. Operating and delivery rooms immediately adjoin in the wing to the rear. The projecting wings of the first floor units are mainly for admission and observation cases; and those on the second floor are isoltion sections, for men and women.

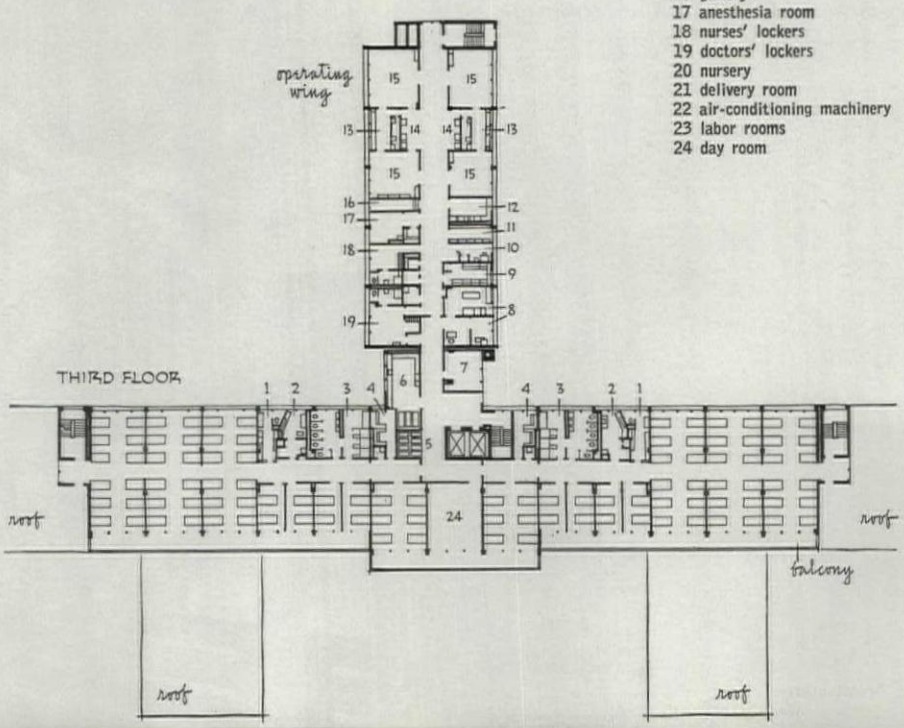








1 nurses' station
2 utility room
3 patients' washroom
4 supplies and linen
5 wheel chairs
6 serving pantry
7 doctors' office
8 pneumothorax suite

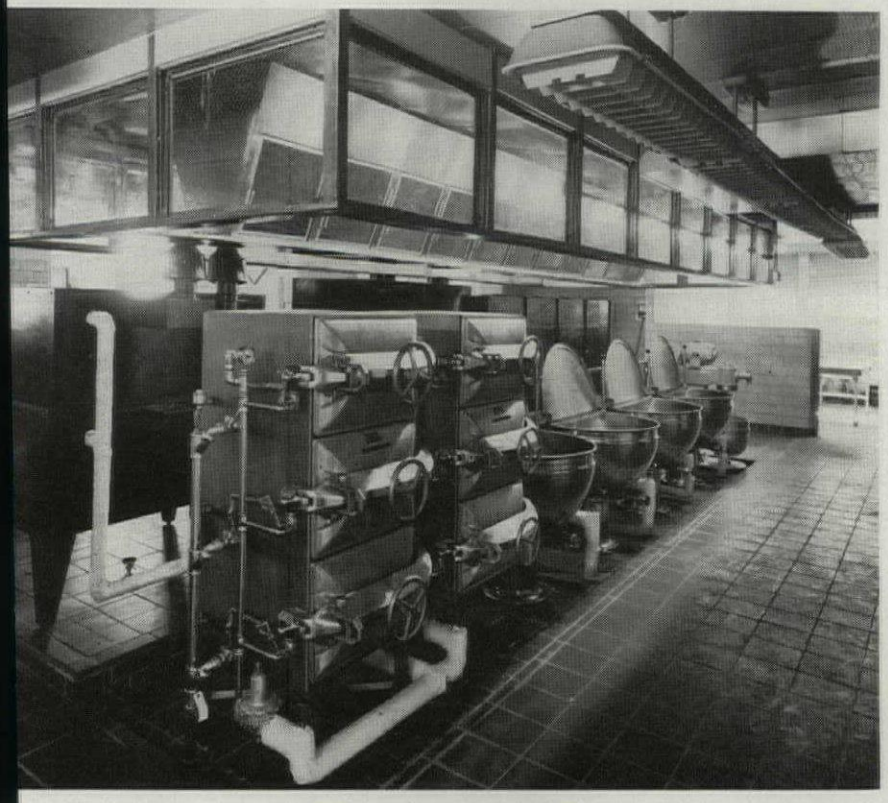


9 sterile storage
10 supervisor
11 instrument storage
12 clean-up room
13 substerilizing
14 scrub-up alcoves
15 operating room
16 gallery
17 anesthesia room
18 nurses' lockers
19 doctors' lockers
20 nursery
21 delivery room
22 air-conditioning machinery
23 labor rooms
24 day room

TB hospital: medical-surgical building

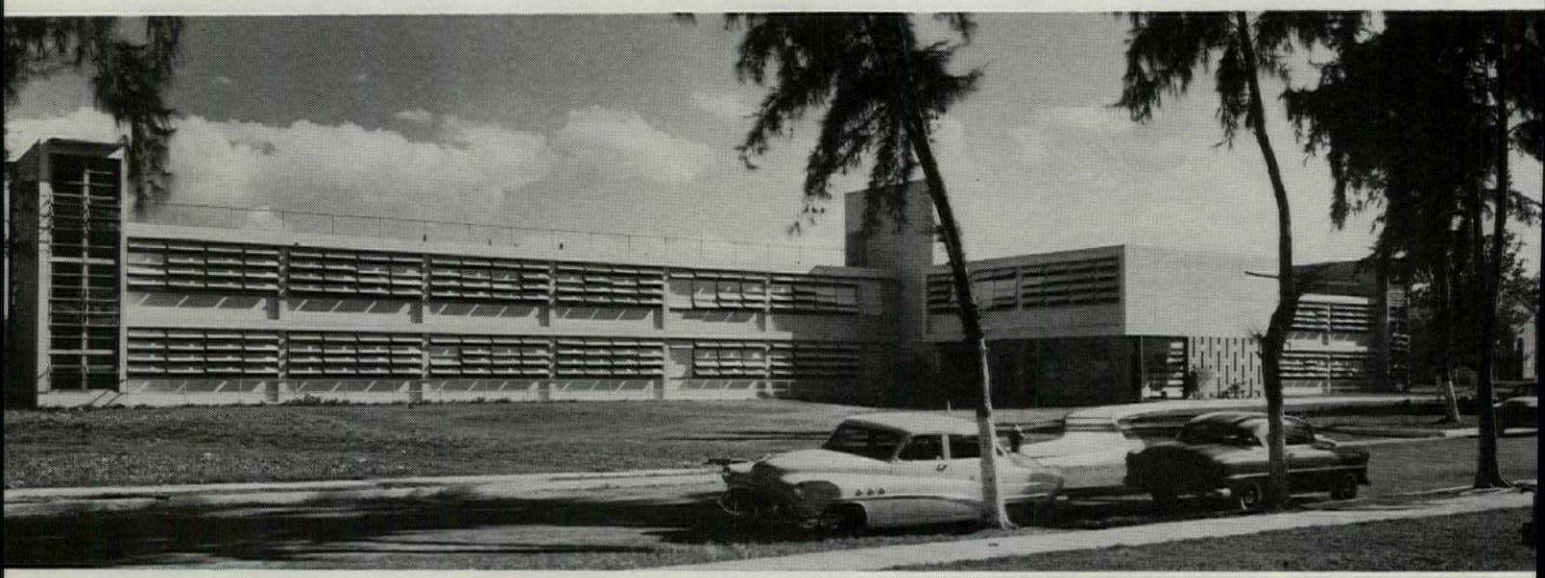
Services surrounding the main entrance lobby (above *and* right) *and the adjoining patio will serve the 800 patients who occupy the existing quarters elsewhere on the grounds, as well as patients in the new buildings. In this first-floor area are admitting office, social-service department, barber and beauty shops, post office, patients' library, and the treatment departments—pneumothorax suites, eye-ear-nose-throat, and extensive X-ray department.*

Accommodations for patients include large wards (right) *for the gregarious convalescent; smaller wards for the less gregarious; and private rooms for the critically ill. Floors: terrazzo.*



Like many of the facilities in the Medical-Surgical building, the main kitchen (above *and* right) *serves not only the two new buildings but also the entire 1600-bed hospital. Quarry-tile floor; glazed-tile wall surface to above head height.*

TB hospital: children's building



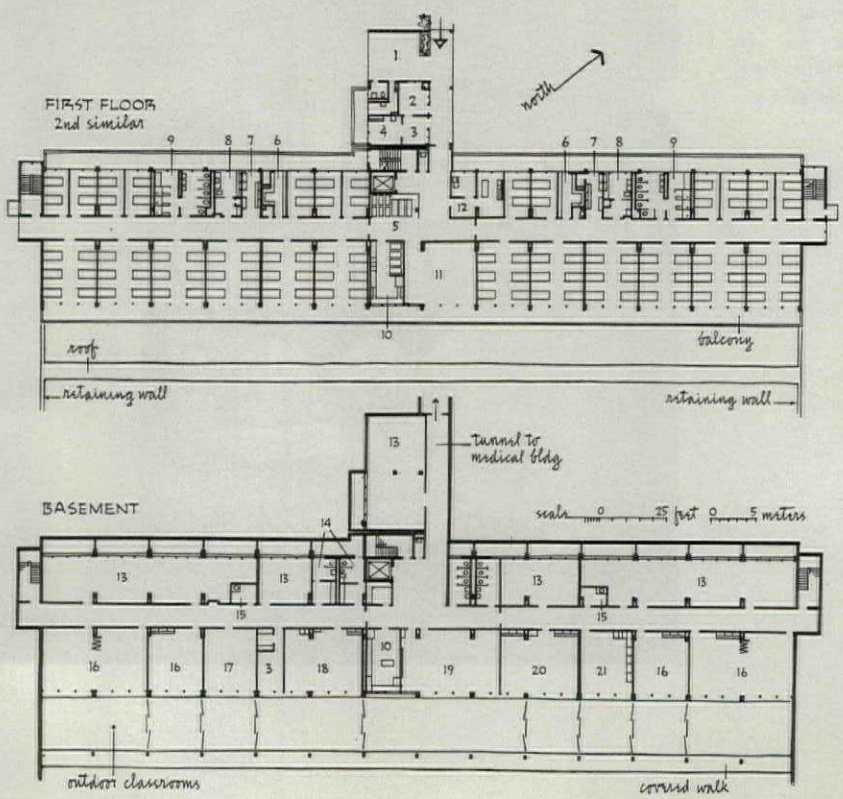
In some respects, the Children's Building is wholly independent of the Adult (Medical-Surgical) Building. But for its food, administration, diagnostic and therapeutic services, it depends on the larger unit. The basement-level tunnel facilitates this two-way operation.

The first and second floors have four (almost identical) nursing units of 50 beds each. On the second floor, over the entrance-administration area, is a small isolation unit.

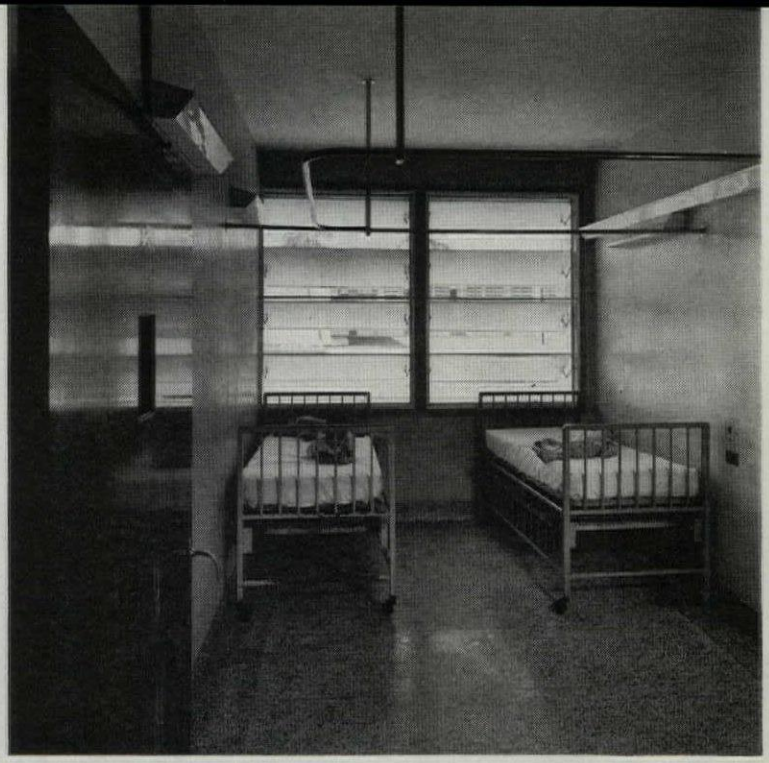
The slope of the land—in this instance to the southeast and the prevailing breeze—makes it possible to have a complete above-grade area at basement level on this side of the building. Here, it is used for school rooms—a shop, art and science classrooms—as well as for a dining room and related services. Outside these rooms is an open-air terrace and garden where the benefit of sun and fresh air can be completely enjoyed.

As in the Adult Building, heat and glare of the sun are diverted by both balcony slabs and the asbestos "glazed" louver sash. Because of the salubrious climate, neither of the buildings required a heating system, and exposure to the trade winds provides natural "air conditioning" in most areas. For maximum protection in operating and delivery suites of the Medical-Surgical Building, however, the spaces are air conditioned.

In general, fluorescent lighting is used throughout the two buildings, with patients' beds equipped with architect-designed, over-bed, metal, stationary fixtures that have a downward component (controlled by the patient) to light the bed; and an upward component to light the room.

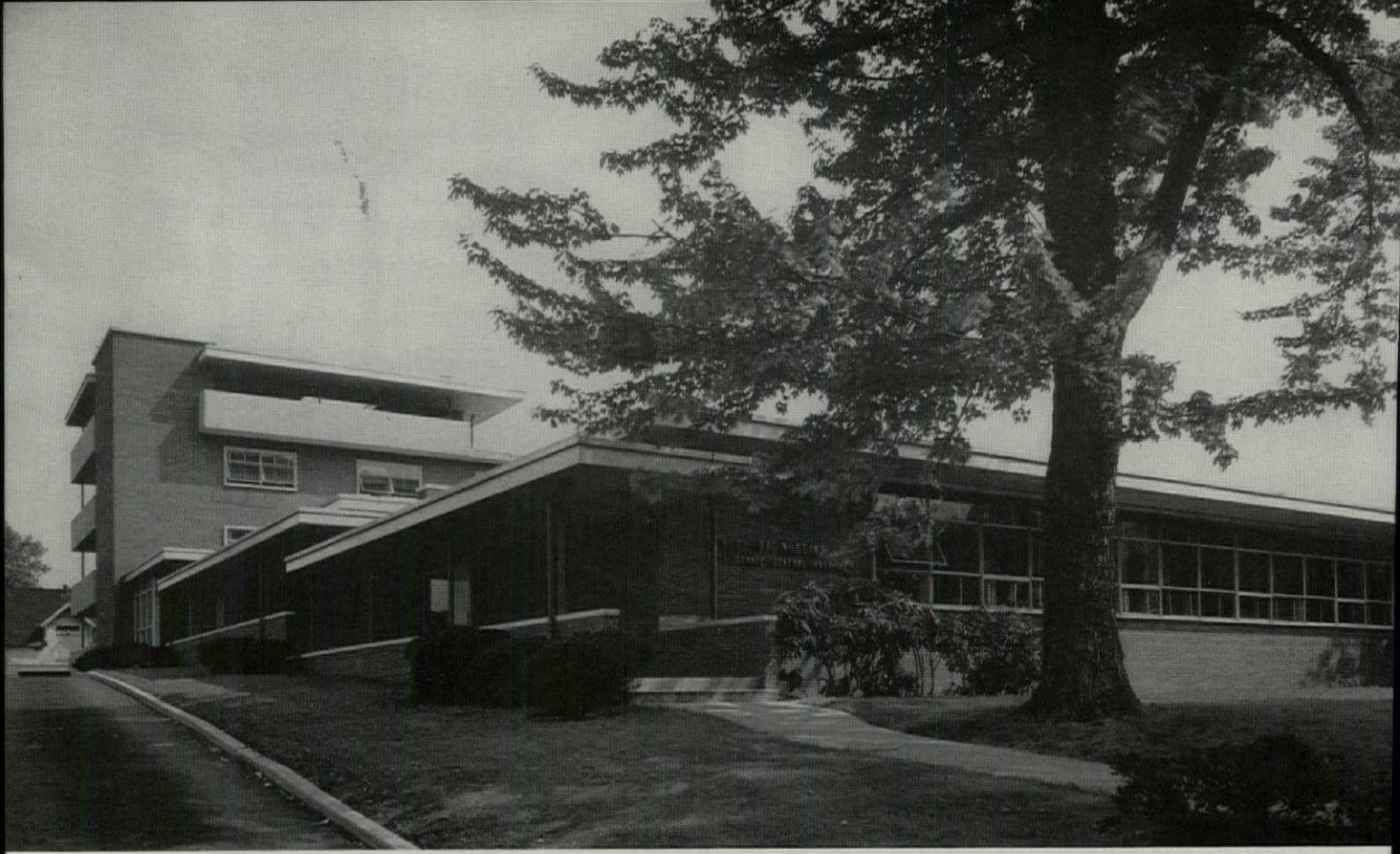


1 waiting space
2 reception
3 office
4 examination
5 wheel chairs
6 linen
7 nurses' station
8 utility room
9 patients' wash room
10 serving pantry
11 day room
12 pneumothorax suite
13 storage
14 staff washrooms
15 soiled linen
16 classroom
17 library
18 art room
19 cafeteria
20 shop
21 science room



Rooms range in size from single-bed units for those needing them to two-bed rooms (right) *to wards that can accommodate as many as six.*

On the southeast front (below) *the basement floor, used for schooling, has outdoor classroom extensions.*



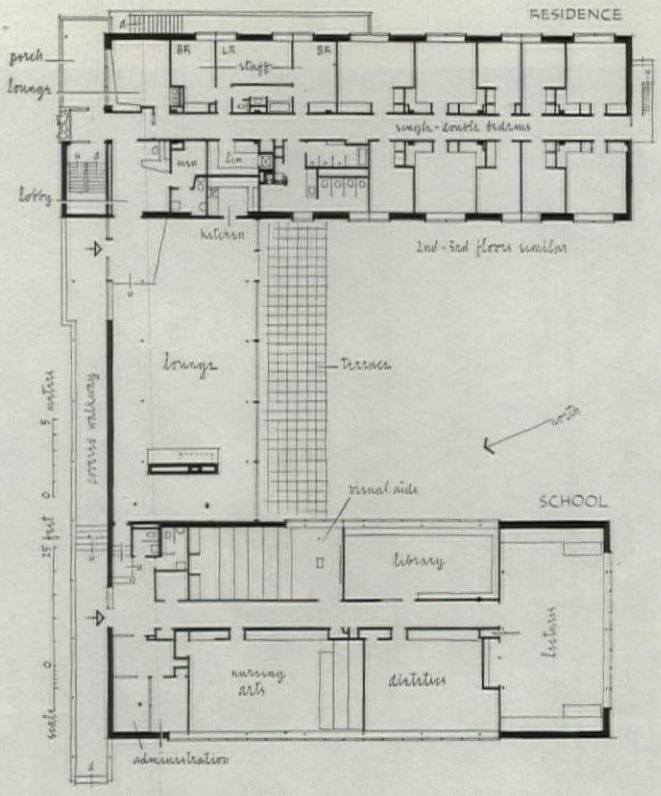
nurses' residence/school

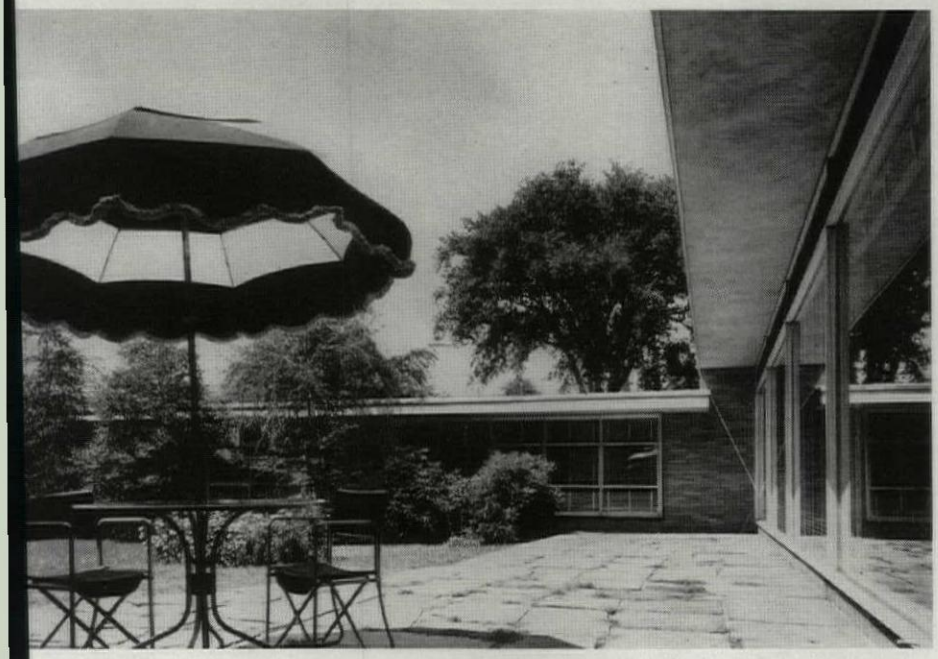
location | East Orange, New Jersey
architect | Vincent G. Kling

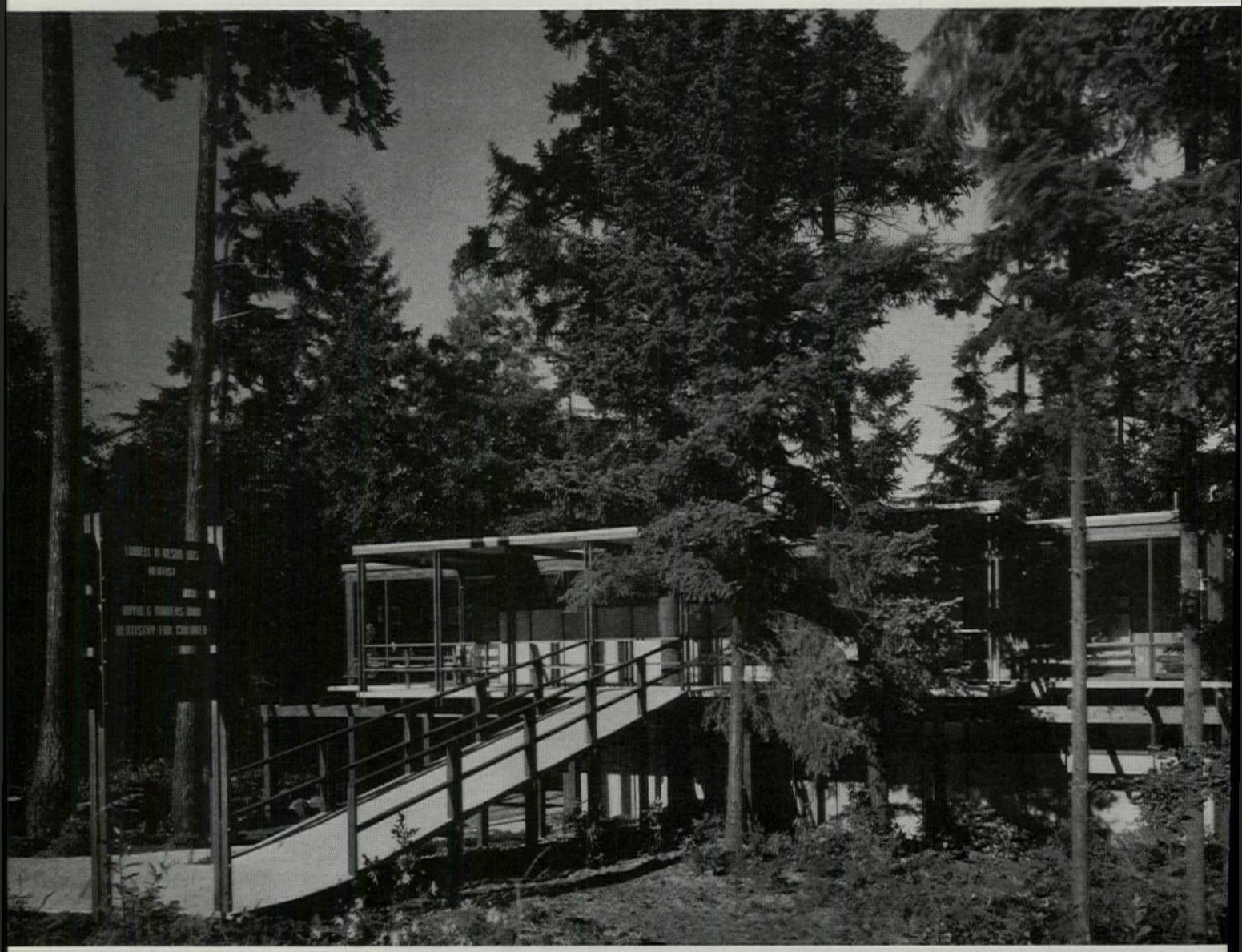
The plan of this nurses' residence and school is so exceptional that the U. S. Public Health Service made wide distribution of it as a desirable standard, not only for this country but also for Europe and South America. Back of it, the architect tells us, is the forward-looking approach of Dr. Edgar C. Hayhow, Director of the East Orange General Hospital, which the school serves. It was Dr. Hayhow's conviction that everything possible should be done to elevate the quality of nurses' training and residence facilities to match those of the best universities, with a view to attracting and holding trainees of the highest caliber. He wished the institutional aspect minimized and the amenities accentuated.

Translating this admirable program into architecture, Kling developed a U-shaped plan around a courtyard, with the teaching area removed as far as possible from the living space. The one-story teaching wing occurs on the streetfront; the three-story residence hall is placed to the rear; and the two are joined by an unusually spacious lounge or all-purpose room, that opens onto the terrace.

The four-story portion of the building has a reinforced-concrete frame, floors and roof; the low portions are steel framed and use exposed wood plank ceilings. Exterior finish is salmon-colored brick. A hot-water system using finned radiation heats the building. Sash are steel casements. Edward A. Sears was the Mechanical-Electrical Engineer for the job; Wm. L. Blanchard Co., the General Contractor. *Photos: Lawrence S. Williams*


RESIDENCE
porch
lounge
BR
LR
staff
BR
single - double bedrooms
lobby
kitchen
2nd - 3rd floors similar
lounge
terrace
covered walkway
15 feet
0
5 meters
visual aids
SCHOOL
library
lecture
nursing arts
dietetics
scale
administration



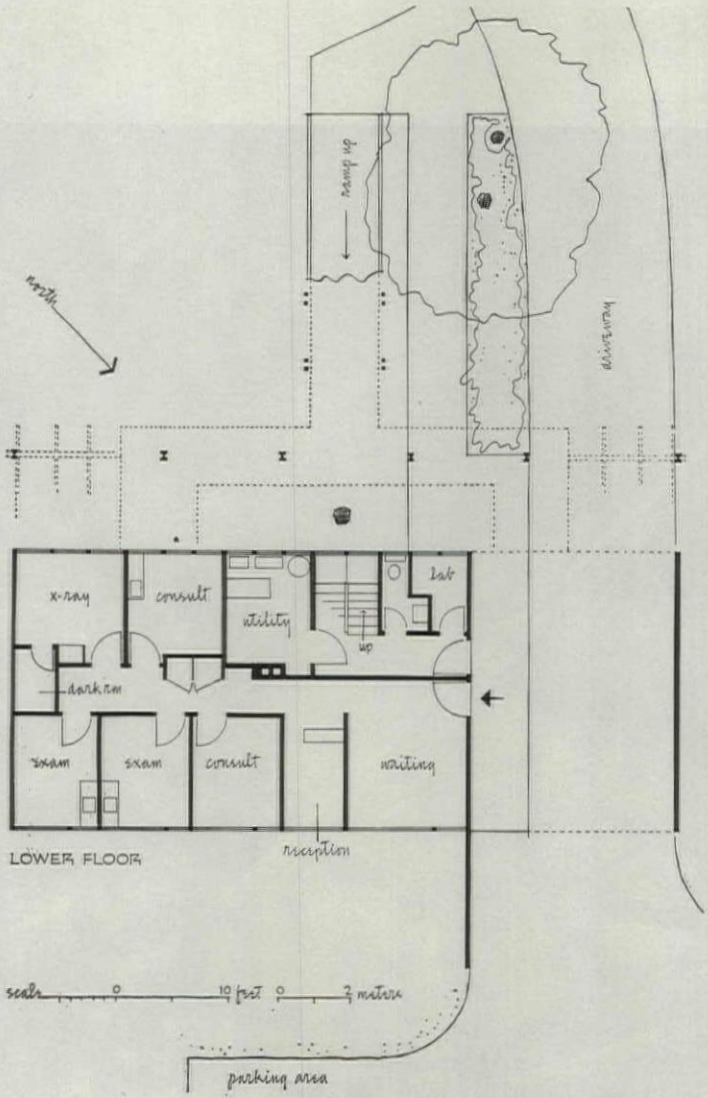


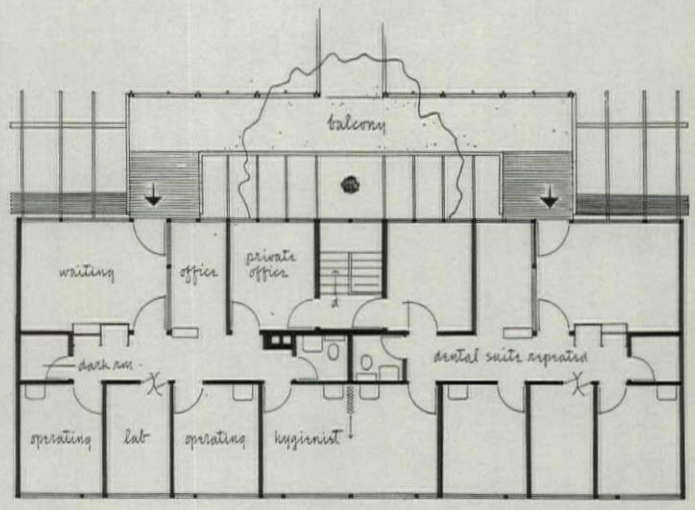
clinic

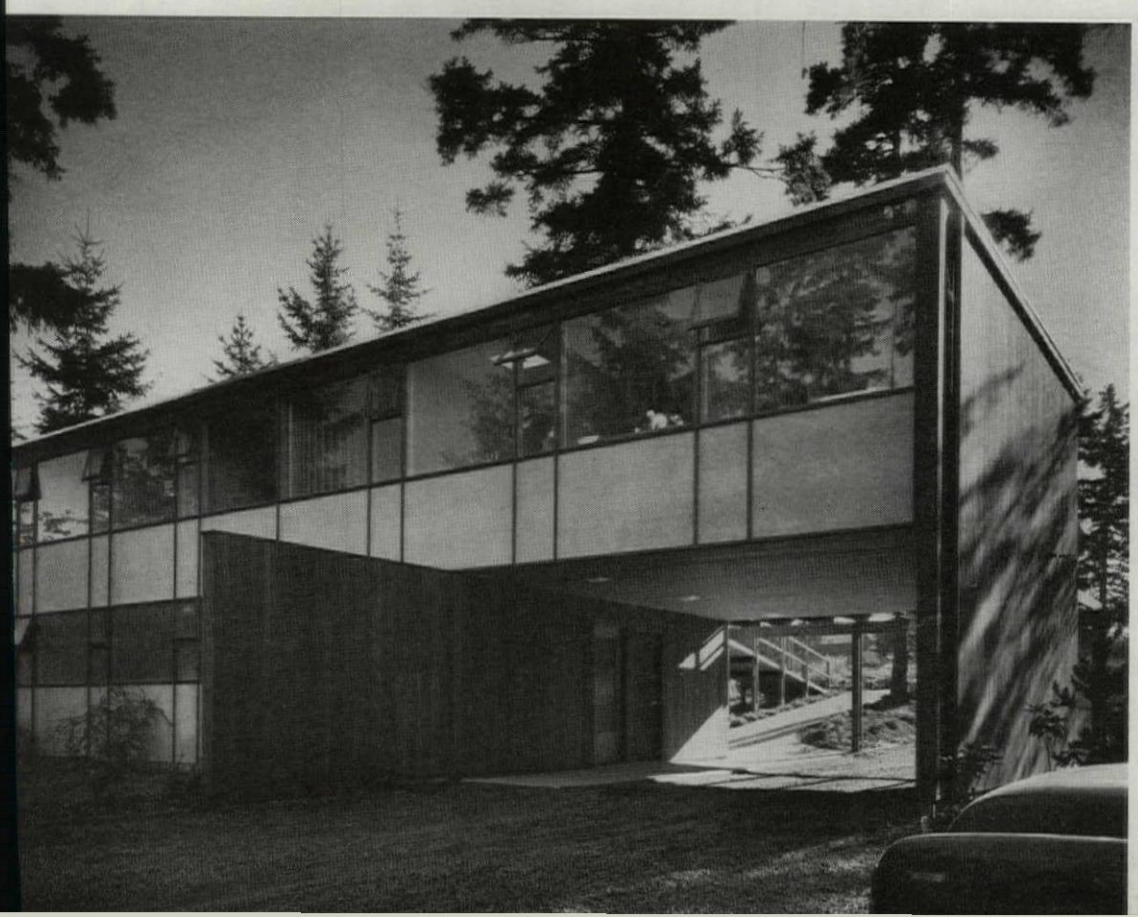
location | Seattle, Washington
architect | Paul Hayden Kirk

In designing the Dr. Lowell Olson Clinic, the space requirements were for an office suite for the dentist-owner, plus separate rental units for another dentist and a physician. The beautiful site, with a handsome growth of native conifers and ground cover, has a substantial downward slope toward the northeast, away from the street. To cope with the space needs, plus the requirement that offstreet parking be provided, the building was located well back from the street and developed in an ingenious, two-story plan. This not only placed the two dentists' suites on the upper level, reached by an inviting ramp, but also avoided the need for extensive fill across the front and allowed incorporation of the under-building porte-cochere, at the northwest end of the building, leading back to the parking space. The third office suite is located on the lower floor, along with furnace and storage rooms and a common stair hall that serves all private offices.

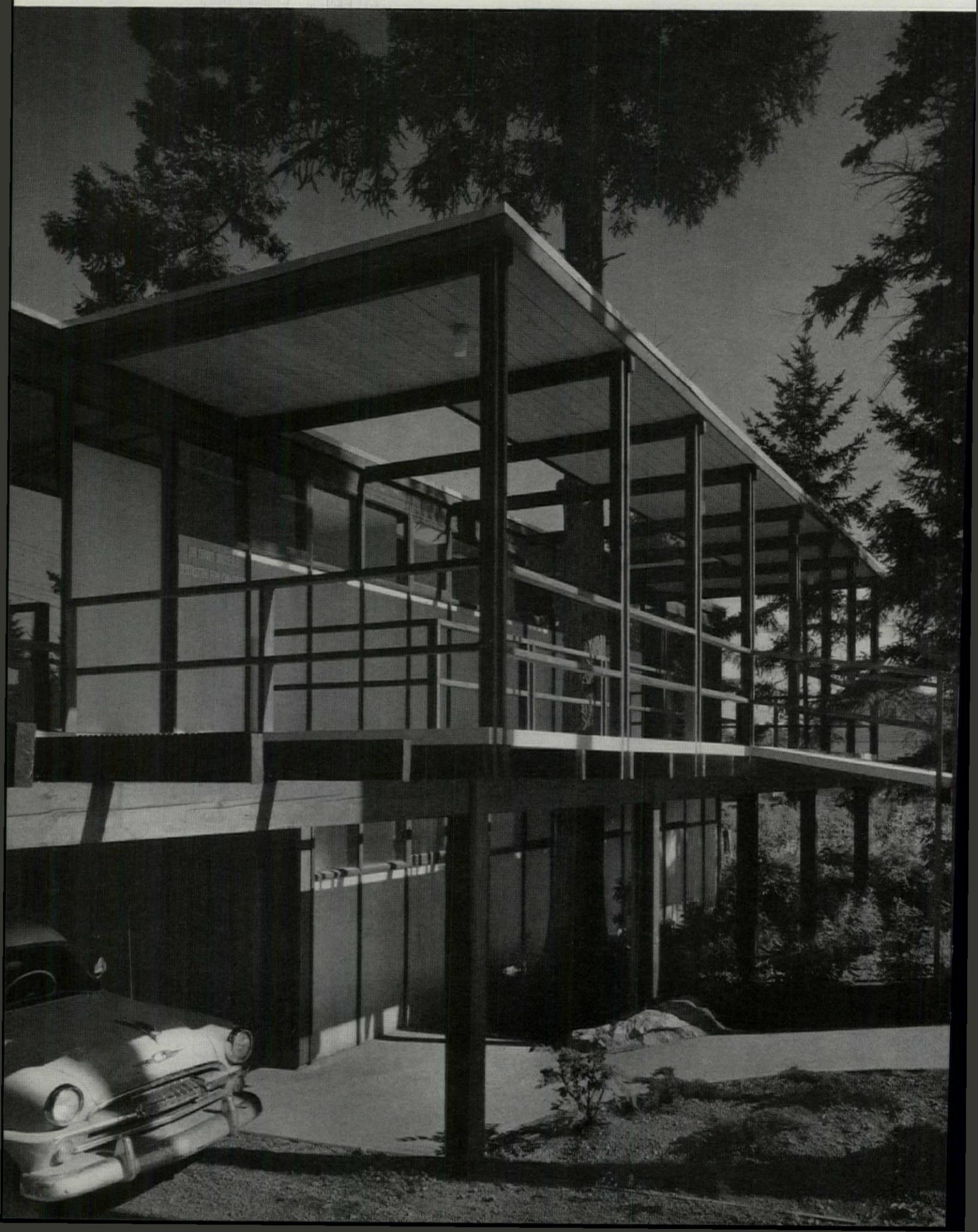
Stained 1″ x 4″ cedar boards and panels of asbestos cement surface the wood-framed structure. (*See* SELECTED DETAIL, *page 148, for construction of rear wall.*) Vinyl cork is used for flooring in waiting rooms; asphalt tile, elsewhere. Ceilings are either plasterboard, painted, or acoustical tile. Sash are wood, with operating, awning-type ventilator panels. A warm-air furnace heats the clinic. Richard Stern & Associates were Heating-Ventilating Engineers for the building; Thomas Sparling, the Electrical Engineer; and Dale Madden Construction Co., the General Contractor.

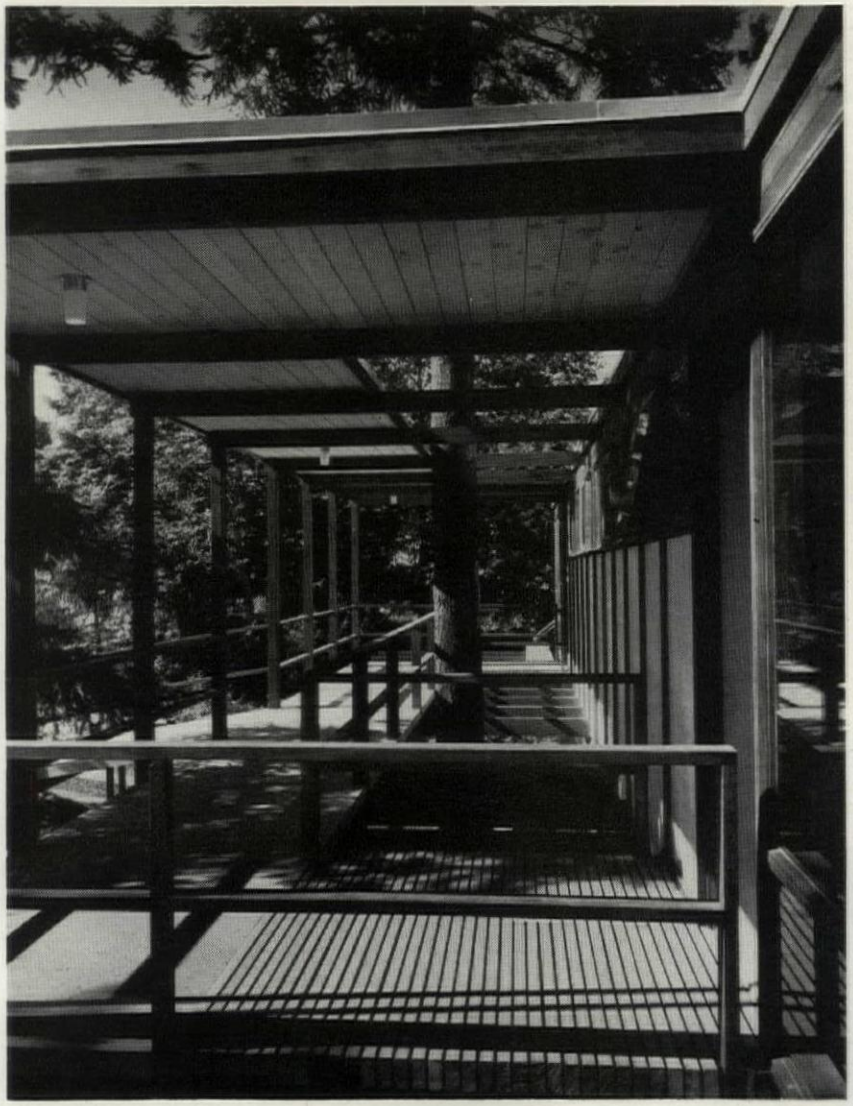

north
ramp up
driveway
x-ray
consult
utility
lab
up
dark rm
exam
exam
consult
waiting
reception
LOWER FLOOR
scale 0 10 feet 0 3 meters
parking area

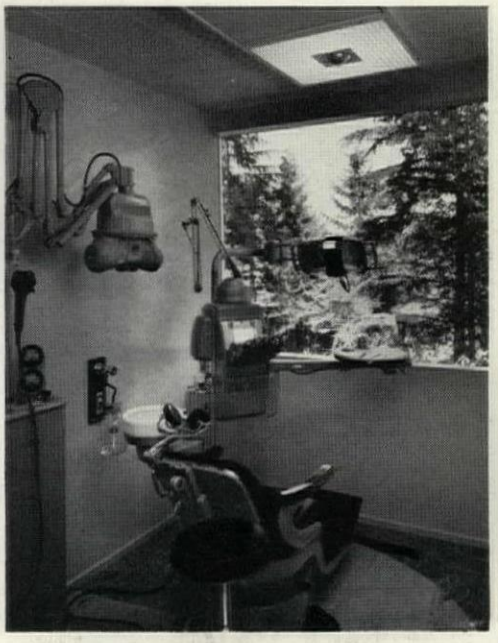

balcony
waiting
office
private office
dark rm
dental suite reported
operating
lab
operating
hygienist
UPPER FLOOR



clinic



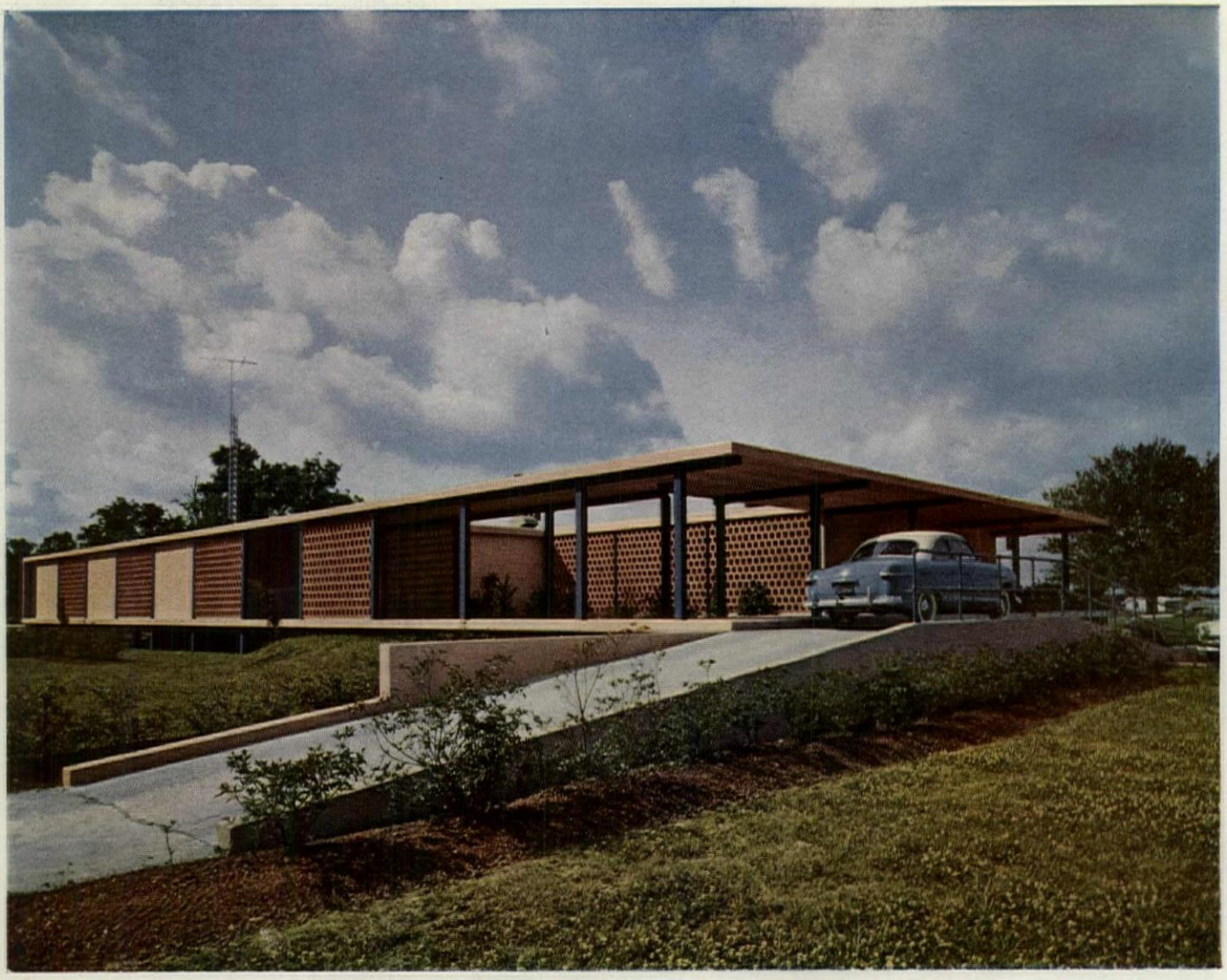




At either side of the concrete-surfaced ramp, separate entrances to the two upper-level suites lead off the streetfront porch (above). *The soffit is of 2" x 6"* T&G *western red cedar.*

Pleasant waiting rooms (top) *have window walls facing the street, but have privacy—due to the placement of the building and upper-level location.*

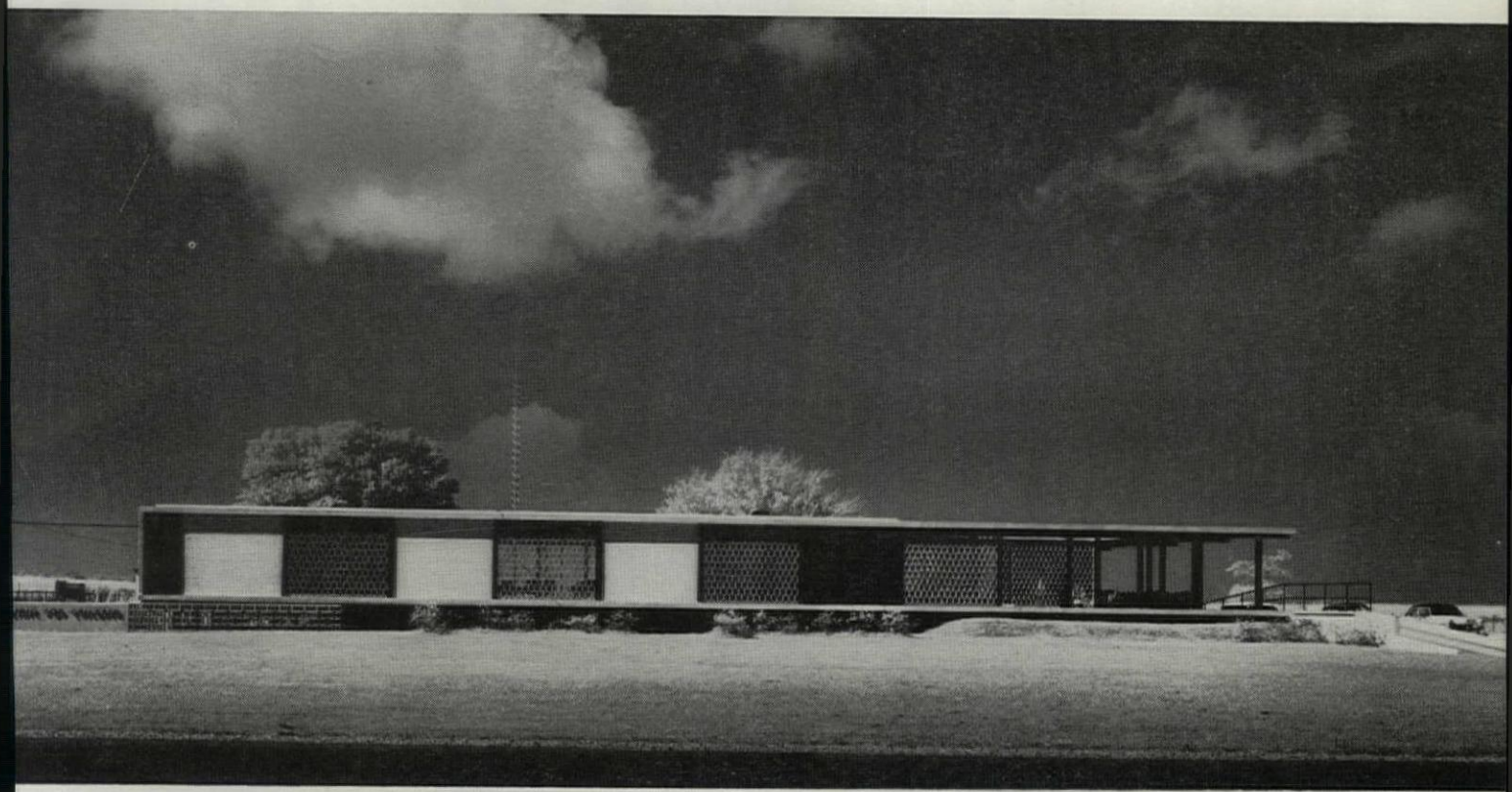
All operating rooms (right) *have a serene view into the treetops to the northeast.* Photos: Dearborn-Massar

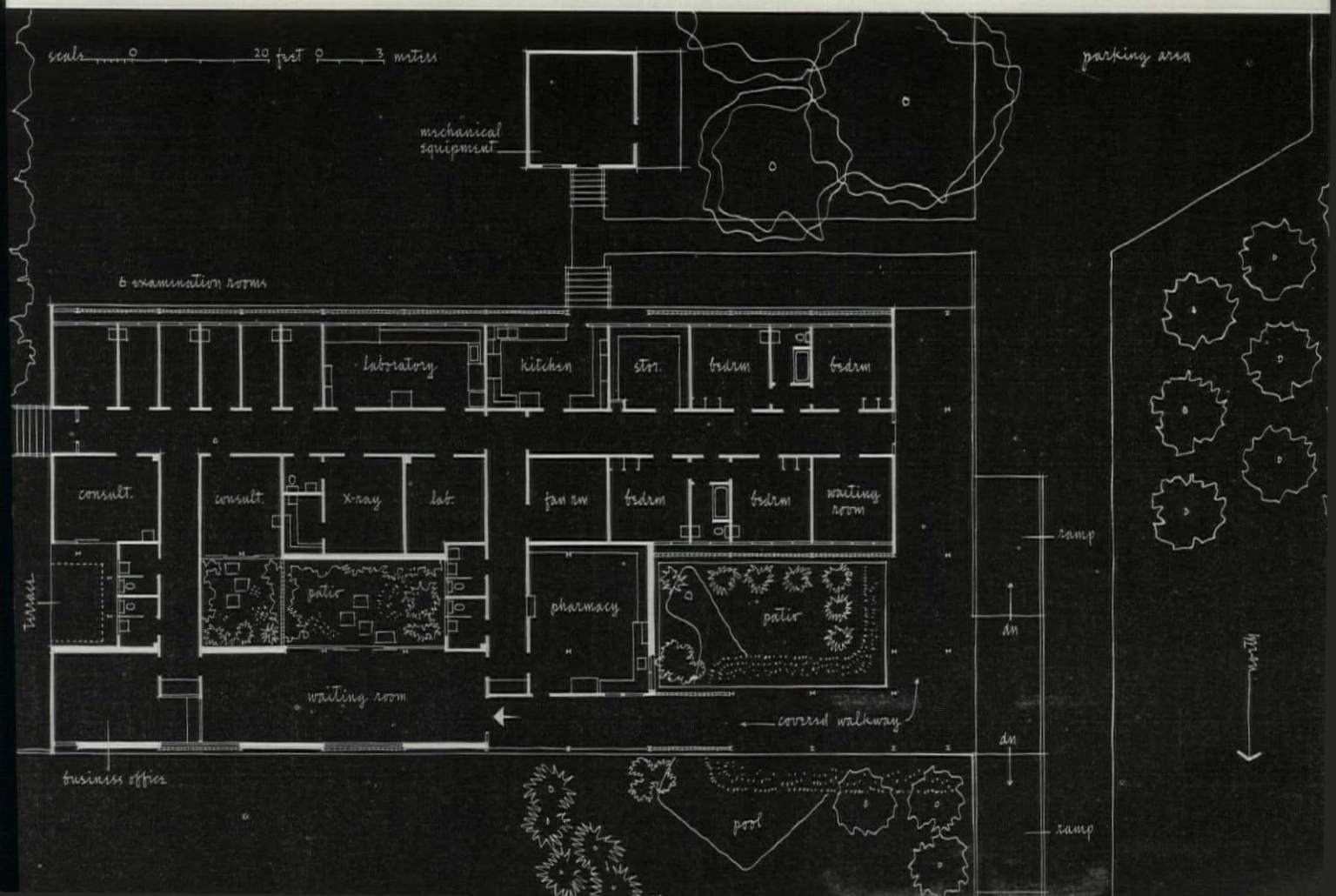


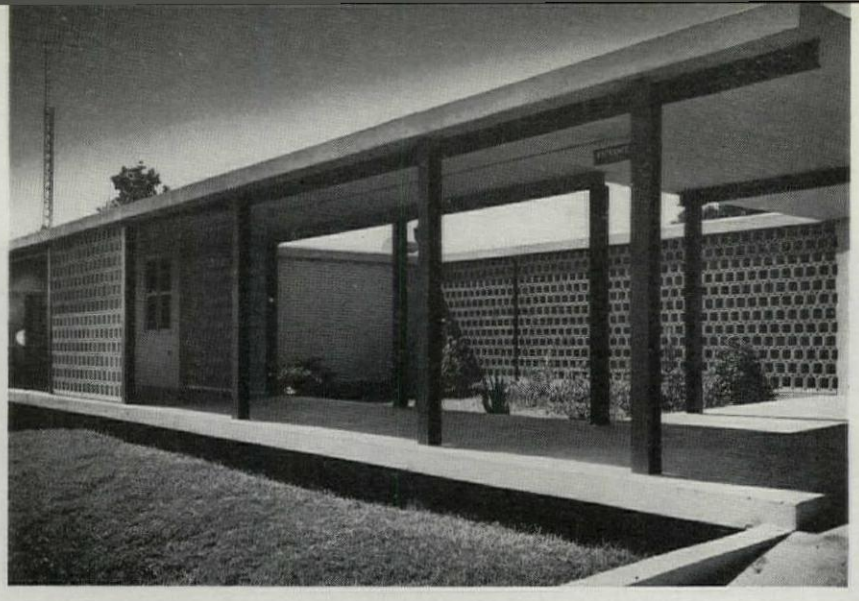
clinic

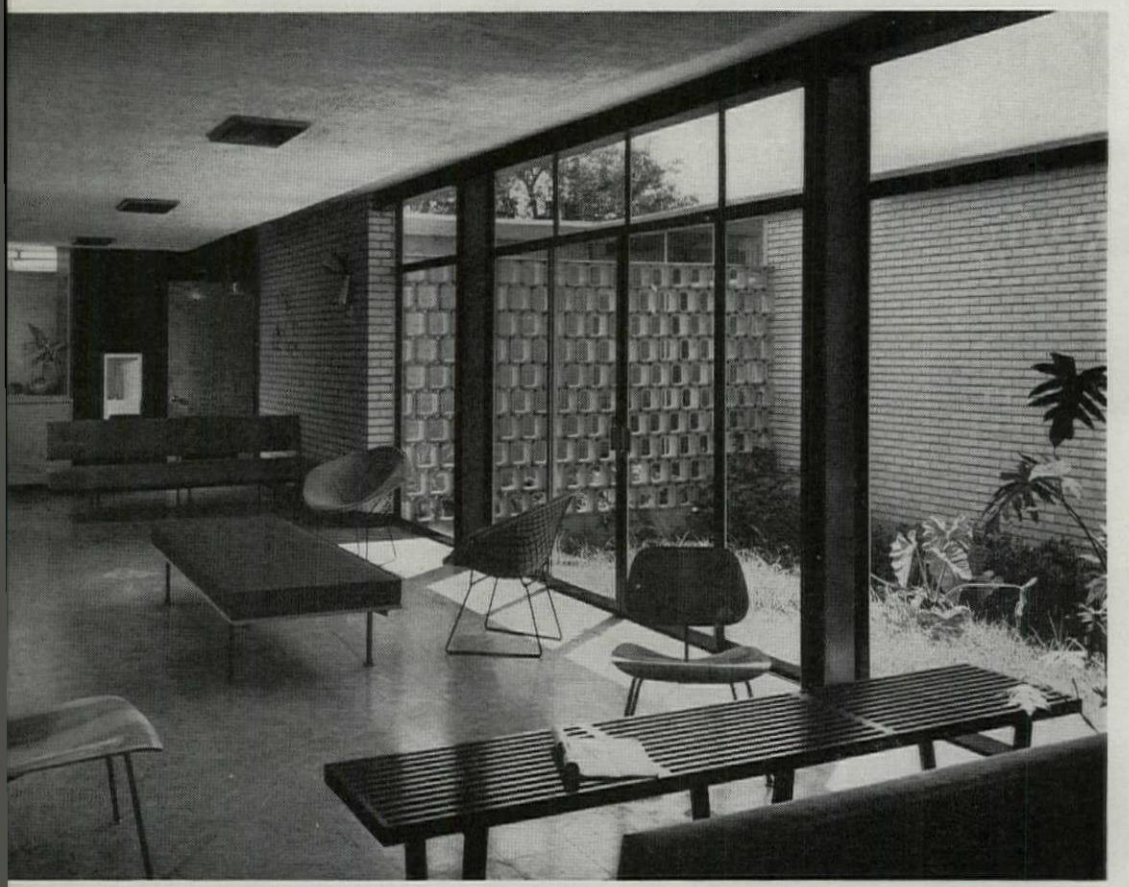
location | Raceland, Louisiana
architects-engineers | Curtis & Davis

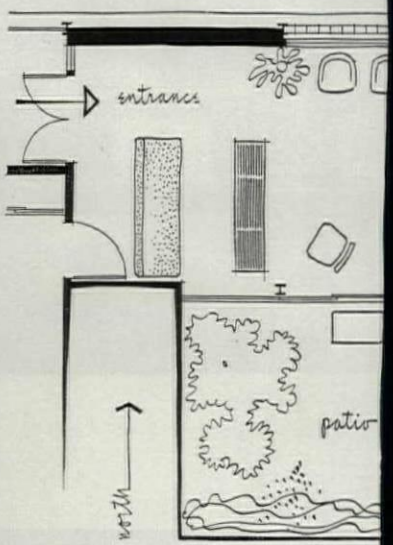
This children's clinic was designed for a pediatrician who chose to give up a busy office in New Orleans to practice in a rural community. The site is located on Bayou Lafourche in the extreme southern part of Louisiana, on a main highway connecting rich tidelands with opulent agricultural areas to the north. The terrain is low and damp, and the area as a whole subject to hurricane winds and occasional flooding. The building was consequently raised off the ground as a safety measure. For weather and sun protection, flue-tile screens were erected in front of window walls. In accordance with the client's wishes, the building can be easily managed by a small staff, and the plan is zoned so that a large number of patients may be cared for in an orderly and efficient manner, with a minimum of cross circulation. Allowance has also been made for possible future expansion. Structurally, pile foundations support rigid steel frames (for solidity during high winds). Precast, prestressed concrete planks, waterproofed with cementitious silicone-base paint (lightweight in consideration of poor soil conditions) were used for floor and roof. Precast-concrete beams were chosen in preference to poured concrete, because of the isolated location of the site and the consequent difficulty in obtaining ready-mixed concrete from nearby sources. Exterior materials were selected for easy maintenance and long life expectancy. Solid-brick panels alternate with the open flue-tile screens. The light-buff brick and reddish-tan tile screens also determine the exterior color pattern, accented with a vivid blue applied to the exposed steel members. The building is fully air conditioned, but for the sake of year-round optimum comfort, sliding glass doors in public areas and consultation rooms may be opened to permit natural ventilation. The mechanical and air-conditioning system was designed by Cary B. Gamble & Associates. Edward Lee Morony was Electrical Engineer; John C. Corbin, General Contractor.



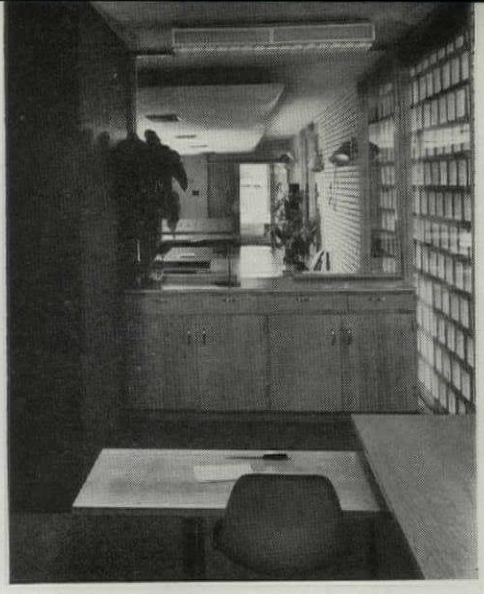

scale 0 20 feet 0 3 metres
parking area
mechanical equipment
6 examination rooms
laboratory
kitchen
stor.
bedrm
bedrm
consult.
consult.
x-ray
lab.
fan rm
bedrm
bedrm
waiting room
terrace
patio
pharmacy
patio
ramp
dn
dn
waiting room
covered walkway
business office
pool
ramp





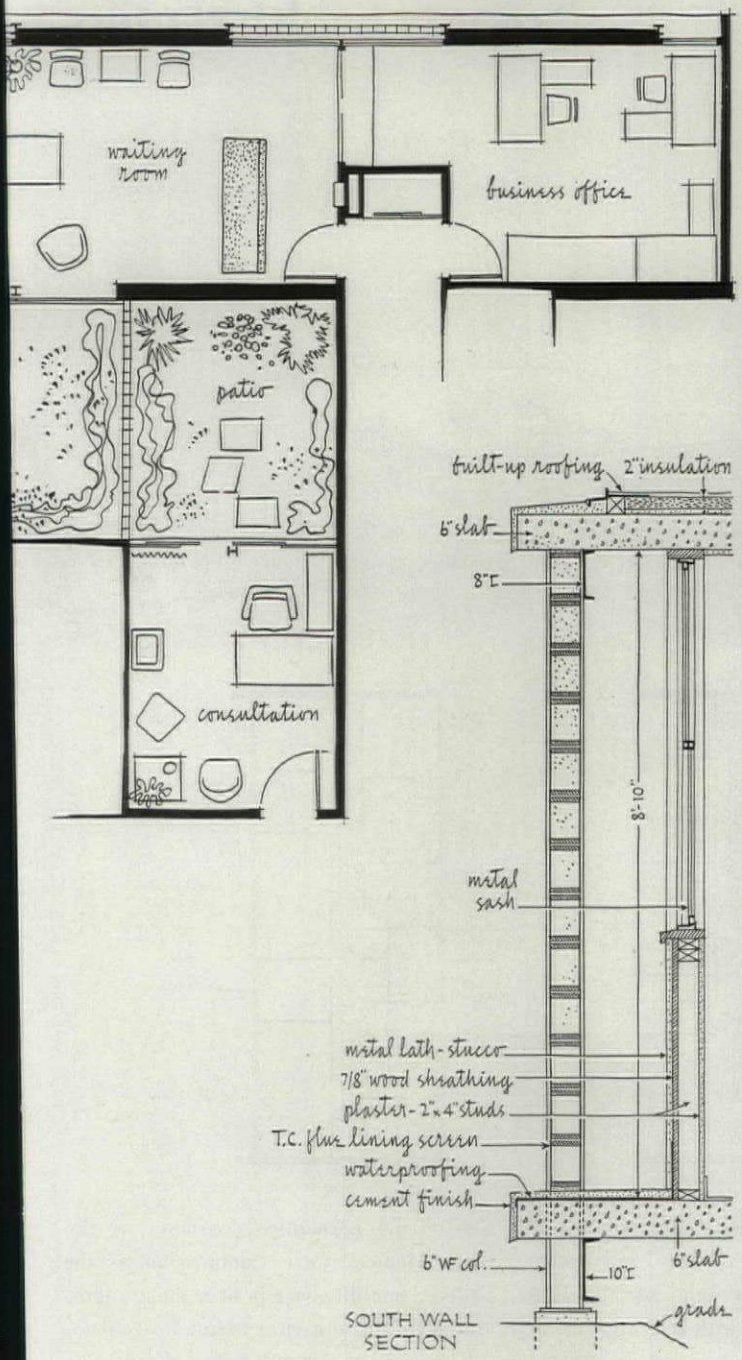


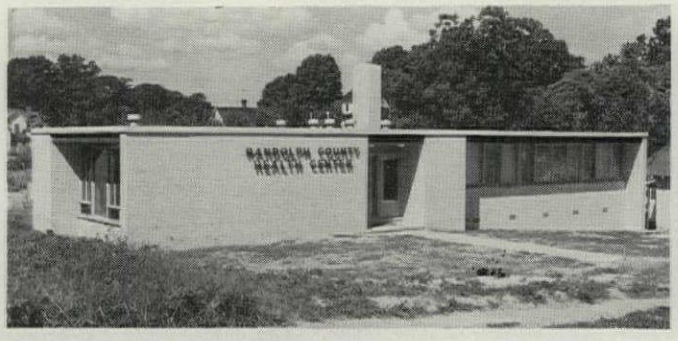
Passage from the main entrance (top); *main waiting room* (above); *consultation room* (right); *and business office* (acrosspage, top)—*all shown on detail plan—display architects' deft handling of exterior as well as interior spaces. Colors throughout the building are based on the light-buff brick and reddish-tan of the flue tiles—prominent both inside and outside. Most interior walls are painted off-white; occasional accent walls are bright yellow or dull black. Furniture, also selected by architects, is mostly of walnut or black metal. Upholstery is in shades of tan and brown with small cushions in white, yellow, and black. Floors throughout are tan asphalt tile. For acoustical insulation three materials were used: acoustical plaster, textured paint directly applied to underside of precast-concrete joists, and acoustical tiles.* Photos: Frank Lotz Miller

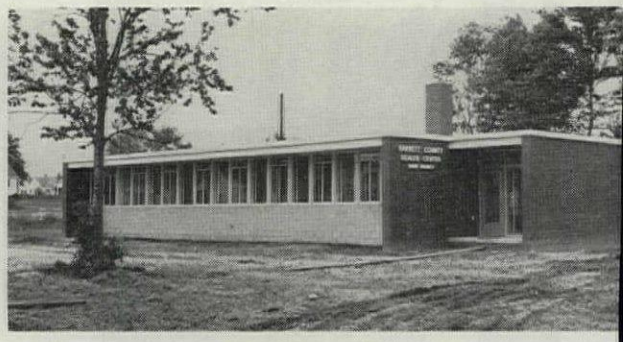


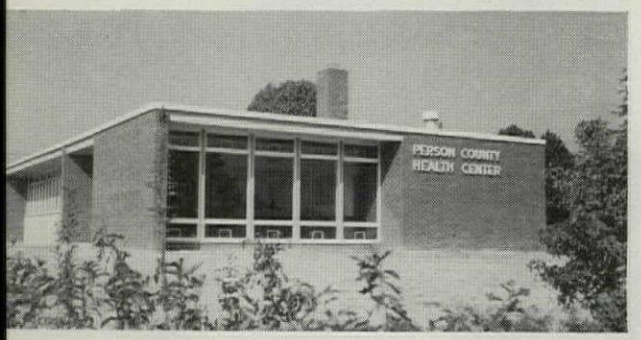
Pharmacy (below) *is accessible from covered entrance passage as well as interior hallway. Furnishings are architect-designed.*

Double-hung metal windows in bedroom (bottom) *may be opened during favorable weather. Wall section through flue-tile screen and window wall* (below) *occurs in bedrooms, kitchen, laboratory, and examination rooms. "The open pattern and delicate proportions of these screens," state the architects, "create an illusion of great spaciousness from the exterior of the building and a comfortable protected feeling from within."*

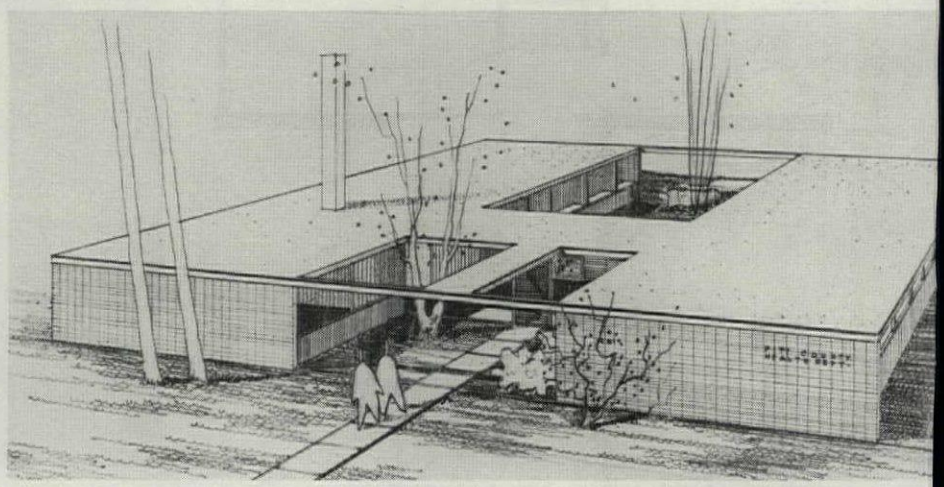


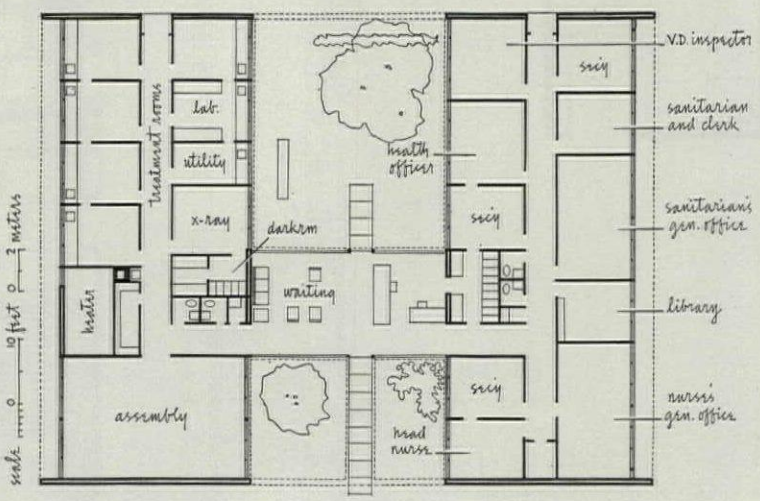






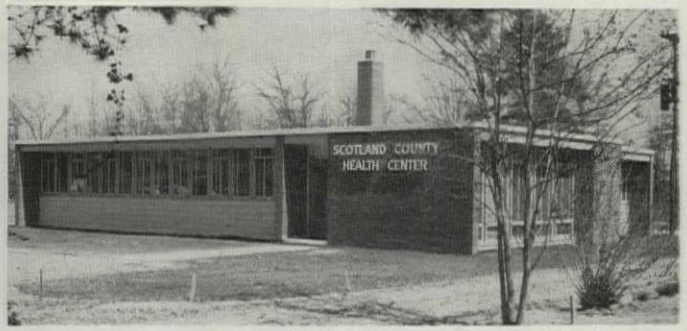
county health centers



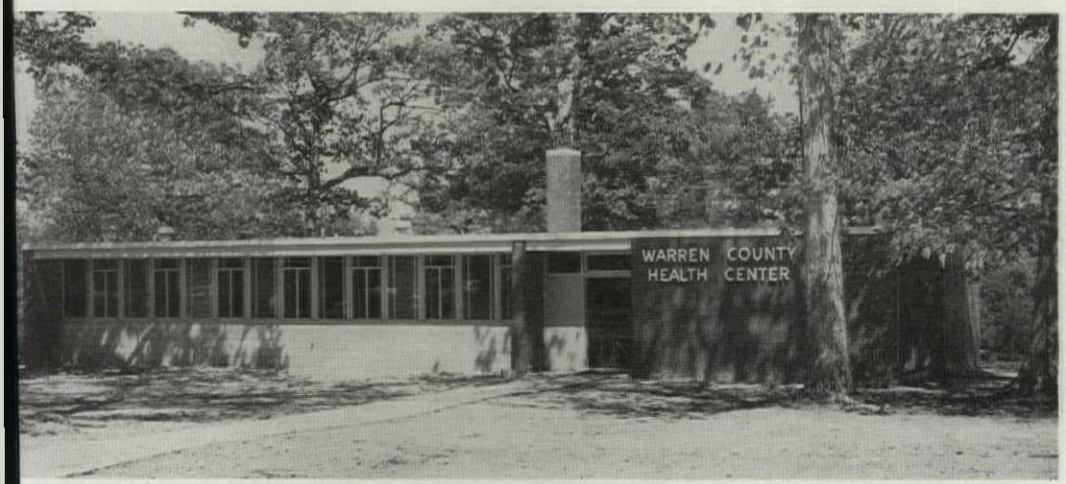


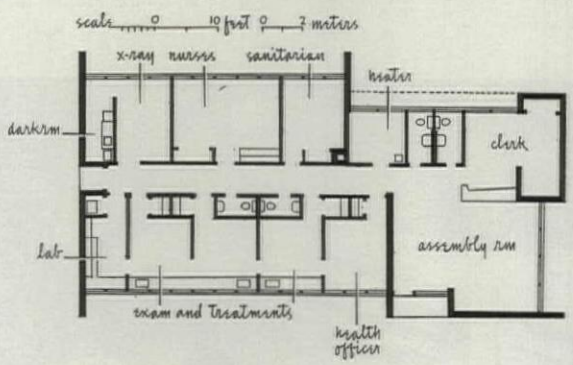
North Carolina's leading position among southern states in social and economic progress is further advanced by the overall excellence of this County Health Center construction program, which many other states with similar health and welfare needs will doubtless emulate. Federal aid grants under the provisions of the Hill-Burton Act of 1946 will eventually provide every one of the 100 counties in the state with a Center, all to be designed and construction supervised by Architect Weber. Thirty have been completed to date. They are as illustrative of the perceptive character of the State Medical Care Commission as the Federal enabling act is of a most admirable solution to a vital national problem.

The size of the individual Centers is determined by the needs of each community. However, generally adequate for



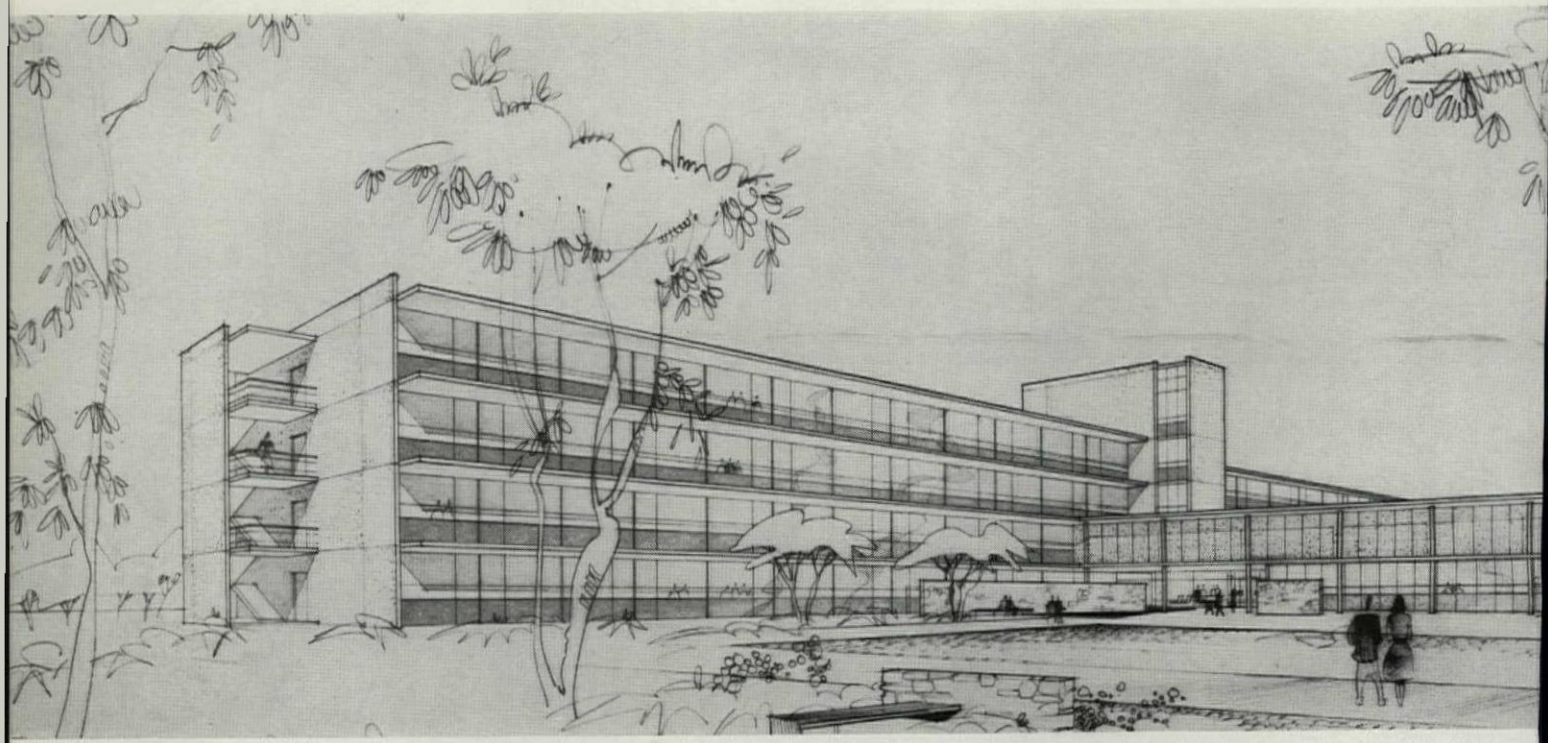
location | North Carolina
architect | Wm. Moore Weber





most counties are three treatment rooms, space for X-ray and laboratory equipment, two to three offices, and a waiting room that also serves as assembly room. Since funds are limited, building plans are compact, and construction is simple and economical. For example, the Warren County Health Center (*above*) has a wood frame supported on a flat-slab foundation. Walls are of concrete block faced with brick veneer on the outside and plaster on the inside. Floors are asphalt tile. The hot-air heating system is adaptable for future air conditioning. Pitt County Health Center (*acrosspage*), still in the design stages, but measuring 5000 sq ft against Warren County's 3000, requires fireproof construction.

Furnishings for all Centers are architect-designed, and color schemes are light and noninstitutional.



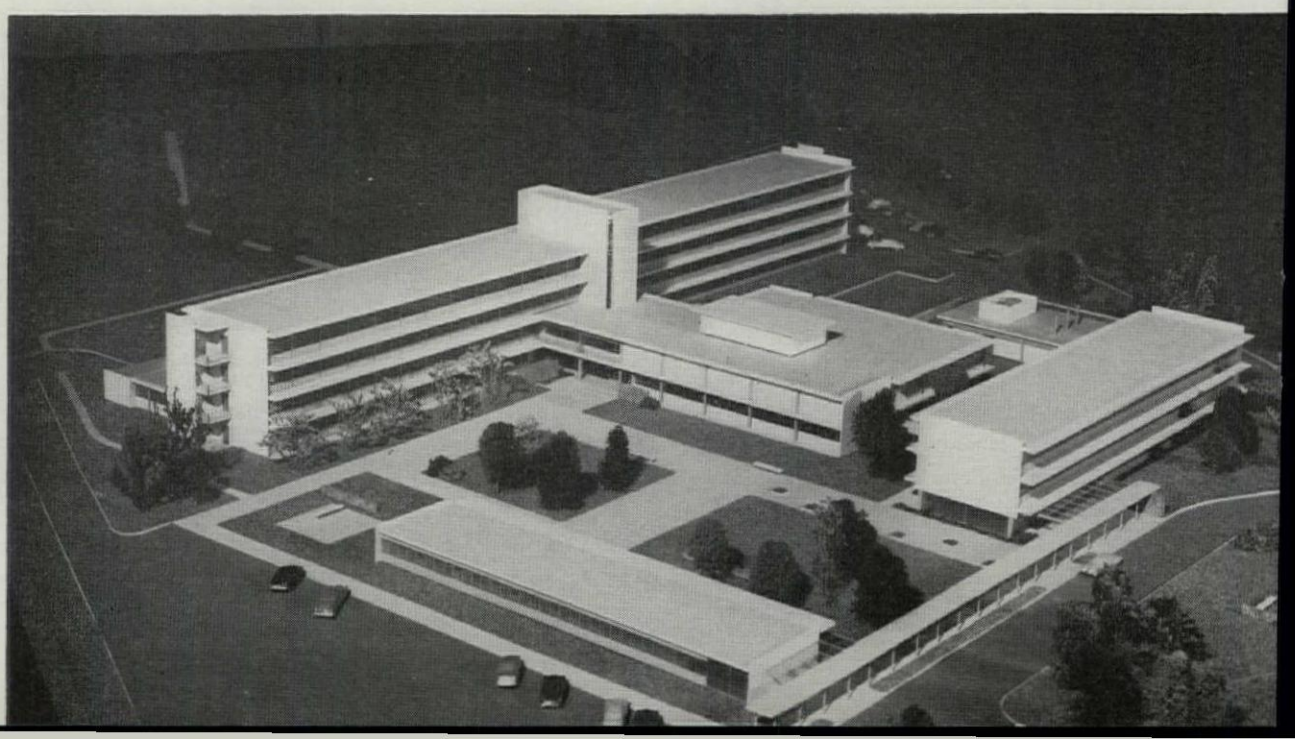
general hospital

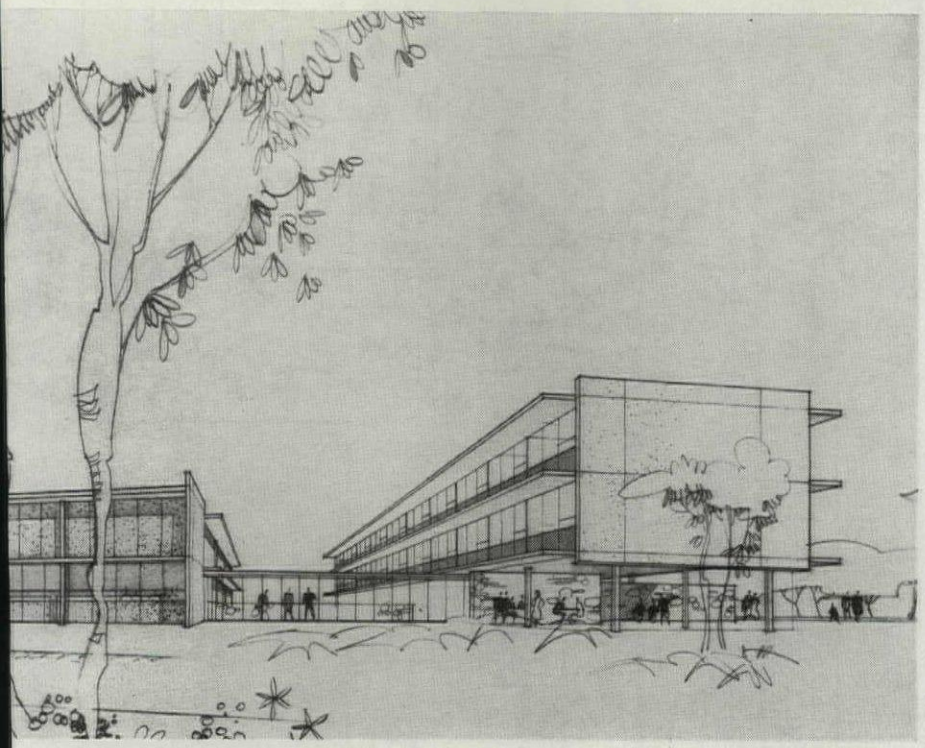
location | Arcadia, California

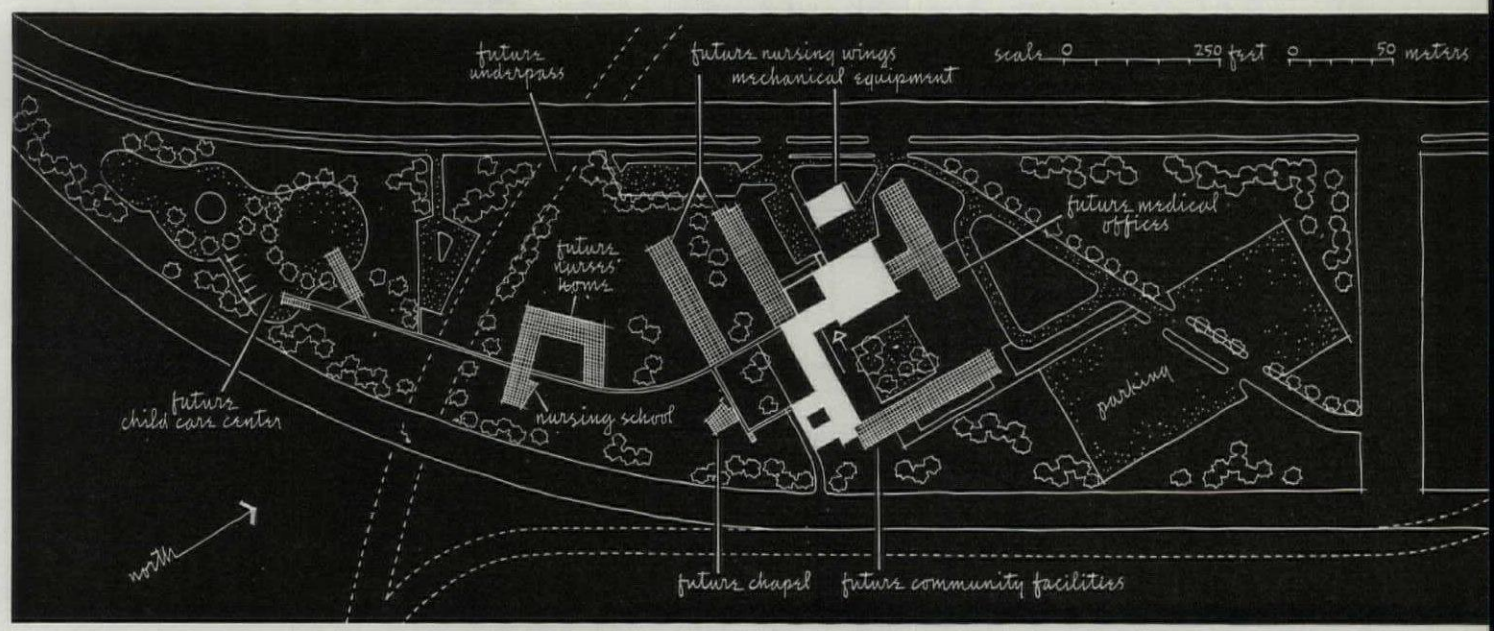
architects | Neptune & Thomas

Initial construction will include four-story nursing wing (far left of sketch *and* model photo); *the connecting two-story wing (containing surgery, delivery, radiology, laboratories, pharmacy, emergency, physical therapy, dietary, laundry, storage, administrative offices); and a small boiler house to the west of the property.*

Model Photos: John Hartley





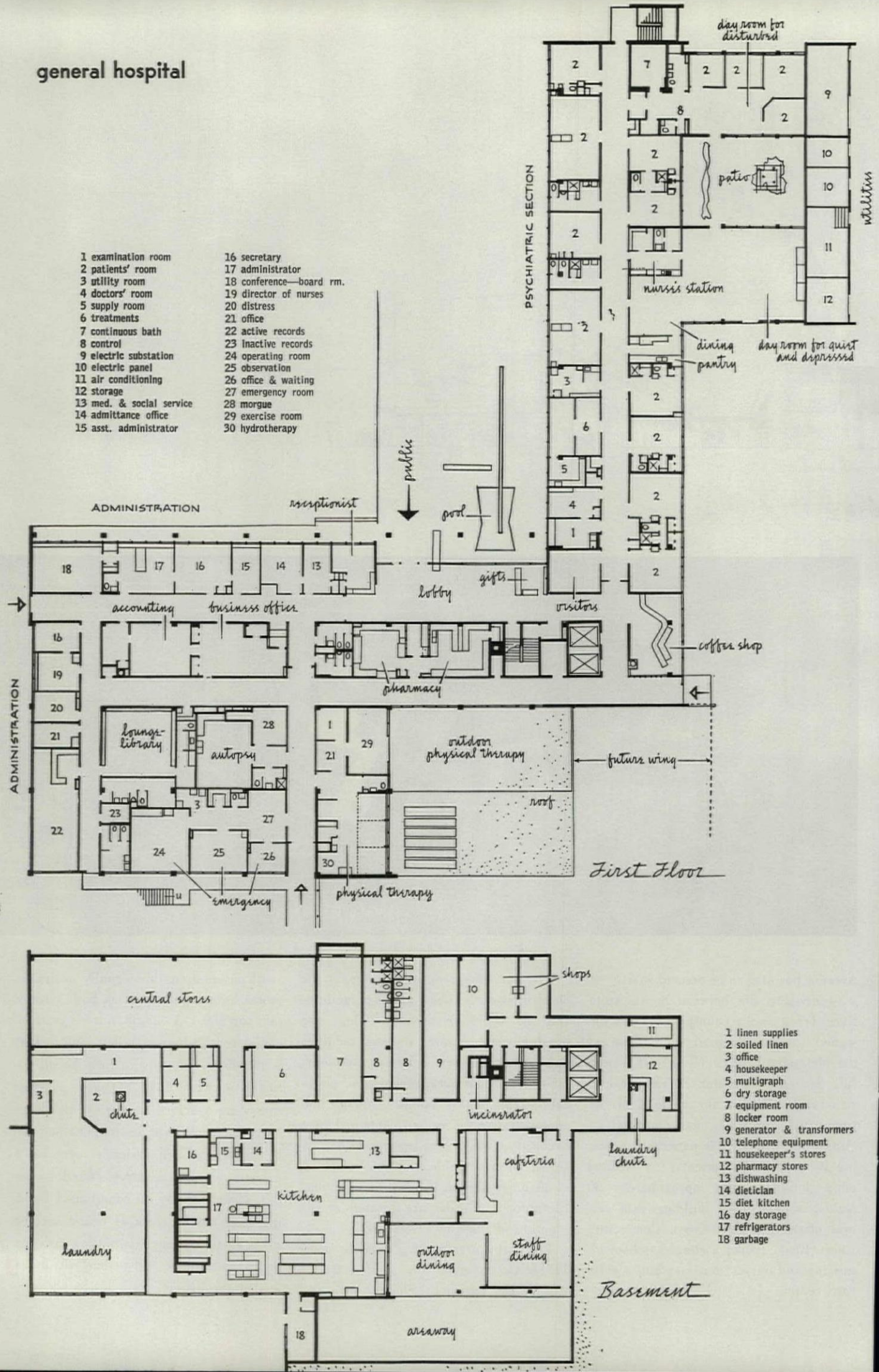


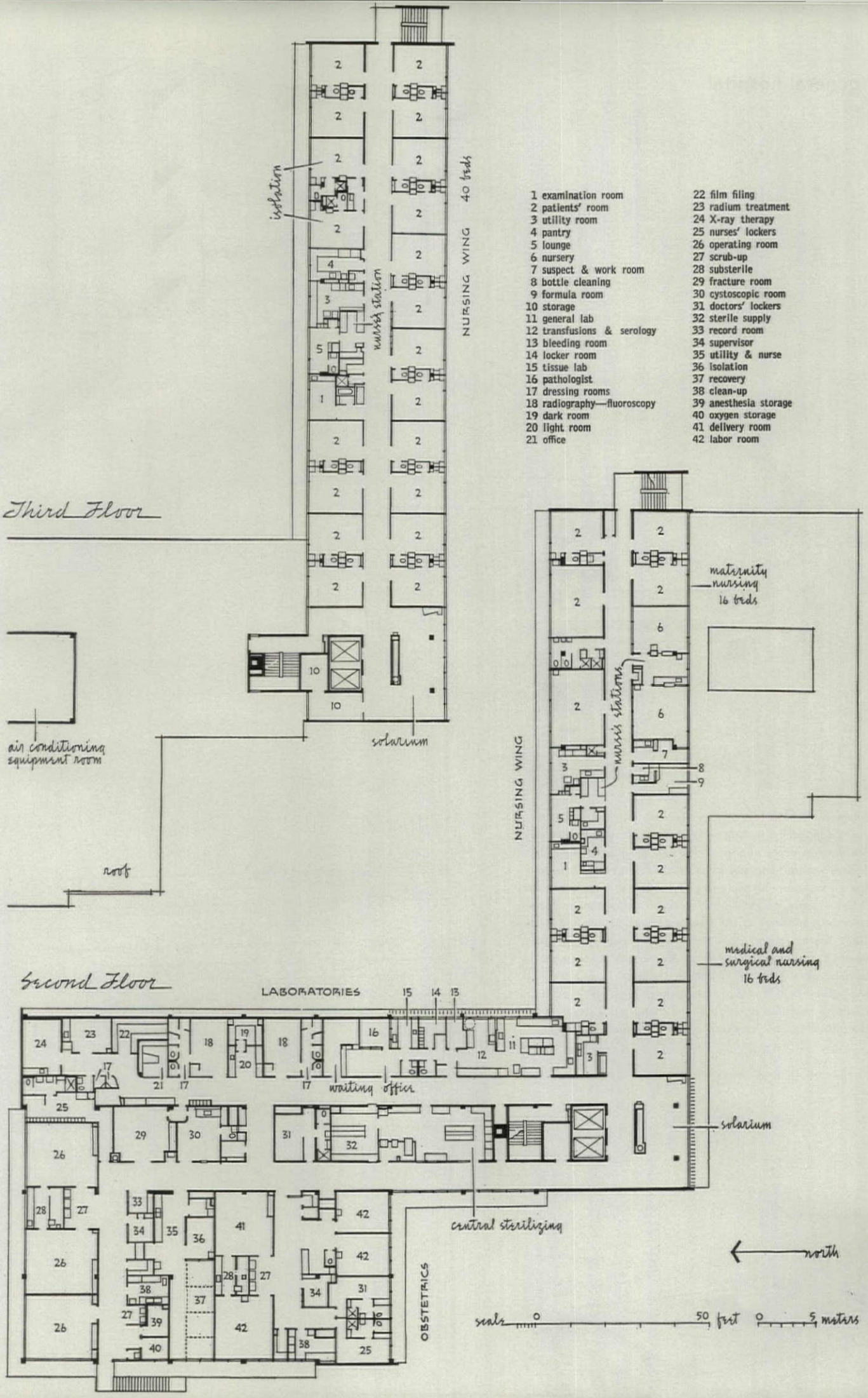
Arcadia hospital, to be erected shortly on a twenty-acre site between Santa Anita Race Track and a county park, was designed for the Hospital Foundation of the Methodist Church (Walter R. Hoefflin, Jr., Administrator). The several structures, planned for completion by stages, will eventually house hospital facilities for 270 to 300 patients (including 25 psychiatric patients); a medical office building with aproximately 30 suites; a community building with several offices for Red Cross, Community Chest, Blood Bank; a chapel; school of nursing and nurses' housing; and a child care center.

Basis of the architect's design is the clear division between nursing facilities and the operative services. Thus, the nursing wing contains nursing facilities only; while surgery, delivery, radiology, laboratory, pharmacy, emergency, physical therapy, dietary, laundry, storage, and administrative offices are contained in a connecting wing. The separation has resulted in a simplification of structure, mechanical layout, control, and traffic. Elevators and stairs are located at the juncture of these two elements.

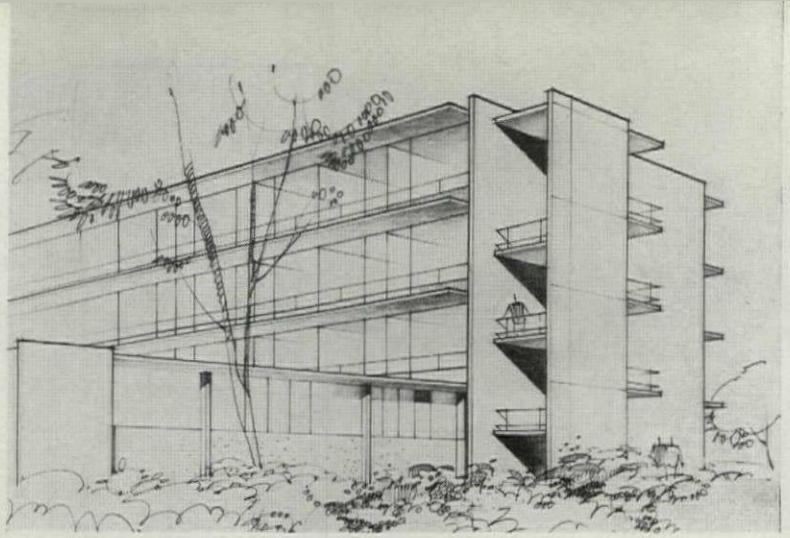
The first nursing wing contains some 135 beds, including the section for 25 psychiatric patients. Since north and south orientations are equally desirable, rooms have been placed on both sides of the corridor. A single nurse's station, complete with lounge, toilets, and lockers is therefore adequate to care for all patients on each floor. Typical patient's rooms are spacious enough for two beds. If private rooms are desired, one bed can be removed. Each patient's room has a private toilet and lavatory. Windows for this section of the air-conditioned building have fixed panels of heat-absorbing glass plus occasional ventilating sash. An audio-visual nurse call system will be installed throughout.

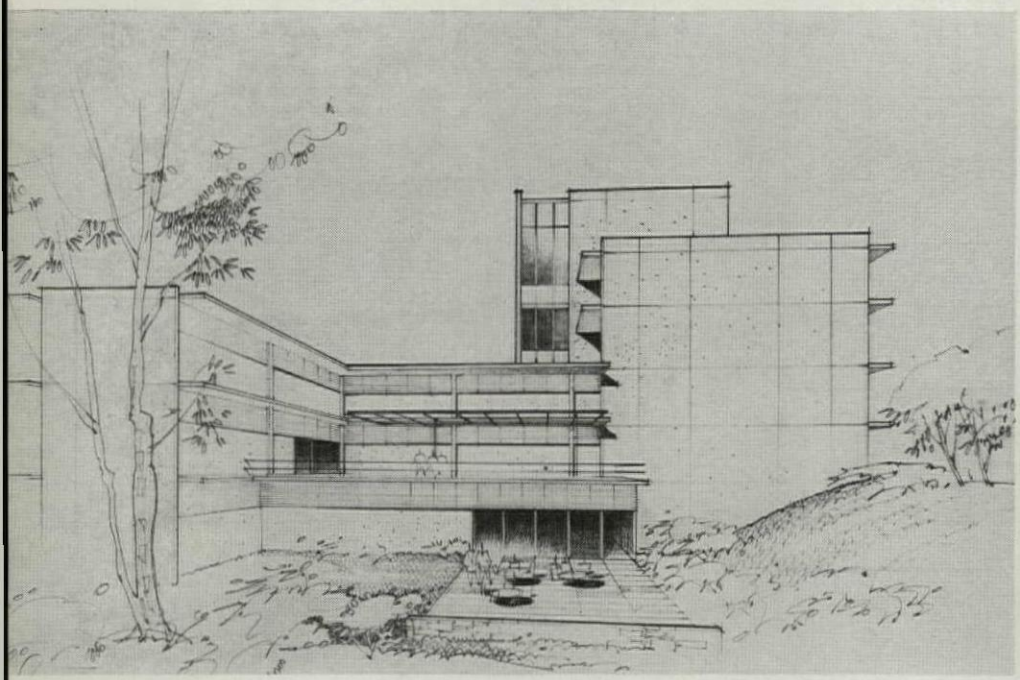
general hospital



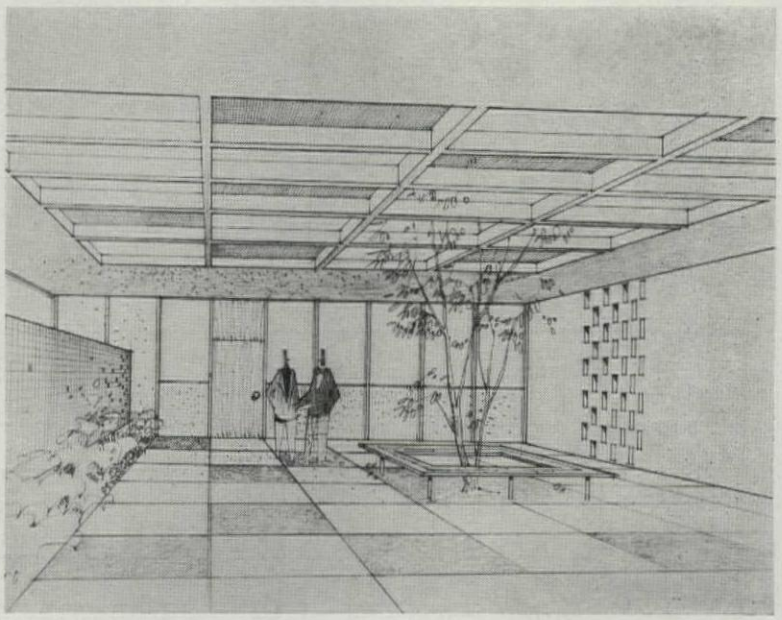

1 examination room
2 patients' room
3 utility room
4 pantry
5 lounge
6 nursery
7 suspect & work room
8 bottle cleaning
9 formula room
10 storage
11 general lab
12 transfusions & serology
13 bleeding room
14 locker room
15 tissue lab
16 pathologist
17 dressing rooms
18 radiography—fluoroscopy
19 dark room
20 light room
21 office
22 film filing
23 radium treatment
24 X-ray therapy
25 nurses' lockers
26 operating room
27 scrub-up
28 substerile
29 fracture room
30 cystoscopic room
31 doctors' lockers
32 sterile supply
33 record room
34 supervisor
35 utility & nurse
36 isolation
37 recovery
38 clean-up
39 anesthesia storage
40 oxygen storage
41 delivery room
42 labor room
Third Floor
isolation
nurses station
NURSING WING 40 beds
solarium
air conditioning equipment room
roof
maternity nursing 16 beds
nurses stations
NURSING WING
Second Floor
LABORATORIES
waiting
office
medical and surgical nursing 16 beds
solarium
central sterilizing
north
SURGERY
OBSTETRICS
scale 0 50 feet 0 5 meters

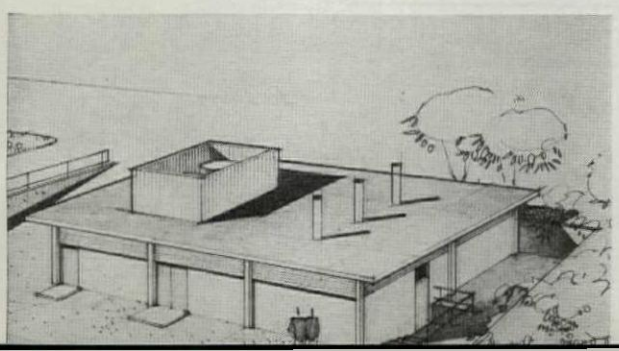
general hospital





Spacious lobby (acrosspage below) *opens onto large court defined by nursing wing to the right and community building directly opposite. Portion of ground floor also houses mental hospital clinic for 25 patients. Low one-story extension beyond nursing wing* (top) *and pleasant interior patio* (right) *are for disturbed patients. Floor-to-ceiling windows at the basement level* (above) *identify staff dining room with terrace extension. Four-story nursing wing is to the right. Mechanical equipment is located in a separate structure* (below) *to the west of the property. Model* (acrosspage) *presents the main building complex after second nursing wing, medical office building, and community facilities have been added.*

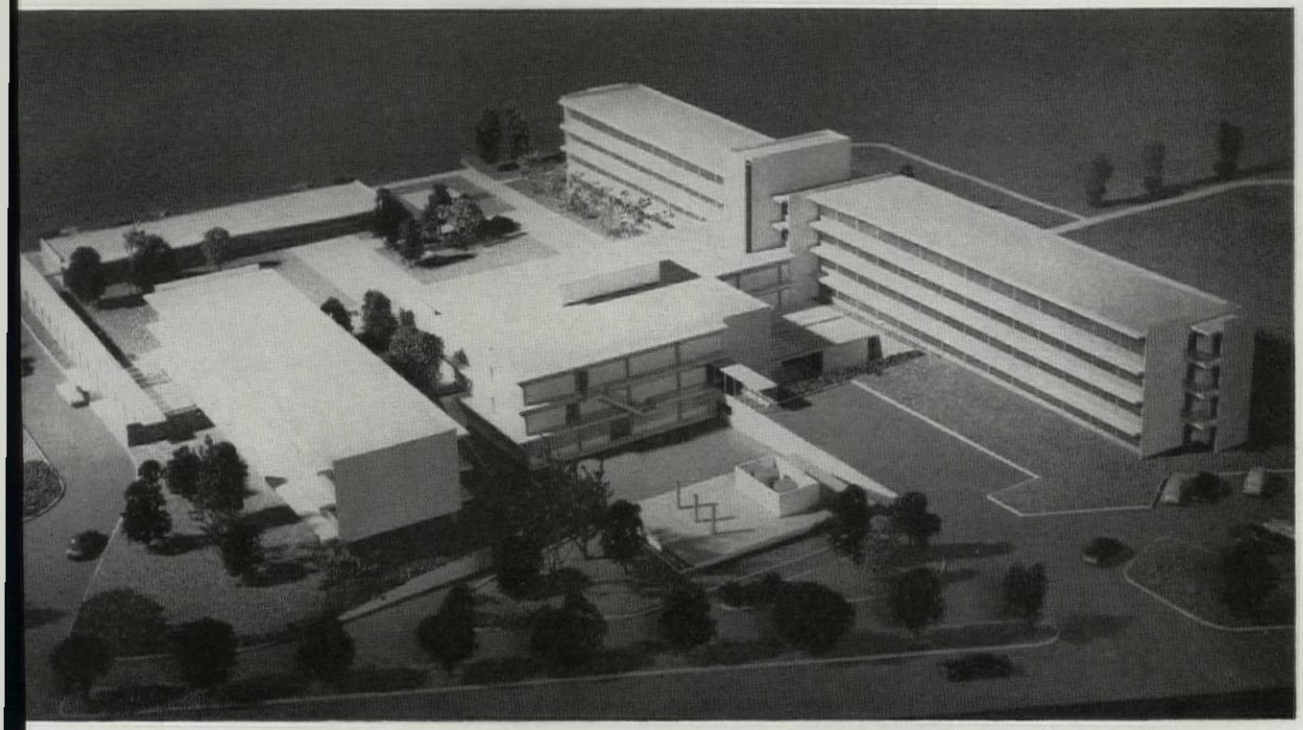


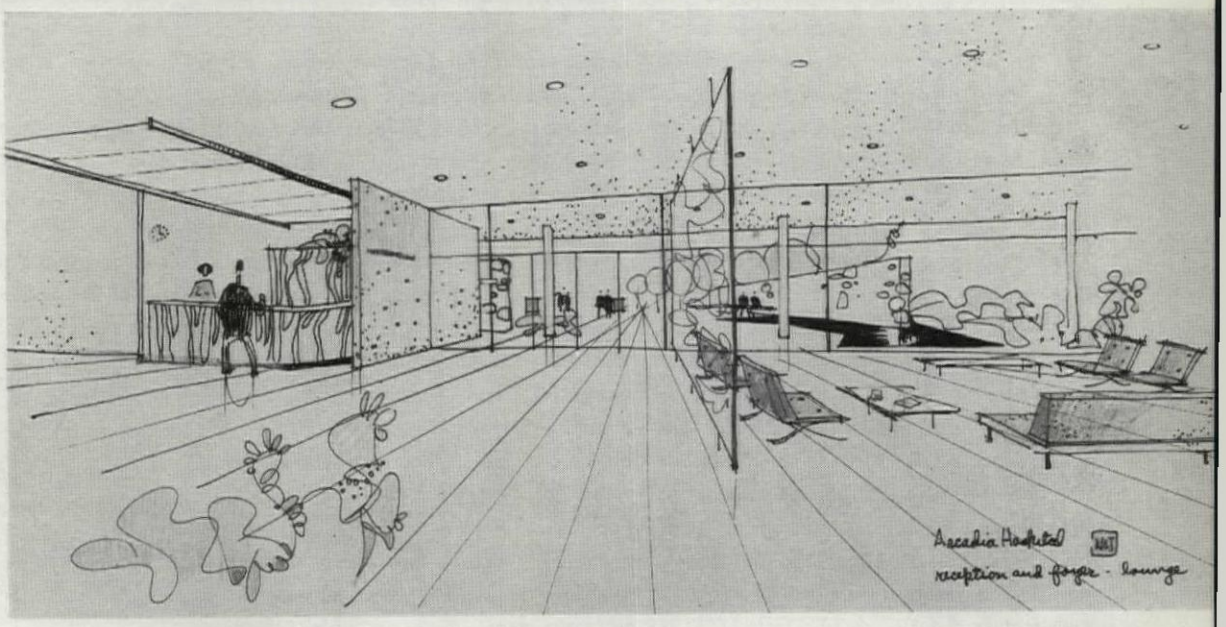


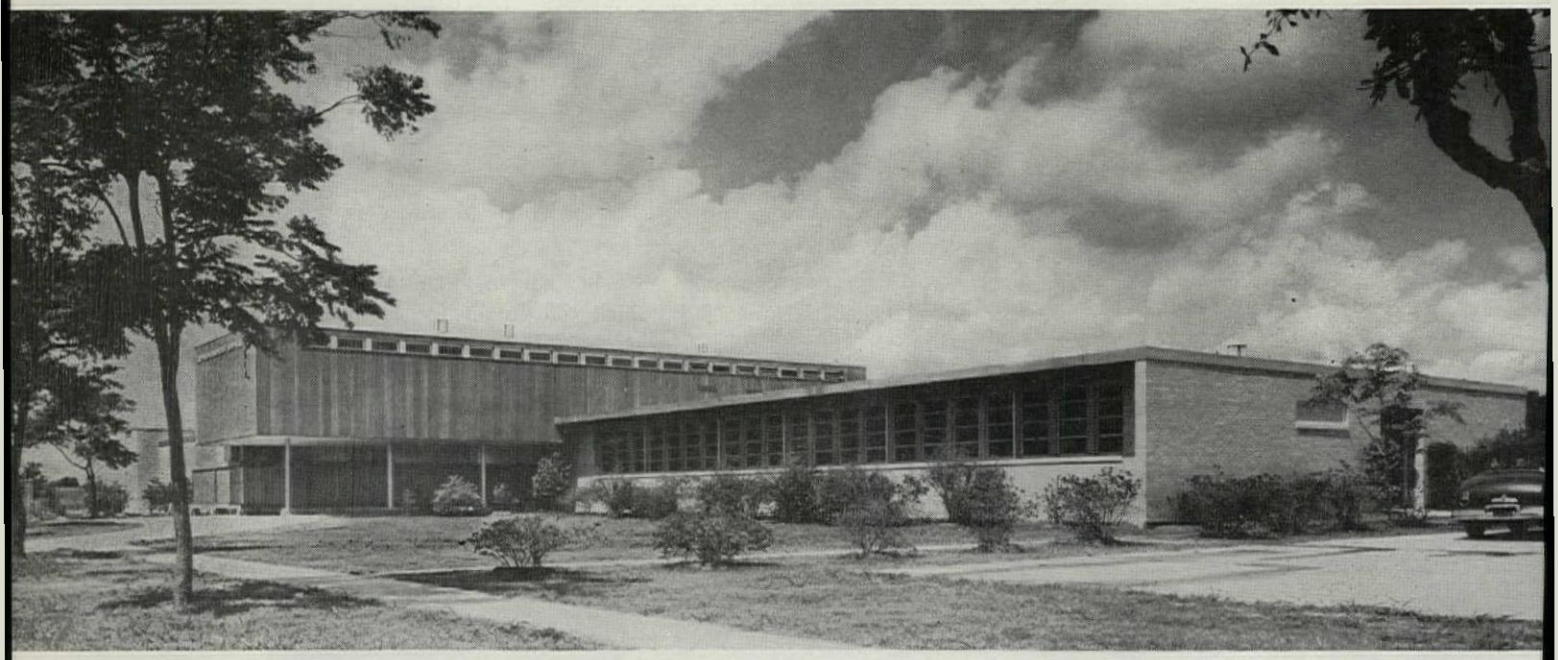
The psychiatric section, housed on the ground floor, extends in an L beyond the limits of the nursing wing. Mild patients have rooms with sliding safety glass doors opening directly on an outdoor court. Disturbed patients are to have their own soundproofed area, with direct access to another outdoor patio. Much thought has been given toward making the surroundings natural, cheerful, and homelike.

Structurally, the building is ideally suited for lift-slab construction. Due to the cantilever design, floor slabs of the nursing wing require only minimum thickness and reinforcement. At the same time, overhangs created by the cantilevers protect windows from sun and rain. Exterior concrete walls are of precast sections. Porcelain-enamel panels with a core of glass fibers form 2 in. thick spandrels. The entire building is air conditioned, though for daylight control the patient's rooms have vertical venetian blinds. South and west windows of the service unit are protected by exterior aluminum shades.

John Minasian is the Structural Engineer associated on this project; John Kocher, Electrical Engineer; Levine & McCann, Mechanical Engineers.







crippled children's hospital

location | New Orleans, Louisiana
architects-engineers | Ricciuti Associates

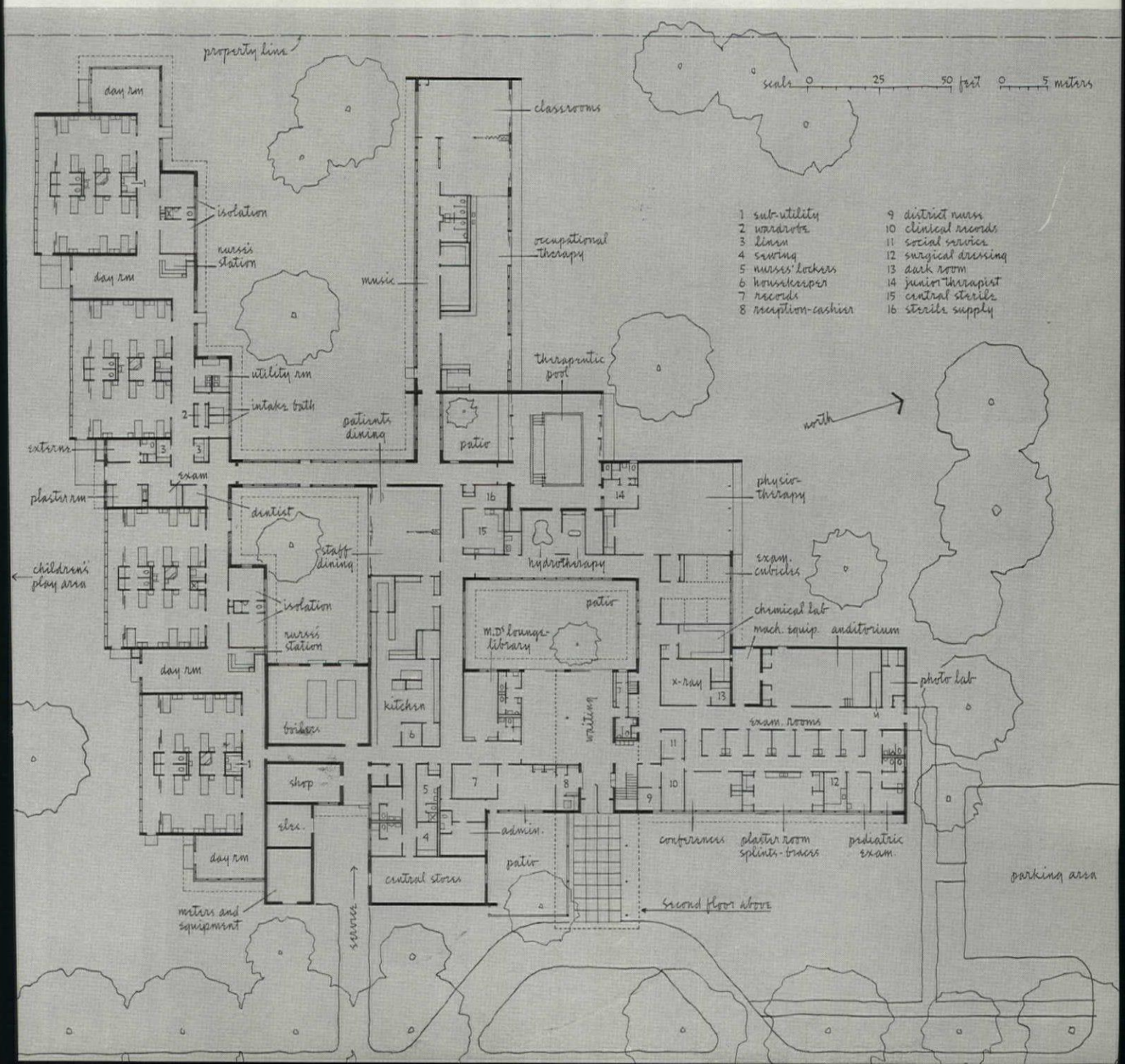
Most New Orleans hospitals have made provision for children suffering from crippling illnesses during the acute, pre-operative stages, and for corrective operations. However urgently needed facilities for postoperative care were lacking. "Months of futile inactivity following an operation can dull a child and make him less receptive to therapy," states an authority. "Unsupervised activity can undo whatever has been accomplished, and lack of proper postoperative therapy may cancel the opportunity for strength and motion in a child's diseased limbs." This specialized hospital for the rehabilitation and convalescence of crippled children was designed to fill this need. No small share of the success of this building goes to the architects, who worked in collaboration with the hospital planning board. Many of the solutions and design innovations will probably set a new standard for such hospitals.

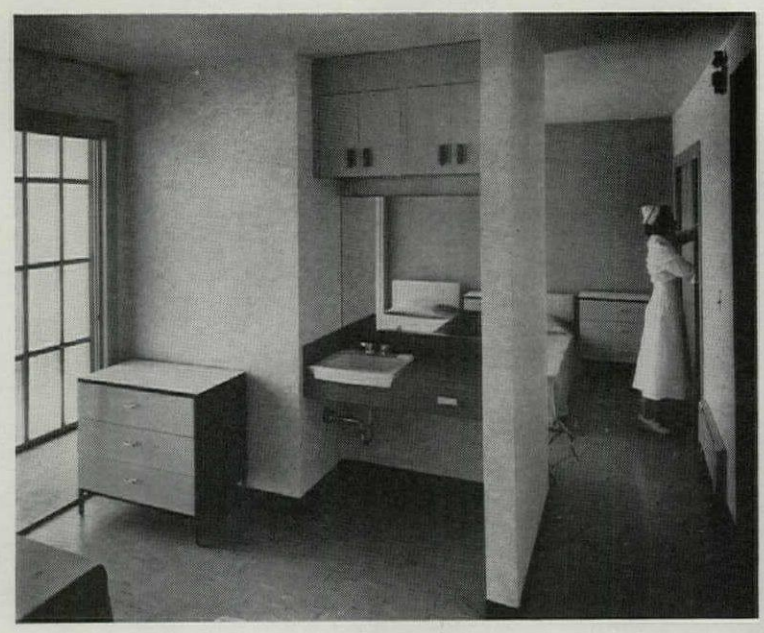
The main elements of the plant are: 1. administration and public spaces; 2. physio- and hydro-therapy department; 3. out-patient department; 4. nursing units (at present accommodating 50 beds, later to be expanded to 100 beds); 5. occupational therapy; 6. recreational area; 7. school; 8. service (sized for eventual 100-bed capacity); 9. staff quarters. To simplify the circulation of patients, visitors, and staff members, all of these elements, except the second-floor staff quarters, have been arranged on the ground floor. Main entry to the building is from the east, where the second floor juts out to shelter a passage from the driveway. On pleasant days the waiting room can be expanded into the planted patio beyond. Both serve hospital patients as well as out-patients. The out-patient section (*right of photo above*) contains its own separate facilities, including a plaster room, surgical dressing room, brace fitting room, clinical and X-ray laboratories, photo lab, and lecture room for teaching purposes. A favored position with a river view has been given to the nursing wing, in which children are housed in six-bed cottages, rather than the usual dormitory-like hospital ward. Leading child psychologists have recommended groups of six as ideal for play, study, and everyday activities. Glass walls to the south slide back to open the interior to the prevailing breezes, and an eight-foot screened overhang wards off sun, rain, and insects. Adjoining day rooms are light, cheerful, and equipped with toy boxes, radio, and television. Treatment facilities, located centrally between cottages and out-patient clinic, comprise one large physio-therapy room, a number of individual treatment rooms, and a 16′x24′ therapeutic pool—all closely related to outdoor areas. Occupational therapy rooms, and classrooms adjoin the pool to the west. Natural colors and textures of building materials predominate in an effort to avoid the usual institutional appearance.

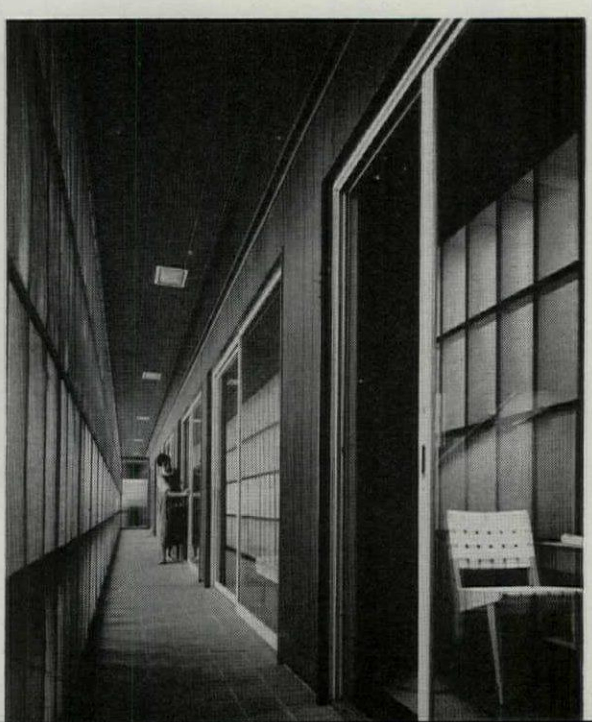
Ricciuti Associates (formerly Ricciuti, Stoffle & Associates) credit the following members of the firm: Associate-in-Charge of Design J. Buchanan Blitch; Associate-in-Charge of Civil Engineering L. J. Rosenbohm, Jr.; Associate-in-Charge of Mechanical Engineering E. W. Peneguy. Louis N. Goodman & Associates were Consulting Electrical Engineers; J. A. Jones Company, General Contractor.

Second floor (right) *houses staff quarters. Patients and visitors pass underneath to main entrance which serves hospital as well as out-patient clinic. Hydraulically operated doors* (above) *are specially designed for children in wheel chairs or on crutches.*

Photos: Frank Lotz Miller

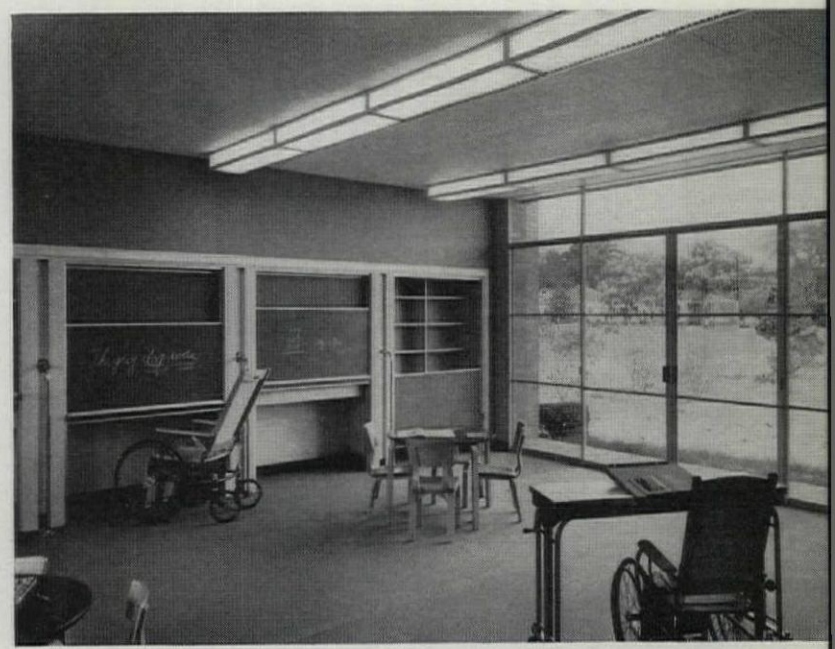




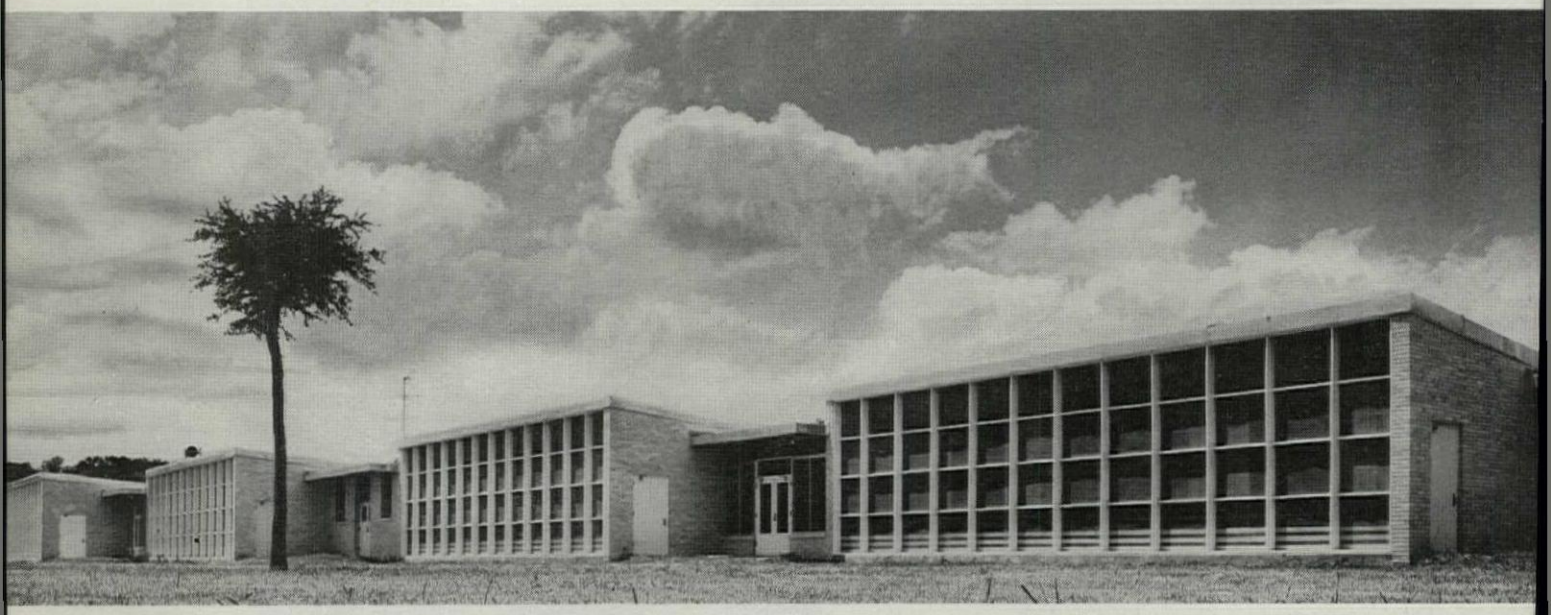


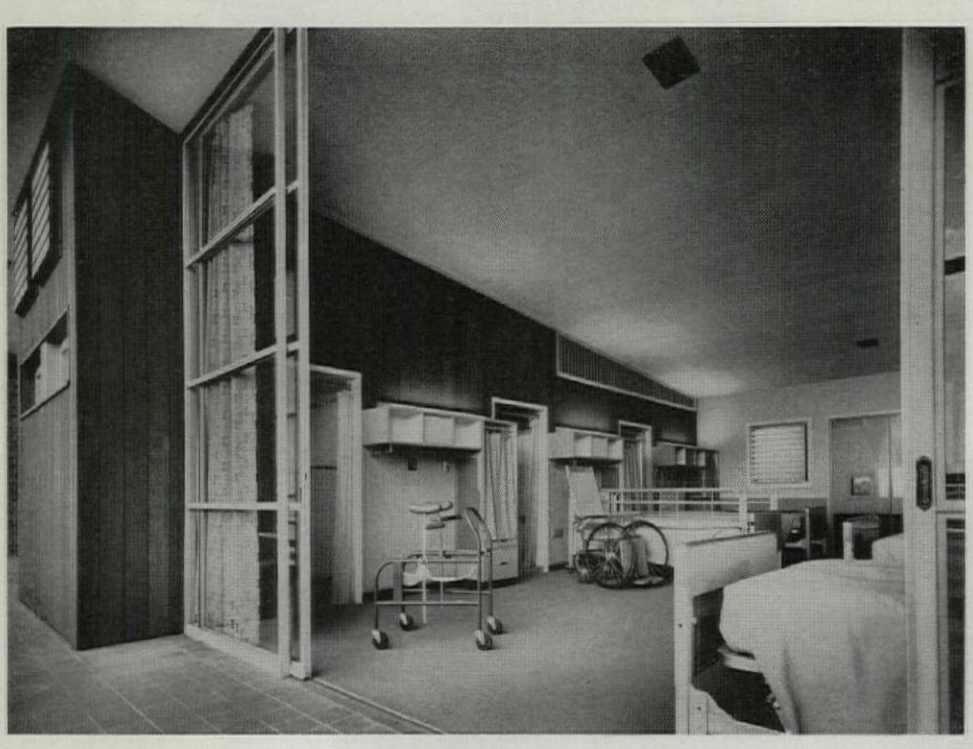
Comfortable nurses' residence on the second floor (above *and* right) *includes three double bedrooms, a suite for the nurses' administrator, and a lounge. Sliding glass doors open into a screened gallery to the south. Vertical louvers of 2"x12" members, spaced one ft o.c., protect from the sun.*

Major elements of treatment section are gymnasium (acrosspage top) *and therapeutic swimming pool* (above). *Exercise mats, weights, trapezes—standard equipment for gymnasiums—are further supplemented here by special devices, such as stairs, mock-up of boarding area of a bus, light switches, door knobs, and other common items intended to train the child for later life. Flooring in this section, as in all corridors and patient areas, is nonslip vinyl-plastic carpeting on foam-rubber cushion. Sides and stepped floor of swimming pool are surfaced with ceramic tile. Swimming pool enclosure, designed for year-round use, has roof of translucent plastic. A protected play court with sand beach adjoins the enclosure. Space under blackboards in classrooms* (right) *is recessed to accommodate children in wheel chairs. Desks are of modified height. Waiting area* (below) *serves both in-patients and out-patients. Sliding glass walls permit view and access into the adjoining patio.*

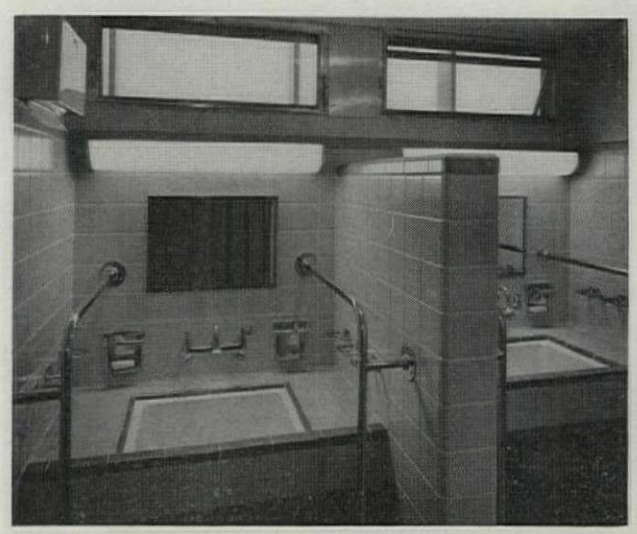


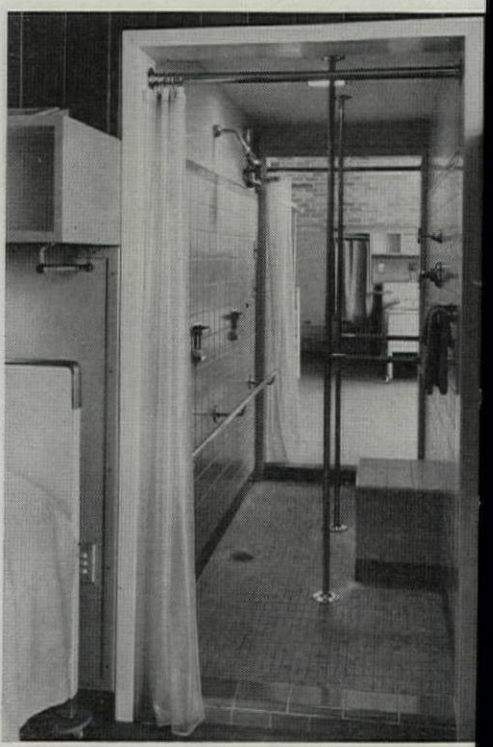
crippled children's hospital

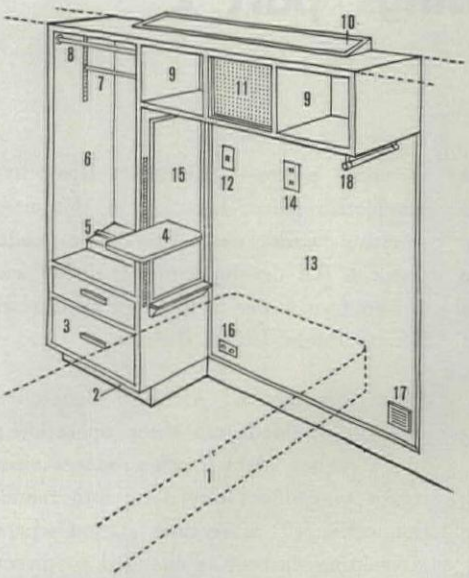


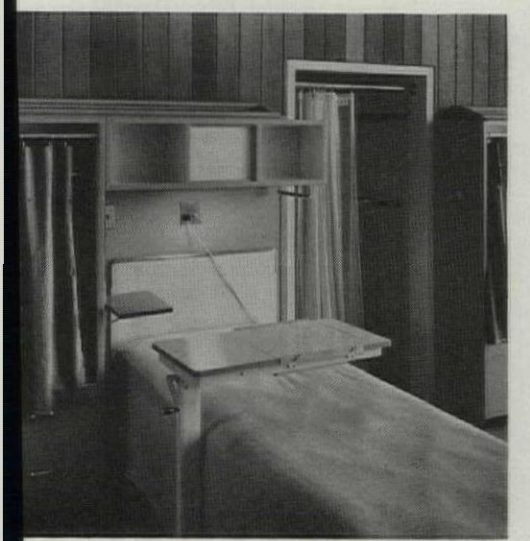


Nursing cottages (above) *have screened galleries onto which all paitents' rooms face. Sliding glass doors* (left) *may be opened to permit natural ventilation. Two rooms, for six children each, share thermostatically controlled showers with built-in seats* (below), *and specially designed washroom facilities and safety devices* (bottom). *Storage unit for each patient's use* (across-page) *is attractive, convenient, and combines many uses.*









1 line of patient bed
2 molded base
3 drawers with ball-bearing slides
4 adjustable and removable bedside table top
5 shoe and brace storage
6 clothing storage
7 adjustable clothes rod
8 curtain rod
9 bookshelf and toy storage
10 recessed fluorescent lamps with plastic cover for glare-free general illumination
11 perforated hardboard with recessed bed light
12 mercury switch for recessed bed light
13 plastic covered cork board
14 nurses call station, flush mounted
15 bed side chalk board with chalk tray
16 duplex safety receptacle
17 night light
18 grab bar

construction

Foundation, floors: reinforced concrete: cement—Lone Star Cement Corporation. **Frame:** beams and pipe columns. **Walls:** brick—Delta Brick & Tile Company; hollow-clay tile—Schindler Brick & Tile Company. **Roof:** steel bar joists—Southwest Steel Products; corrugated-steel decking—Granco Steel Products Company; glue-laminated arches and beams (swimming pool)—Unit Structures, Inc.; **Wall surfacing:** exterior: brick, redwood siding; interior: impregnated-vinyl fabric—Joanna Western Mills Company, gypsum board and plaster—United States Gypsum Company, wood paneling—The Mengel Company; rest rooms, toilets, laboratories, kitchen, pool, wards: ceramic tile—The Mosaic Tile Company. **Floor surfacing:** corridors, patient areas: vinyl-plastic carpeting—Southbridge Plastic Corporation, foam-rubber cushion—The B. F. Goodrich Company, adhesive—Robbins Floor Products, Inc.; rest rooms, toilets, laboratories, dressing rooms: ceramic tile—The Mosaic Tile Company; pool, patient areas: nonslip ceramic tile—Norton Company; kitchen, porches: quarry tile—The Mosaic Tile Company; living area, out-patient corridor, offices: asphalt tile—Tile-Tex Division, The Flintkote Company. **Roof surfacing:** lightweight, insulating concrete—Alatex Construction Service Company; plastic (pool area)—Corrulux Division, Libbey-Owens-Ford Glass Company. **Waterproofing & damproofing:** membrane damp course—Wasco Products, Inc. **Insulation:** corridors: glass-fiber ceiling boards—Owens-Corning Fiberglas Corporation, metal suspension system—Cupples Products Corporation; rooms: perforated fiber tile—Armstrong Cork Company; kitchen: perforated asbestos board—Armstrong Cork Company, glass-fiber batts—Owens-Corning Fiberglas Corporation. **Roof drainage:** aluminum gutters and downspouts—Holzer Sheet Metal Works. **Partitions:** stud flameproofing—American Cresote Works, Inc.; vermiculite plaster and metal lath—United States Gypsum Company; metal studs (wards)—Stran-Steel Division, Great Lakes Steel Corporation. **Windows:** awning-type sash—Ludman Corporation; wire glass—Mississippi Glass Company; heat-absorbing and double-strength, A-quality window glass—Glass Division, Pittsburgh Plate Glass Company; obscure glass—Blue Ridge Glass Corporation. **Doors:** interior: solid-core flush—Roddis Plywood Corporation, Class-B fire doors—United States Plywood Corporation; overhead: Class-A metal—The Kinnear Manufacturing Company; entrance: single-acting automatic opener and tubular-aluminum doors—Pittsburgh Plate Glass Company; vinyl-covered folding doors—New Castle Products, Inc. **Hardware:** lock sets, door closers, hinges, and panic exit—Russell & Erwin Division, The American Hardware Corporation. **Paint & stain:** interior and exterior—Martin-Senour Company.

equipment

Specialized equipment: kitchen: custom-built cabinets and counters—Star Metal Manufacturing Company, Inc., ranges—Vulcan-Hart Manufacturing Company, mixers—Hobart Manufacturing Company, ice-cube maker—Carrier Corporation, garbage disposal—Albert Given Manufacturing Company; X-ray: radiographic unit, film viewer, and darkroom developing tank—Westinghouse Electric Corporation; swimming pool: filters and water softener—The Permutit Company, pumps—Weil Pump Company, Proportioneers, Inc.; nurse-call, music, and doctors'-paging system—Executone, Inc.; air-raid warning system—Southern Bell Telephone & Telegraph Company; fire-alarm system—S. H. Couch Company, Inc.; clock system—International Business Machines Corporation; television-antenna system—Radio Corporation of America; sterilizers—American Sterilizer Company. **Lighting fixtures:** living area, auditorium—Silvray Lighting Company; offices, classrooms, wards—Fullerton Manufacturing Corporation; lobby, corridors—Day-Brite Lighting, Inc.; stage—Swivelier Company, Inc. **Electric distribution:** service-entrance switch—Frank Adam Electric Company; panelboard and secondary switchboard—Square D Company; wire and cable—The Okonite Company; conduit—General Electric Company; wiring devices—Harvey Hubbell, Inc.; power transformers—Kuhlman Electric Company. **Plumbing & sanitary:** water closets, tubs, and lavatories—Crane Company; toilet seats—C. F. Church Manufacturing Company; copper-lined, hot-water generator—American District Steam Company, Inc.; flush valves—Sloan Valve Company; pipe—The American Brass Company, A. M. Byers Company; drains—Josam Manufacturing Company; sprinklers—Herbert S. Hiller, Inc.; shower controls—Powers Regulator Company, Lawler Automatic Controls, Inc.; medicine cabinets—Charles Parker Company. **Heating:** type: hot water, forced warm air, and radiant heating; steam boiler—Ames Iron Works, Inc.; fuel: natural gas; cast-iron baseboard convectors—Crane Company; pipe—The American Brass Company, A. M. Byers Company; converters and pumps—Bell & Gossett Company; unit heaters—Fedders-Quigan Corporation, Marlo Coil Company; ventilators and fans—Ilg Electric Ventilating Company; controls—Barber-Colman Company. **Air conditioning:** type: package units—Worthington Corporation; refrigerant: Freon 12 and 22—E. I. du Pont de Nemours & Company, Inc.; semi-hermetic compressor—Worthington Corporation; metal cooling tower—Binks Manufacturing Company; grills and electronic controls—Barber-Colman Company.

air conditioning: industrial buildings, part 2

by Tyler Hicks*

In the first part of this article,† a number of factors important in deciding whether or not to air condition an industrial plant were discussed. As shown, it is often difficult to evaluate some of the known advantages of industrial air conditioning—increased productivity, greater personnel comfort, and better labor supply. Though there has been a tremendous growth in industrial air conditioning in recent years, units and equipment for this service still represent but a small portion of the total sales volume of air-conditioning equipment today.

Many commerical establishments—hotels, departments stores, and office buildings—are forced by competition into installing air conditioning. This is seldom the case with industrial plants, unless the competition is considered in terms of a better product. But as more commercial, public, and other types of buildings become air conditioned, demand for the same comfort advantages will increase in industrial buildings. This is especially true of new industrial structures, where it is relatively easy to provide facilities for equipment, ducts, outlets, etc.

equipment selection

There are no hard-and-fast rules for the type of air-conditioning and refrigerating equipment to be used in industrial plants. Each job must be analyzed in its own terms and the important factors evaluated. A general guide, however, can be helpful in preliminary selection of equipment (*Table I*). Although current practice for applications in a wide variety of installations is indicated, this data should be used with caution because prevailing conditions on a given job may make other arangements more desirable. Note that the equipment choice (*as listed in the table*) is based on the refrigeration tonnage required and assumes that the plant is to be air conditioned. This means that to use the table some estimate of the tonnage required must be made. Where a complete heat-load analysis cannot be made during preliminary design stages, a rough estimate can be made at the start, followed by a preliminary selection of the type of refrigerating equipment and air-distribution system. However, before any construction is begun or equipment purchased, a complete heat-load analysis of the structure *must* be made. Satisfactory results cannot be expected unless the architectural and mechanical design are carried on jointly. Many architectural features can produce sizeable savings in initial and operating costs of the air-conditioning system.

Where a plant is to be served only by ventilating and heating equipment, the above mentioned guide cannot be used. In general, the type of ventilating equipment chosen is affected by the same factors as air-conditioning equipment—namely, load, air flow required, types of rooms served, etc. There are instances where ventilation may be easier to justify than complete air conditioning; but the final choice in any proposed installation can be made only after a complete study of the governing factors.

To illustrate some of the current trends in industrial air conditioning, a number of recent installations have been chosen for discussion in this article. The methods used should be helpful to architects and engineers considering use of air conditioning for a given plant. Many of the problems met and solved in these installations are common today in a number of different industries.

year-round conditioning

One of the new smelting works of Aluminum Company of America is located near Wenatchee, Washington. Electricity is the motivating energy used to transform alumina, a white, powdery oxide of aluminum, into its metallic form by what is known as an electrolytic-reduction process. Since it takes about 10 kw of electricity to make one pound of aluminum, the works is located near a source of abundant power—a Columbia River hydroelectric plant. Location of this new smelting works near Wenatchee made possible the development of 15,000 kw of new firm power in the area by Chelan County Public Utility District.

Plant operations. Alcoa's Wenatchee works is divided into three operations: (1) a carbon plant which produces electrodes to conduct electricity into reduction cells; (2) a rectifier station where alternating current is changed to direct current at the desired rate—160,000 d-c kw being the usual load; and (3) an aluminum plant where alumina is reduced to aluminum.

The administrative center for the Wenatchee Plant is a new office building—a three-story, L-shaped structure. General offices are housed on the first and second floors, while the basement contains chemistry laboratories, the personnel office, spectrographic rooms, first-aid room, and central air-conditioning equipment.

System design. Because of its orientation, shape, and widely diversified activities, designing an air-conditioning, heating, and ventilating system for the entire building posed a number of delicate problems. For example, the large glass area in the building and its four-foot overhang created variable solar-heat gains on the two upper floors. Also, Wenatchee's rather extreme climate conditions required design of a system for 100-F dry bulb, 70-F wet bulb in summer, and –10 F in winter. All the outside air supply is filtered before being discharged into the building.

Temperature and humidity conditions in the spectrographic rooms had to be custom-made. And while the general offices, personnel office, and first-aid room required complete air conditioning, the chemistry labs needed only heating because arrangements could be made for secondary cooling. The required secondary cooling could be obtained by exhausting all surplus air from cooled portions of the building through the labs' fume-

* *Associate Editor, Power Magazine*
† *October 1955 P/A*

exhaust hoods. Since the hoods were needed regardless of the exhaust arrangement used for the cooled areas, drawing the cool air through the hoods saved an investment for exhaust equipment which would otherwise be needed.

System details. Installation of a large central-fan system with ductwork was considered, but the idea was discarded because of the building's varied air-conditioning requirements and lack of space. Instead, The Austin Company, engineers and builders, took advantage of the wide variety of equipment available and designed three separate systems. Using the equipment of one manufacturer, The Trane Company, one undivided responsibility was obtained. Here is how the three systems work:

1. The air-conditioning system for the general offices on two floors and the personnel office and first-aid room in the basement was divided into eight zones so that any zone can be cooled or heated independently, summer or winter, to offset solar gains or losses and maintain predetermined temperatures.

At first, consideration was given to use of 50,000 cfm of properly tempered outside air alone as the cooling and heating medium. But it was found that by installing individually controlled room air conditioners in each room, it was possible to accomplish the required conditioning with all the advantages of individual room control. At the same time it was possible to show considerable savings on the cost of operation, since with this arrangement

Table I—Typical Equipment for Air Conditioning*

Capacity tons	Majority used	Some used	Few used
0 to 5	Unit system in conditioned space	Unit central systems with duct distribution	Built-up central systems
5 to 25	Built-up central system with reciprocating compressors	Unit central systems with duct distribution	Unit systems in conditioned space
			Built-up systems using either absorption or adsorption units
25 to 50	Built-up central systems with reciprocating compressors	Built-up central systems with centrifugal compressors	Central systems with adsorption units
50 to 400	Built-up central systems with reciprocating compressors	Built-up central systems with steam-jet and centrifugal compressors	
400 and over	Built-up central systems with centrifugal compressors	Built-up central systems with steam-jet refrigeration	

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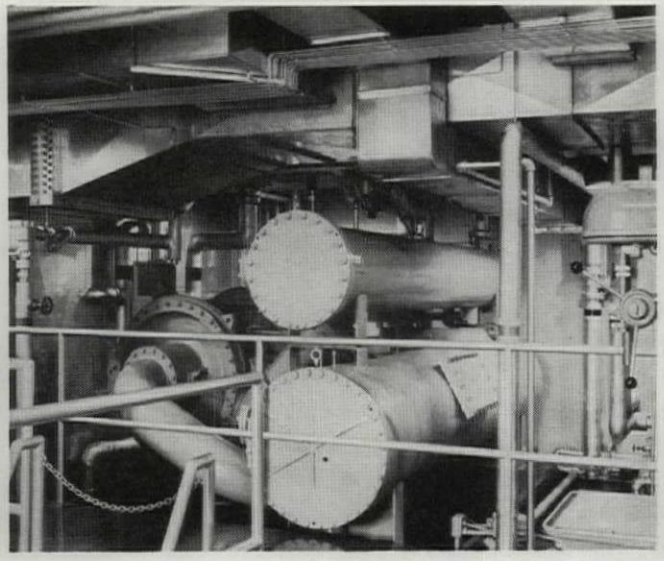
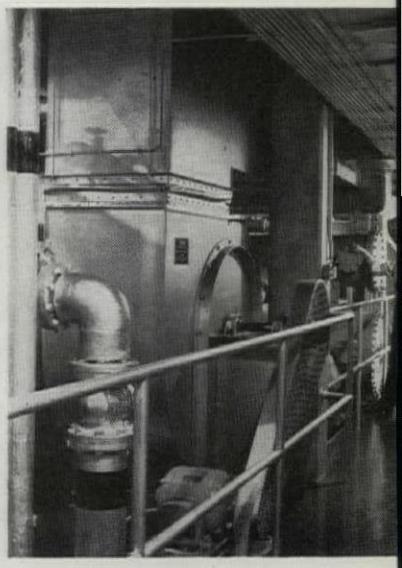
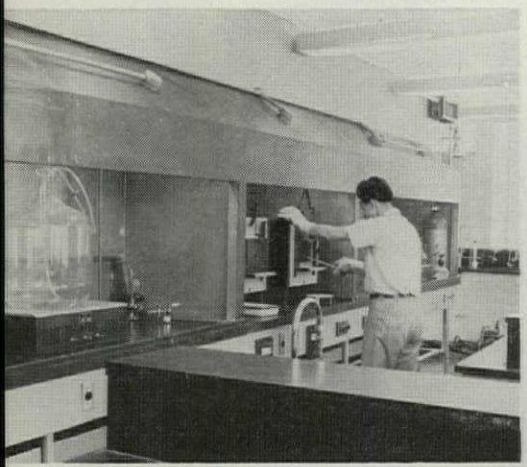
Figure 1—individually controlled room air-conditioning unit in an office (below left). *Figure 2—compact centrifugal compressor supplies chilled water to room units* (below). *Figure 3—this centrifugal fan supplies ventilation air to the plant offices* (below right).







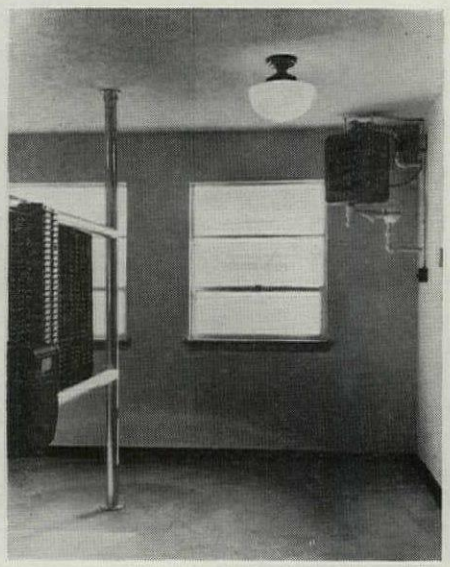


Figure 4—chemistry laboratories are cooled with air exhausted from other areas (far left). *Figure 5—factory area is equipped with unit heater mounted near ceiling* (below left).

only 20 percent of the air need come from the outside. One of these units is shown (*Figure 1*).

For summer cooling, chilled water from a hermetically sealed centrifugal refrigeration unit with a nominal 100-ton capacity (*Figure 2*), is circulated through coils in the room units. Columbia River water, which varies in temperature from 38 F in winter to 68 F in summer, is used for the condensing units. In winter, water is heated by shell-and-tube heat exchangers and circulated through the same coils in the room units.

2. The heating and ventilating system for chemistry labs, where raw and process materials and finished products are analyzed, has a capacity of 10,000 cfm. This system includes a packaged unit containing filter, ductwork, grills, dampers, and reheat coils supplying 70 F air. Since the labs are not cooled by mechanical refrigeration, cooled exhaust air from other portions of the building is drawn through the labs and expelled through fume-exhaust hoods on the roof. One of the chemistry labs is shown (*Figure 4*).

When the hoods in the labs are closed, the system is throttled down to supply only 2800 cfm of heated air in winter and outside air in summer for ventilation. A separate exhaust-fan system then dissipates 3500 cfm to maintain comfortable working conditions. The controls are statically interlocked to keep the labs at a slight negative pressure so that odors will not circulate to the office areas.

3. In the spectrograph rooms, aluminum samples are burned in carbon arcs until a spectrograph or color picture is given off by the burnt metal. By analyzing the spectrograph, the exact properties of the aluminum can be quickly determined. This process of product control requires maintenance of a constant temperature of 75 F and a relative humidity of 40 percent.

A packaged unit continuously supplies 600 cfm of tempered outside air, drawn through an activated-charcoal cell-and-mat filter, and 2200 cfm of recirculated air. This air is electrostatically and mechanically filtered, cooled and reheated, or humidified for comfort conditions.

For cooling, the engineers designed a built-up system consisting of two five-ton compressors, direct-expansion coils, and condensers. In this system, one compressor operates to capacity before the second one starts, for a total capacity of 10 tons. Cooled air is delivered through ceiling-type diffusers and exhausted by means of grills under windows.

For heating of the factory portion of the building, 70 heating units of the wall, floor, and ceiling type are used, together with 50 unit heaters (*Figure 5*). Convectors heat the service buildings.

ventilated shops and offices

The ventilating and heating installation at the new branch plant of the Square D Company in Seattle, Washington, is an excellent example of how good working conditions can be obtained in a plant where, for one or more reasons, air conditioning cannot be justified.

System design. In planning the ventilating system for the factory portion of the new structure (*Figure 6*) the designers faced an unusual situation. Besides providing a means of removing fumes and odors of general shop work, they had to find a way to handle the ventilating requirements of an infrequently used paint-spray booth. For economy reasons they wanted a single unit to do both jobs. This is how the situation was handled.

1. A blower-type unit heater was selected as the shop ventilating unit. It is suspended from the ceiling (*Figure 6*) and uses only outside air. To provide for heating and variable-load conditions it is fitted with a heating coil and a two-speed fan motor. When the paint-spray booth is in operation, the unit heater's fans operate at high speed and the unit supplies ventilation air for the booth as well as the rest of the factory. When the

booth is not being used, the fans operate at lower speed, supplying air for general shop ventilation. A thermostat in the discharge air stream of the unit controls the temperature of the ventilating air introduced into the factory area.

2. The factory is heated by projection-type unit heaters equipped with adjustable-louver cone diffusers (*Figure 7*). These unit heaters are also suspended from the ceiling, away from shop machinery and the flow of production. The versatile diffusers make it possible to send heat from the ceiling level down to selected shop areas.

3. For the building's office space—which contains large, exposed-glass areas—free-standing and recessed convectors supply heat to offset possible downdraft of air chilled by windows (*Figure 8*). Ventilation for the offices is supplied by a packaged unit equipped with heating coil, steam-grid humidifier, and face-and-bypass dampers. During warmer weather this unit keeps employees comfortable by maintaining proper humidity conditions and constant circulation of fresh air. The heating coil is used to supply additional heat to the offices on colder days. Exhaust fans round out this flexible system designed to economically satisfy the building's changing heating and ventilating requirements.

Young, Richardson, Carleton & Detlie were the architects for this installation; DeWitt Griffin was the consulting engineer. Air-conditioning equipment was manufactured by The Trane Company.

pneumatically-controlled system

The Powers Regulator Company office and manufacturing plant at Skokie, Illinois, is a T-shaped building 290 ft wide by 515 ft long and offers an excellent working atmosphere for office and production personnel.

Air conditioning and heating. The building air-conditioning system features a modern control panel (*Figure 9*) using Powers Regulator Company instruments and controls. In its design are integrated various types of pneumatic controlling, indicating, and recording instruments. These master-mind the operation of the air-conditioning and heating systems for the building. The control panel and its equipment also serve as a working model of the company's products for this service.

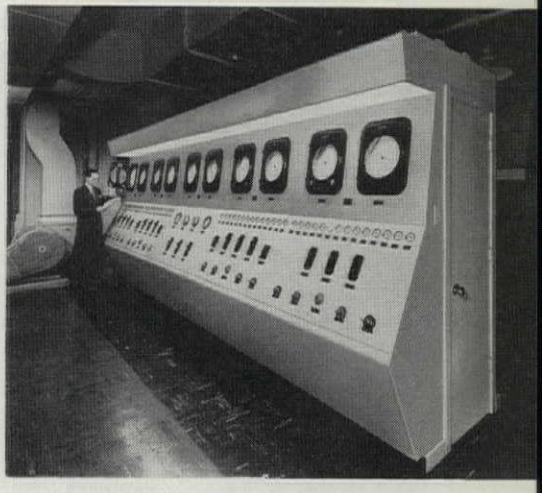


Figure 9—modern control-panel master-minds the operation of the air-conditioning and heating systems (above).

Figure 6—blower-type unit heater in shop area has heating coil and two-speed fan (left). *Figure 7—projection-type unit heaters, upper right in photo, heat the factory work areas* (below left). *Figure 8—recessed convectors eliminate the cold wall effect of large window areas* (below).

Each office in the building is fitted with an individual thermostat to maintain the temperature desired by its occupant or occupants. Conditioned air is distributed to each room by diffusers supplied by ducts. Convectors are used for heating the various offices and rooms; each convector has a pneumatically operated control valve on the inlet side, giving the desired control of room temperature. The inner and outer sash of each window and the venetian blinds are designed to reduce solar-heat gain during the summer but allow maximum light entry in winter. Forced hot water heats the entire plant. An outdoor master controller operates an indoor submaster regulator, which controls hot-water flow in the heating system in direct relation to the outdoor temperature.

Load division. For greater efficiency and flexibility to meet occupancy needs, the air-conditioning system is divided into four parts. Each has its own fan, heating and cooling coils, humidifier, face-and-bypass dampers, air filters, activated carbon filters for odor removal, maximum and minimum fresh-air dampers, return-air exhaust dampers, static-pressure dampers, and a separate refrigeration compressor and evaporative condenser. Each system is further subdivided into three or more zones with a booster heater in each zone for summer operation when some zones need heat and the others do not. A special feature of each system is summer-reheat to permit moisture removal but avoid overcooling on humid days.

Heating and ventilation. This system is designed to provide maximum comfort for all employes in summer and winter. Radiators and ceiling unit heaters in the manufacturing portion of the building are controlled by thermostats and pneumatically actuated valves. A two-temperature day-night control system is used. Room air is changed 10 times per hour in summer, twice per hour in winter. Large ventilating fans keep the room air under pressure so that the warm air leaks out of the building in winter, instead of allowing cold air to enter the building. Of course, the amount of outleakage is held to the minimum required for comfortable working conditions.

The factory roof has 30 large motor-driven ventilators to give generous air circulation in the manufacturing area at all times. These, combined with a well-insulated poured-gypsum roof, heat-absorbing window glass, and fluorescent lighting, help keep the factory temperature lower than outdoors in summer. This is another example of how production areas can be kept comfortably cool throughout the summer without complete air conditioning of the structure. Exhaust fans are used throughout the plant to remove fumes and odors.

Boiler room. Three boilers supply plant steam and hot water; two oil-fired units handle the hot-water load. The steam load is carried by a gas- or oil-fired unit operating at 200 psi and rated at 2800 lb per hour. Underground oil tanks store enough oil for the three coldest months of the year and can be filled from tank cars or oil-tank trailers, giving assurance of an adequate supply at all times. Two centrifugal pumps circulate hot water for the heating system. The instrument panel has a master system for control of the hot-water circulation.

Building. Overhangs provide shade for the windows in the summer to help reduce the cooling load in the air-conditioned offices. The added cost of an overhang of this type can often be justified by the savings in machine operating cost, maintenance, and repair.

Fire protection. The entire plant is completely equipped with automatic sprinklers. Flush-type heads are used in the office spaces, while pendant heads are used in the factory areas. The truck docks and garage have dry-pipe systems to prevent freezing in winter. Large fire doors are operated by electropneumatic power.

Sessions Engineering was in charge of the entire project; Worthington Corporation supplied the air-conditioning equipment.

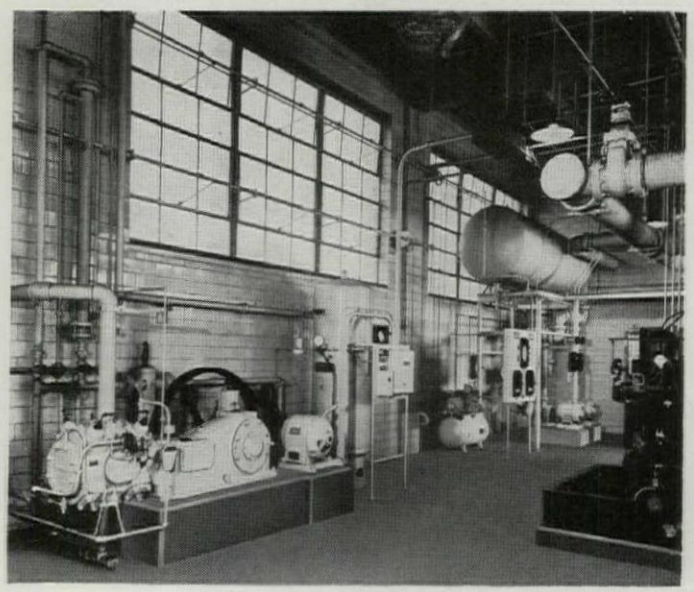


Figure 10—compressors supply air for manufacturing area and control instruments.

apartment-building air conditioning: *an effective electrical reinforcement program*

Countless owners of inadequately wired apartment buildings admit that eventually they must undertake some sort of electrical modernization of their holdings. Meanwhile, enjoying a full rent roll—and tenants managing without too much protest—why, they reason, should they concern themselves with immediate action involving an investment on which it would take years to realize a return.

Other owners, of course, are of the opinion that under present operating conditions they are making enough power available. Enough, let's say, considering the rents they are getting or enough if tenants would learn to operate only one high-wattage appliance at a time. Air conditioning would put too great a strain on the existing systems but air conditioning is considered a luxury feature and how encumbent is it upon them as owners to meet luxury demands? Also, official orders banning unit installations are not only justifiable with the present inadequate wiring but also they relieve owners of the obligation to make air conditioning available. On this basis they stand pat—with perhaps a conciliatory word to their tenants that a modernization of the building's electrical system would impose a certain amount of inconvenience and discomfort upon occupants.

And, finally, there are owners who consider their present wiring installations in the light of present and future loads. They wonder how far to go with an electrical modernization. Should they heed immediate demand only and do a limited reinforcing job and wait for further developments; or should they anticipate and prepare for a future far-heavier load? If the latter, how much heavier will it be? By what method or to what extent should they prepare for it? While they mull over these vital issues, residential construction all around them—wired at least for present electrical loads—gradually nears completion, daily threatening the economic security of every inadequately wired apartment building in the vicinity.

Actually, the growing desire of tenants in medium- and upper-income groups for enough electric power to operate inexpensive air-conditioning units and other high-wattage appliances now available, is an ominous force in the making. Tenants are rapidly becoming electric-power conscious although few have any technical understanding of wiring. Branch circuits, feeders, risers, or wire sizes are so many unrelated words—diversity just another way of saying variety. They neither appreciate nor do they take any interest in *why* their apartments are inadequately wired. They are intensely concerned, however, with its effect on their daily living and their own convenience—an effect sufficiently irritating to make them move out whenever more adequately wired space in their price range becomes available. Pressure to raise existing electrical capacities has come from technical levels; a far more telling pressure is building up at tenant levels. Temporizing or discounting it will prove fatal to hundreds and hundreds of otherwise well-equipped and well-located properties.

There are degrees of inadequacy just as there are degrees of hunger. Remedial measures depend as much upon owner intention as upon existing wiring conditions. There is no all-inclusive reinforcing method applicable to all inadequately wired apartment buildings, yet if the economic stability of these buildings is to be maintained, corrective action is essential. This problem of electrical obsolescence should be the concern of every owner, engineer, and electrical contractor. No building is well enough established to stand up against its own obsolete wiring system.

Peter Cooper Village, one of the Metropolitan Life Insurance Company's developments in New York, is an outstanding example to demonstrate how rapidly an electrical installation can become obsolete and how effectively it can be treated. Here is a comparatively new, 21-building apartment

project, housing close to 2500 families, completed in 1947. Electric services from the streets were installed in accordance with electrical codes and the electric utility company's requirements for anticipated maximum load under peak conditions, which were deemed ample for future increase of apartment load. As a matter of fact, there was enough reserve built into the system to supply some 20 air-conditioning units in each of the 21 buildings. This was clearly an above-average installation for 1947 when residential air conditioning was a mere infant and practically no one anticipated the husky wallop it would eventually deliver. Wiring for all service, power, lighting, etc., was in rigid-steel conduit: 4-in. conduit from the streets, various-sized submains, and the usual conduits for supplying public lighting, power, and all apartment branch circuits. Basically, each three-room apartment has two branch circuits; four-room apartments have three—all with #12 type "R" wire. Fuses were maximum size permitted by code, 15 amp.

This was the situation in 1953 when—in response to a trend of unknown proportions—the housing division's operating department instituted the first step of its air-conditioning program. Tenant demand for air conditioning had been spotty but significant—enough, certainly, to warrant facing the issue head on. Under similar conditions, many owners would have ignored this demand or complied only up to the capacities of their existing wiring systems. Metropolitan engineers took a more realistic approach. First of all, their project had been conceived and constructed as a solid, long-term investment; they intended maintaining it on precisely that basis. Secondly, the company has long displayed keen interest in the welfare and happiness of human beings. Tenants are human beings as well as the life blood of any building—residential or commercial. Good management and good business, therefore, dictated the advisability of getting down to cases. How real was the demand? Was it broad enough to exhaust the existing reserve in the system? Specifically, if electric power were to be made available for air conditioning, how many tenants planned installing their own units and how soon—immediately or at some time in the distant future?

Factual data of this character would have direct bearing on any reinforcing method to be developed. To get a true picture of the current demand and its potential growth, a preliminary canvass of the tenants was conducted. This, too, was a straightforward approach. Tenants were advised of the program under consideration and told that if it were put into effect an initial hook-up charge and an annual service charge to cover increased capital and operating costs would be imposed upon each air-conditioning unit installed. It was too early in the program to cite exact charges but the warning was there. And note, please, charges were to be levied only upon those tenants who made use of air-conditioning facilities; nonusers were not to be involved. Despite the additional costs, tenant desire for air conditioning justified moving ahead with the program.

The selection of a method for wiring apartment mains, risers, branch circuits, etc., was undertaken and developed by the electrical engineer of the company's housing division in co-operation with the company's consulting electrical engineer and the utility company. They had already recognized an unforeseen increase in normal apartment load, largely attributable to expanding use of high-wattage household appliances that had come on the market in the six years since Peter Cooper Village had been constructed. For this reason it was considered inadvisable to use existing apartment wiring—such as mains and branch circuits—for air-conditioning units. The real problem was to figure out the best possible method of meeting present and future requirements without too large an initial investment or the needless duplication of work which could be more economically handled in one operation.

The program—developed in its entirety—was set up as three separate, well-integrated steps—almost a "pace-setting" type of operation. Every aspect of the situation was considered—tenant convenience, timing, financing—and many alternate methods were studied before a contract for reinforcing the system was awarded. Carrying out the estimated present reinforcing requirements for

all of the 21 fifteen-story buildings would run close to three quarters of a million dollars, but by handling first things first, keeping abreast of the demand as it grew, financing could be spread over a period of time and no unusual amount of wiring and equipment installed before it was required.

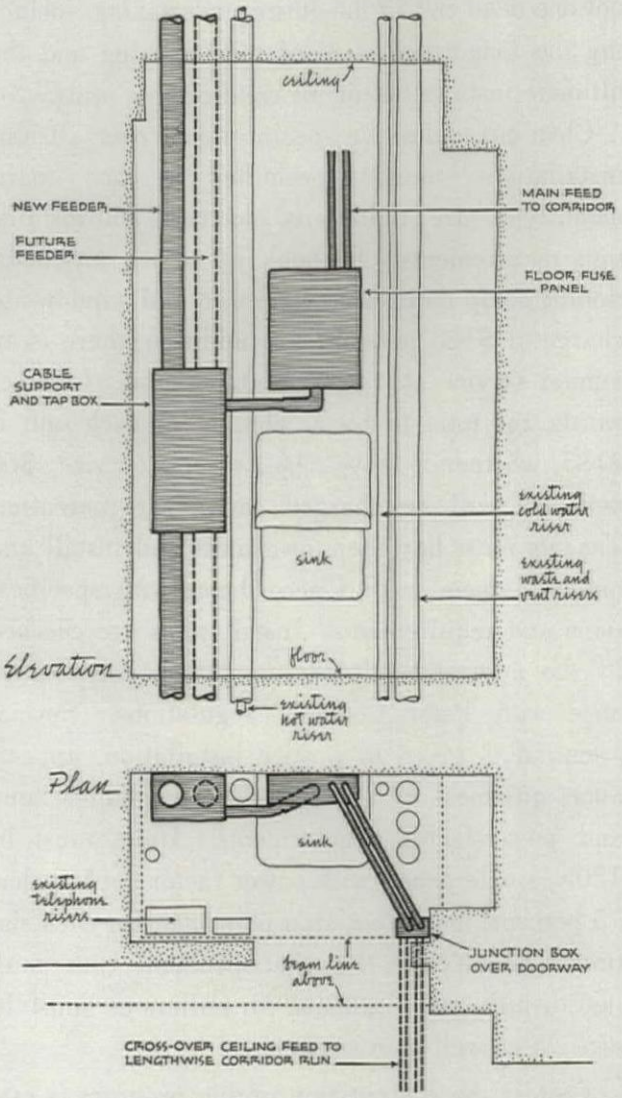


Figure 1—plan and section-elevation of typical existing closet in apartment building corridors at Peter Cooper Village (above).

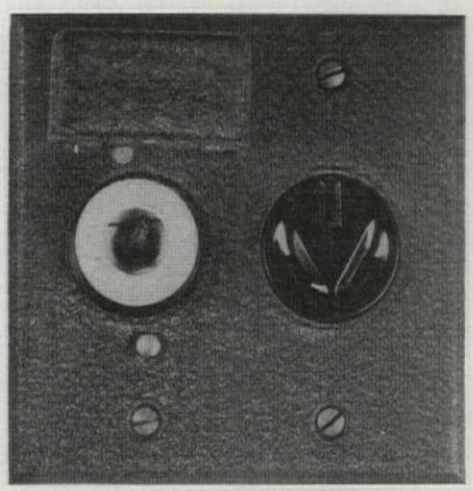


Figure 2—air-conditioning outlet developed for Peter Cooper project has since become a standard trade item.

For the initial step of the program, starting late in 1953, it was decided that the most economical way to provide electricity for the current air-conditioning demand was to run a new 4-in. conduit with four 500-mcm AVA cables from the basement to the top floor of each building and to install an eight-circuit fuse panel on every floor. The conduit runs were brought up through existing locked closets located in public halls—closets large enough to accommodate the fuse panels fed by the new cable *(Figure 1)*. From these panels a new 120-v submain was then run to each of the eight apartments on the floor. Submains were carried in exposed-metal surface raceway through the hallways to an existing outlet in or adjacent to the apartments. After a tenant had signed up for air conditioning it was a comparatively simple operation to pull out the originally installed type "R" wire from the ½-in. conduit branch circuit and replace it with thinner jacketed type "TW" wire. Air-conditioning wiring, also type "TW", pulled in at the same time, was carried to the outlet nearest the window in which a unit would be installed. From there a separate air-conditioning circuit, in metal surface raceway, was taken over to the unit location. Thus, by using existing conduit practically throughout, it was possible to install air conditioning in apartments. Instead of the original two conductors per conduit, they now carry four. Incidentally, the air-conditioning outlet was developed by the staff *(Figure 2)*. It is an integral, three-prong, 20-amp receptacle with fuse and fuse cover on a two-gang plate. No comparable receptacle for window air-conditioning units had been devised when this work was in progress. It has since become a standard trade item.

All raceways were installed in the initial step of the over-all program and so arranged that if the first set of 500-mcm AVA cables became overloaded, risers of the same size could be run in as needed. Also, with raceway installation behind them, masonry patching could be finished once and for all; tenants need not be inconvenienced again nor public hallways be periodically cluttered with labor and materials.

During the first year the air-conditioning program was in operation, all reserve originally built into service feeders was exhausted. A second canvass of the tenants disclosed enough continued interest to warrant moving into the second step of the program. Started in the latter part of 1954—and, as of this writing, about completed—this step consisted of running additional 4-in. conduits and reinforcing services from the street to the main switch of all buildings. With Peter Cooper Village spreading over 18.1 acres, much of it planted, a vast amount of expensive excavation work was necessary. Moreover, future loads might be heavy enough to require further reinforcement from the street, which would have meant further excavation work had not management again come up with a practical decision. Instead of bringing in the one additional conduit called for in this phase of the program, they brought in three times the number originally installed and pulled a new set of 500-mcm cables into only one of them. The remaining 4-in. conduits are spares, ready for future demand and obviating the necessity for further excavation.

Originally a 600-amp service switch for electric power, lighting, and other equipment had been installed in each building. In an effort to coincide with the increased load, a new 600-amp switch was added for the air-conditioning riser only. However, should the total house and air-conditioning load eventually exceed the safe continuous capacity of the present service switch, all original service equipment will be modified so that ultimately each building will have one 600-amp switch for lighting and apartment use, plus as many as three service switches for air-conditioning risers. This, of course, would represent the final step in the program, as would enlarging and changing metering equipment and reconnecting apartment and air-conditioning risers accordingly. Added electricity for this increased load would be available by pulling in extra feeders from the street in the spare conduits installed in anticipation of just this future load.

All work has been accomplished during the regular working days—no Sundays or other overtime. Not once was any part of the electric service in any of the buildings interrupted nor will it be when new reinforced services are tied in. Meanwhile—and fully co-ordinated with the Peter Cooper program—the utility company was reinforcing its own service in the streets. There was not one dead-end in the entire undertaking, including the long-range view of the financing and the ultimate installation of air-conditioning units.

Clear-cut, definitive specifications cover all unit installations—number permitted in each apartment, type, size limitations, electrical and installation requirements. To hook up to the air-conditioning setup there is a connection and window-use charge of $125 per unit. In addition, there is an annual service charge of $60 per unit. In other words, the total first-year charge for each unit is $185, whether it is ⅓-, ½-, or one-ton size; $60 per unit will be charged each year thereafter. Tenants must buy their own units and install and maintain them in full accordance with specifications and requirements. Installations are checked by the management's representatives for compliance with Peter Cooper's regulations. Special attention is given to proper installation, appearance, quietness of operation, watertightness, amp and power-factor requirements. Units must be 120-v, single phase, with power factor not less than 75 percent; maximum amp permitted for each size unit to be not more than that specified. Units must not disturb other tenants. Installations must be airtight as well as watertight.

Cost of the current reinforcing program is estimated at about $750,000. However, if the time comes that tenants in all of the 2495 apartments in the development have each installed only *one* air-conditioning unit—and that is entirely possible—cost for the current program will have been reduced by $311,875. Various tenants will have installed more than one unit, resulting in further reduction. The initial hook-up fee of $125 per unit covers the occupancy period of that tenant in that apartment. Should he move and the incoming tenant also decide to have air conditioning, he too must pay an initial hook-up fee. No matter how you examine it, the program was well blueprinted, well-thought-out by the management. It has many sound features that owners of presently inadequately wired buildings might consider.

fire protection by localized venting

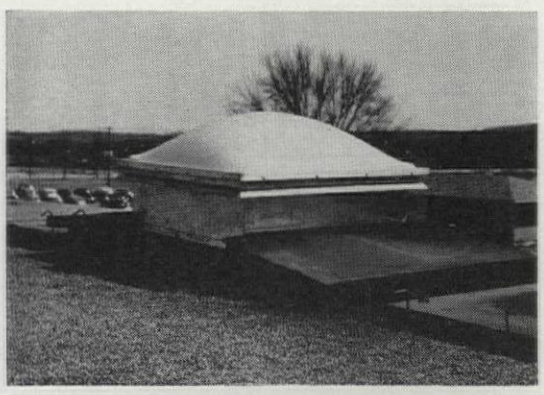
Although the use of noncombustible materials for industrial structures is necessary for fire protection, architects and engineers often overlook the fact that this can be of less importance than providing access to a fire and ventilation of the products of combustion. Localized venting facilitates both access and ventilation.

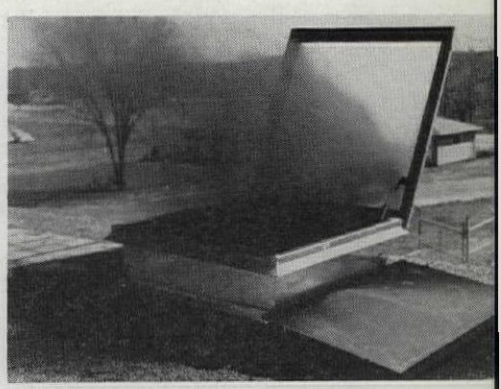
In large industrial plants, especially those for assembly-line production, manufacturing operations make it impracticable to break up the interior with fire partitions. Consequently, if a fire does occur, intense heat, smoke, and toxic gases rise to the ceiling and then mushroom through the entire building. Thus, extreme damage can be caused in areas not directly threatened by fire. Structural steel is deformed by intense heat, which also ignites combustible materials and releases sprinkler valves; but, even more important, smoke and heat prevent firemen from entering the building to extinguish the fire.

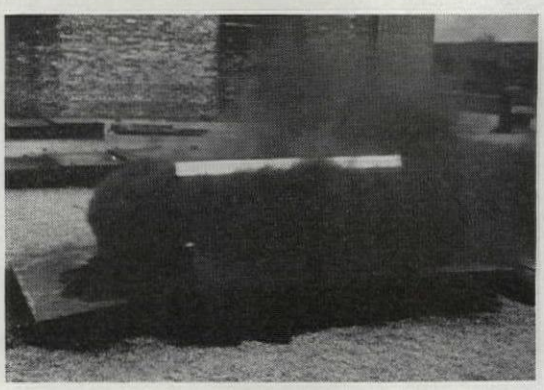
Localized venting simply means placing openings or hatches in the roof in order to exhaust heat, smoke, and flames. By creating a *controlled* draft to eliminate products of combustion, firemen can fight the blaze within a confined area and, in buildings containing highly combustible materials, venting can delay the spread of fire long enough to evacuate personnel.

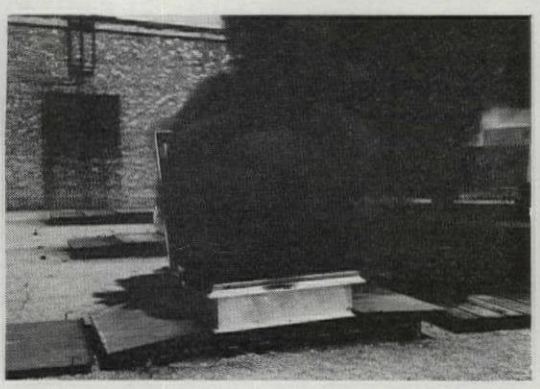
Recent tests conducted by Factory Mutual Laboratories of Boston and Wasco Products, Inc., Cambridge, Massachusetts, substantiated the value of localized venting. A 40′ x 60′ bay in a noncombustible building was defined by corrugated-iron curtains, five feet deep, hung at the ceiling; fire, fed by gasoline, was sustained for 15-minute periods. In tests without venting, spectators were quickly driven from adjacent bays by heat and smoke, which spread across the ceiling and then dropped to floor level; but when open hatches or automatic vents were used, observers were able to watch the entire test. The automatic vent tested —ordinarily sealed weathertight—pops open when a fusible link melts. Although it took a minute and a half to open, once it did, the automatic vent proved as effective as a hatch of the same area. The photos *(below)* show the vent opening and releasing products of combustion.

While the tests proved the effectiveness of localized venting, they also showed that fire curtains must be used with vents to insure the chimney effect. It was found that: (1) the more barriers used and the greater their depth, the more effective the vents; (2) small openings in fire barriers for overhead equipment and pipes do not seriously affect their efficiency; and (3) where vent area is limited, the chimney effect is increased by adding a stack above the roof. Factory Mutual representatives emphasize, however, that venting does not eliminate the need for sprinklers: vents and curtains check the spread of fire, but sprinklers and firemen are needed to extinguish it.









importance of hot-water temperature control

One of the "headaches" that afflict owners and managers of buildings in cities where the water is corrosive, is replacing pipes because of damage done by action of the water. This damage especially affects the hot-water distribution systems, if the water is overheated.

The more corrosive waters are usually the soft waters (those with a low content of mineral salts), such as the supplies of New York and the majority of cities along the Atlantic seaboard. However, certain hard waters may also be corrosive if the mineral salts are largely calcium and magnesium sulphates. The Schuylkill River water in Philadelphia offers an example.

Heating the hot-water supply of office or residential buildings above 140 F is unnecessary and is destructive to the pipes. It speeds up the clogging process that renders iron pipe useless and it speeds up the dezincification process that weakens the structure of yellow-brass pipe. Since a temperature of about 120 F is as high as the human hand can endure, a temperature of 140 F should suffice for most purposes. If very hot water is required for a particular purpose, such as dishwashing in a restaurant, consideration should be given to the installation of a booster heater for the restaurant water.

Although suitable anticorrosion treatment applied to water will minimize corrosion of the piping under normal conditions, its effectiveness will be diminished if the water is greatly overheated.

To obtain a general picture of the hot-water situation in New York, temperature-recording devices were recently installed in a group of typical buildings. Two of the temperature-record charts are shown *(Figures 1 and 2)*. The record is made as follows: The circular chart is set on a machine that has a revolving-disk mechanism—like a phonograph turntable—which causes the chart to revolve very slowly, making a complete revolution in one week. The days and hours are shown on the rim of the chart. During the week, a pen, controlled by a thermometer device on the hot-water supply main, traces a line that continually registers the temperature of the water.

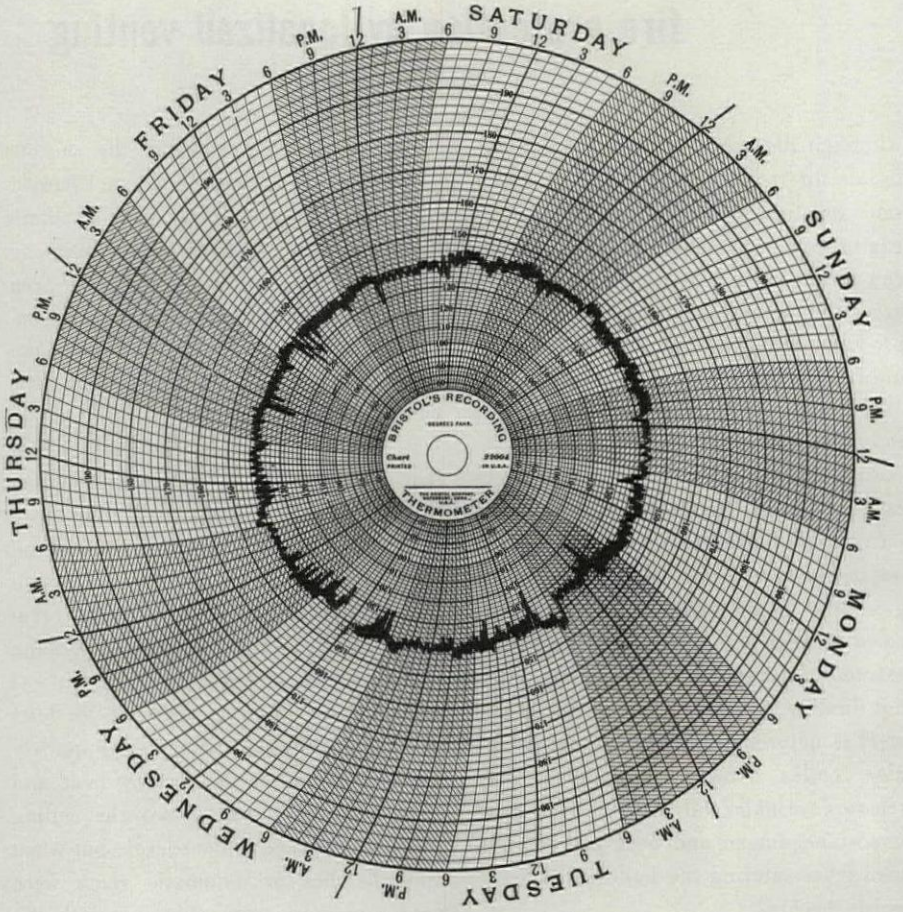


Figure 1

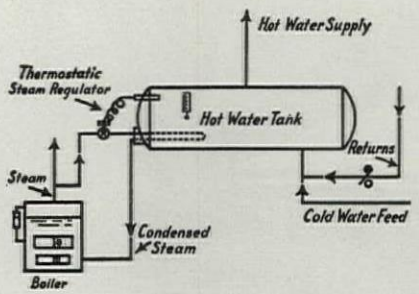


Figure 3

The temperatures are indicated on the lines that radiate from the center of the chart.

The record obtained in a building where there is good temperature control is shown *(Figure 1)*. Examination of the chart will show that, except for occasional dips, the temperature of the water supplied to the tenants remained near 140 F practically the entire time. Even during the dips, the temperature did not go below 120 F. In this building, the tenants are assured of a supply of hot water at the right temperature at all times.

Observe what was going on in the building represented by the other chart *(Figure 2)*. The temperature varied continually over a wide range, from 150 F to over 200 F. In fact, at many times the temperature was in excess of 200 F—the highest reading the chart will show. At a temperature above 212 F some of the water will instantaneously flash into steam when a hot-water faucet is opened. The person who turned on the water

by W. J. Ryan*

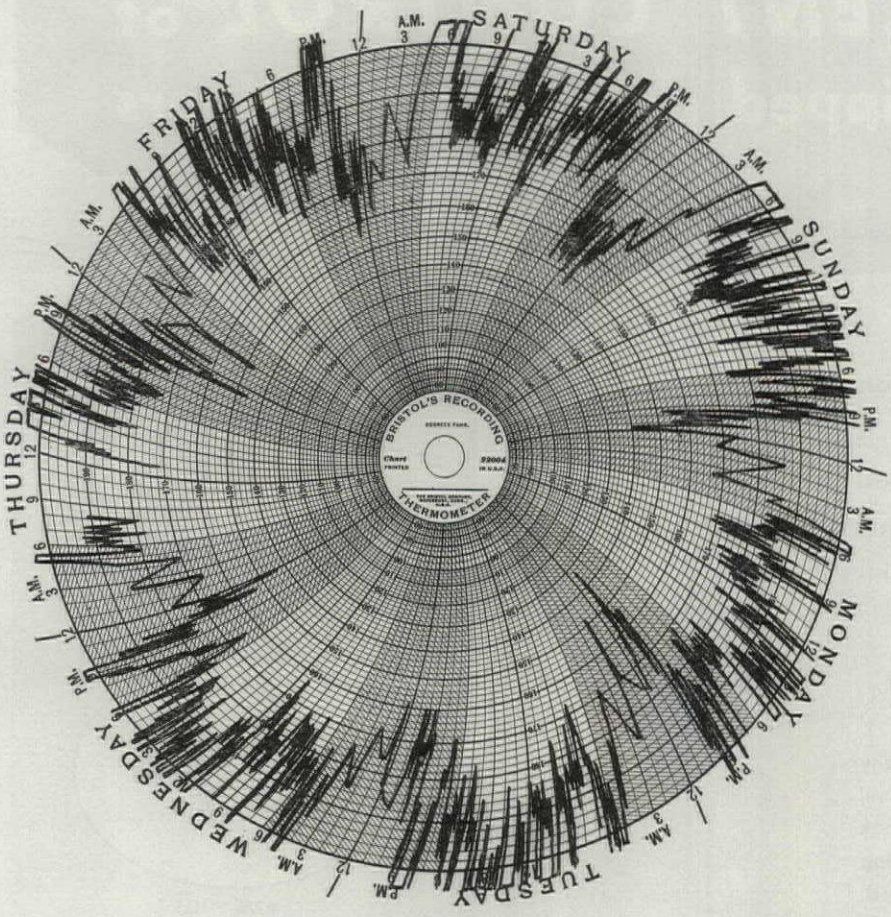


Figure 2

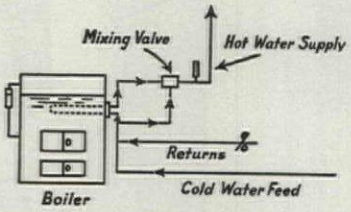


Figure 4

could easily be scalded. In addition to increasing the corrosiveness of the water, overheating and wide fluctuations of temperature cause excessive expansion and contraction strains that help initiate leaks at screwed joints. If the building has iron pipe or iron hot-water tanks, corrosion may give the water a rusty color. The tenants will then waste large volumes of water hoping for clean water to appear. This wastes heated water and overloads the hot-water generator—aggravating an already bad state of affairs.

Conditions such as those shown *(Figure 2)* were found to exist in many buildings and are doing enormous damage to the piping—damage which the owner may be unaware of until he is faced with an extensive and expensive repiping job.

Controlling the hot-water temperature is not difficult and usually requires very little, if any, expense for equipment. The first requirement is to see that a thermometer is installed on the hot-water supply main at some convenient point where the engineer or superintendent can read it. If the temperature is too high at any time, the operation of the controls should be investigated.

If hot water is supplied from tanks heated by steam coils, it is the usual practice to install thermostatic regulators on the lines that admit steam to the coils. Essentially, this regulator consists of some type of diaphragm valve controlled by an expansion element immersed in the tank water. It is well to have a thermometer on each tank *(Figure 3)*.

If the water is heated by an instantaneous heater, a thermostatic mixing valve should be installed on the hot-water supply line from the heater and care should be taken to keep the valve adjusted to control the temperature *(Figure 4)*. Incidentally, the hot-water supply piping between the boiler and the mixing valve should be red brass, regardless of what kind of pipe is used in the remainder of the system. Red-brass pipe is required because the water in that particular part of the system is at a very high temperature. Irrespective of what means are used to heat water, it is not difficult to keep the temperature under control, if the importance of doing so is understood.

Some people have the misconception that the hot-water supply should purposely be overheated in order to provide hot enough water at distant outlets. This should not be done. The proper way to secure hot water throughout the building is to see that circulation is maintained by means of a thermostatically controlled circulation pump on the main return. Such a pump should be installed wherever the circulation is sluggish because of pipes being partly clogged with rust or because of long horizontal lines of piping.

Whenever occasion affords, it would be well for architects and engineers to emphasize the need for hot-water temperature control, not only to protect their clients' investments in buildings but also to protect themselves against possible unjust criticism arising from too rapid failure of the pipes in the buildings they design.

* *Technical Manager, Water Service Laboratories, Inc., New York, N. Y.*

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no free opening or closing action . . . no unexpected slamming . . . no rattle or latching click. Equipped with these GJ devices the door functions silently with the staff in complete control.

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ARM PULLS

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A SILENT DOOR LATCH

with rubber roller, silently engages strike, without annoying click. Closed door will not rattle.

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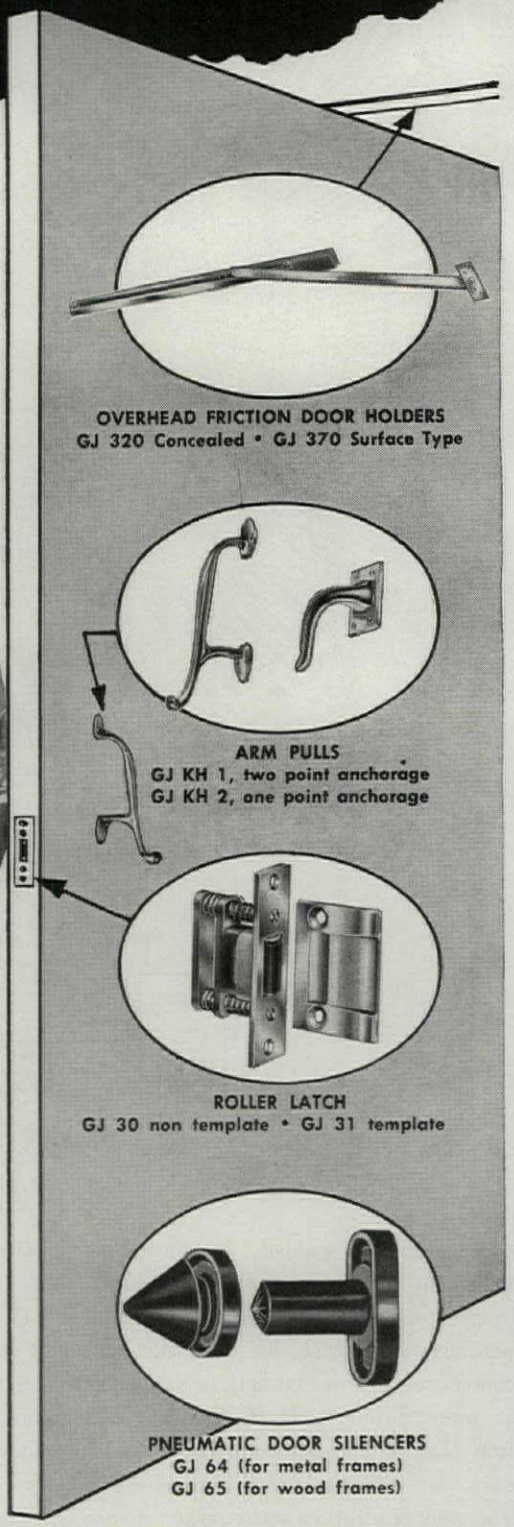

OVERHEAD FRICTION DOOR HOLDERS
GJ 320 Concealed • GJ 370 Surface Type

ARM PULLS
GJ KH 1, two point anchorage
GJ KH 2, one point anchorage

ROLLER LATCH
GJ 30 non template • GJ 31 template

PNEUMATIC DOOR SILENCERS
GJ 64 (for metal frames)
GJ 65 (for wood frames)

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Write for complete catalog of GJ door controls for Hospitals

by Ben John Small

spec small talk

storm over storm sash

So this friend of mine says to me, "You're an architect, aren't you, tell me what kind of combination storm-sash and screens should I buy?" So I give him my best Beaux-Arts look and say to him, "You should have -er -er-, I mean, you ought to buy, that is to say, you know the one that goes up and down, the one that's made of steel or is it aluminum?" So he says polite like, "That's fine, what else is new?" I go back to the office and try it on my seven partners and three associates and they are of no help. I bat the fat with my AIA friends, my CSI friends, my in-laws. They are no help either! Egad, what a fertile field this storm-sash and screen business! Everyone is in the act, about 200 of them, to be roughly precise. You too can be successful; why not convert that little old basement room into a storm-sash and screen plant? Knock off a hand-made sample, hire a smooth talker, and wait to groan about your new tax bracket.

This product is made of many materials, but let us just discuss the aluminum variety. Now aluminum is a peachy, keen material, but in this frame of reference it can be had in formed-sheet form, open-channel type, extruded, light-gage, heavy-gage, rust-proof, warp-proof, mill-finish, anodized-finish, 6063T5 Alcoa heat-hardened, with and without water-white methacrylate lacquer, two-, three-, or four-track, interlocking meeting rails, no money down, blister-contact meeting rails, five years to pay, life insurance policy included, calking required, finger-tip operation, no calking required, foreign glass only, American glass only, no more storage problems, aluminum mesh, mesh plastic, floating-expansion frame, sill-expansion channel, reinforced corners, no fuel bills to pay, six patentable features, extruded expanders, trade in your old sashes, tongue-and-groove weatherstripping of molded vinyl, schmynl or felt, 24-hour service, hyper-tension screens, floating frames, felted grooves, spring-tension plus locks, precision die-cast latch bolts, do-it-yourself installation, no down payment, removable vinyl spline for reglazing, dry-eyed weep holes, prowler-proof invisible screen locks, quarter screens, one screen, two screens, aluminum screws, stainless-steel screws, welded corners, beware of imitations, riveted corners, burglar-proof, guaranteed by *Good Housekeeping*, self-washing glass, free insects, free estimates, slides by friction control, slides within a track, glides on track edges; look ma! no slides, home trial demonstration, washed glass, unwashed glass, cleaned aluminum, our representatives are bonded, uncleaned aluminum, sash stops at three predetermined points, at any point, guillotined fingers and heads of small children, flush with building face, guaranteed by Aluminum Skill-craft, recessed from building face, projected from building face. I have examined a dozen different models and am here to report that I abhor them all and vow to design only windowless buildings

Well, now that I have that hunk of petulance off my hollowed chest let me give you t'other side of the picture. The combination storm-sash industry is a whopper and does an annual business around $200,000,000. It is about equal in size to the asbestos, cement, and shingle industries and larger than the oil burner, linoleum, house fan, household water heater, and my business. The 40-member, four-year-old National Combination Storm Window and Door Institute, formed to promote the code of ethics observed by responsible manufacturers in the industry, avers that the industry is the largest user of aluminum for a consumer product and a major user of glass. A collateral stimulus to the production of storm sash has been created by air conditioning, and I am powerful glad my client did not ask me about window air conditioners because that is one of the many subjects a lot of which I know little. I would write more on the subject of storm windows but I cannot since my right hand is heavily bandaged on account of it got mangled removing the removable sash for cleaning by mama.

However, I can muster up a little energy to dispel a common notion that storm sash is the end all to condensation problems. In a home, condensation is generated by the tea kettle, heating the baby's bottle, taking or giving a shower, washing mashines, ironing, laundering dishes, cooking, drying clothes, breathing. To overcome these condensation producers it is well to open a couple of windows for a couple of seconds and close them very slowly in order to give you time to check on other condensation producers such as leaky roofs, bad drainage situations around the home which cause moisture vapor to enter therein, to turn off the humidifier in your warm air furnace to prevent vapor build up, to check the skin of the home for seepage. If that does not do it then, by golly, use a mechanical dehumidifier; install exhaust fans in kitchen, bathrooms, and laundry; install storm sash (don't ask *me* what kind); cross ventilate crawl spaces, covering the naked earth with roofing felt; install attic louvers (large ones); and vent such equipment as water heaters, ranges, refrigerators, clothes dryers. Oh, my aching hand! Anybody got a splint?

by the numbers

ΕΙΣ

Who carries in his little brain
The ingredients of varnish stain?
The spec writer.
Who knows what constitutes a seal
To keep the moisture from the steel?
The spec writer.
He knows the melting point of brass,
Unites the inches of the glass,[1]
And never lets a poor brand pass—[2]
The spec writer.

Δ Ο

Who chooses the vinyl for the floor?[3]
The hardware for the hollow-core door?[4]
The spec writer.
And matches the wire to the load
(Per the Fire Underwriters' Code)?
The spec writer.
Who guards the wood against the rot,
The limestone from an asphalt blot,[5]
And ties contractors in a knot?
The spec writer.

ΤΡΕΙΣ

Who made the old-time blackboard green,
And keeps enameled fixtures clean?[6]
The spec writer.
Who sees that the nonslip tread nonslips,[7]
And measures her seat to the teacher's hips?
The spec writer.
Who provides rough masonry for the halls?[8]
Heptagonal classrooms with five walls?[9]
A basket for storing basketballs?
The spec writer.

ΤΕΣΣΑΡΕΣ[10]

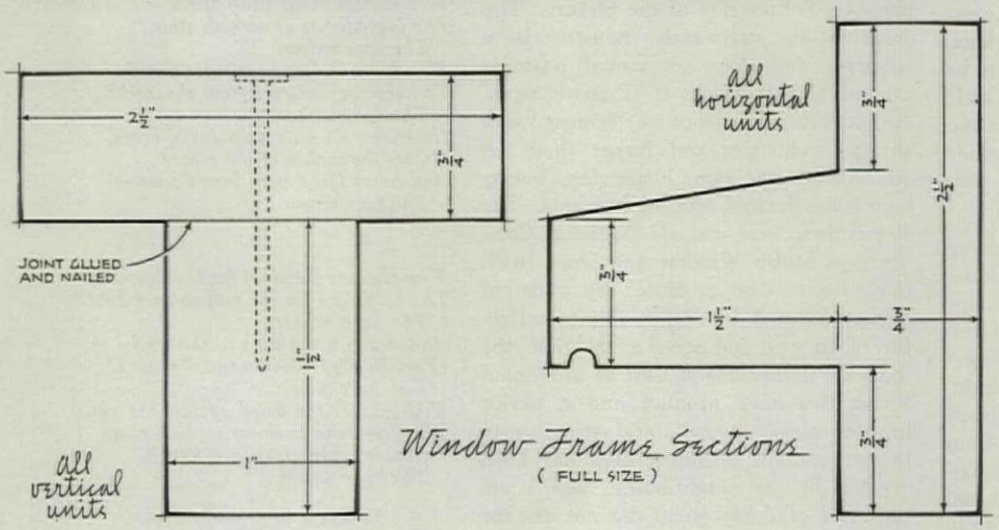
Who's metallurgist, chemist, engineer,
Atomic expert, and sometimes seer?
The spec writer.
He's learned a thrust key from a wing,[11]
He always remembers everything—
The spec writer.
Whose mind is keen as a razor blade?
Whose heart is pure and unafraid?
Who's often sadly underpaid?
You guessed it!

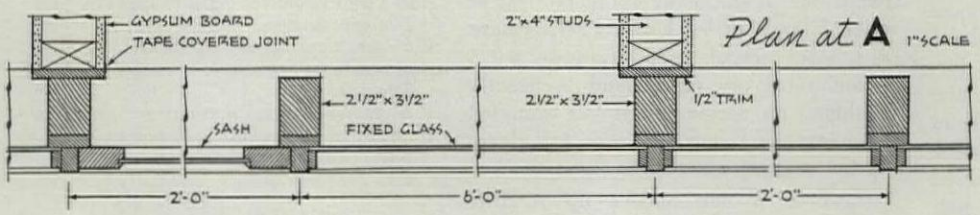
AMICUS LUCIFER

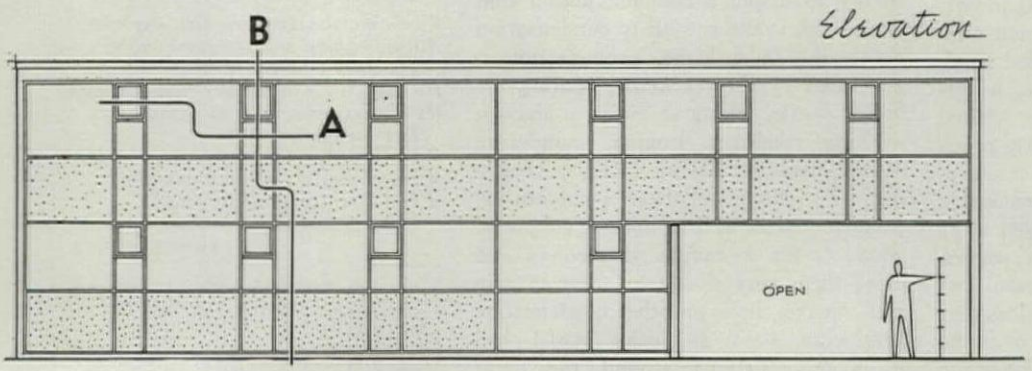
[1] *Vide:* SPEC SMALL TALK, *4/53*
[2] *Ibid., 1/55*
[3] *Ibid., 12/54*
[4] *Ibid., 4/55*
[5] *Ibid., 6/54*
[6] *Ibid., 9/54*
[7] *Vide: Heathcote School, Scarsdale, N. Y.*
[8] *Thought you caught me, eh? That's modern Greek. Anyone knows the old-fashioned kind.*
[9] *Vide:* SPEC SMALL TALK, *3/55*

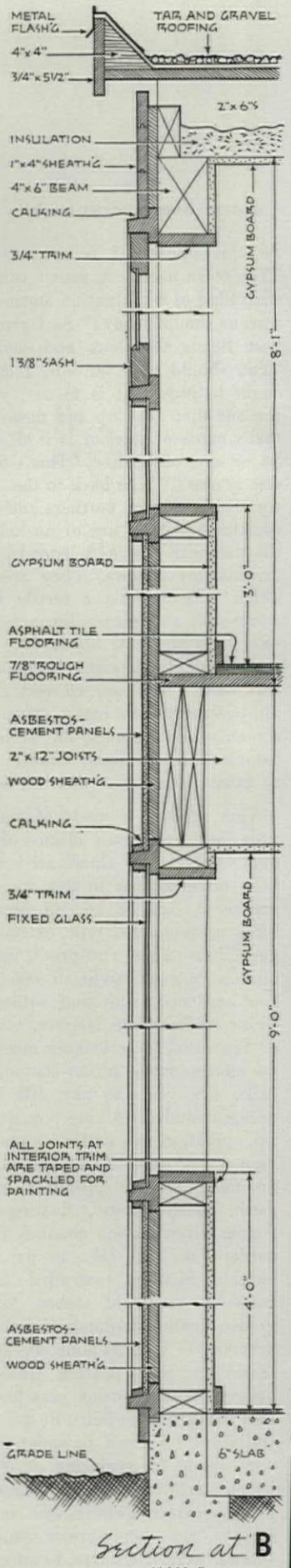
wall section

DEARBORN-MASSAR





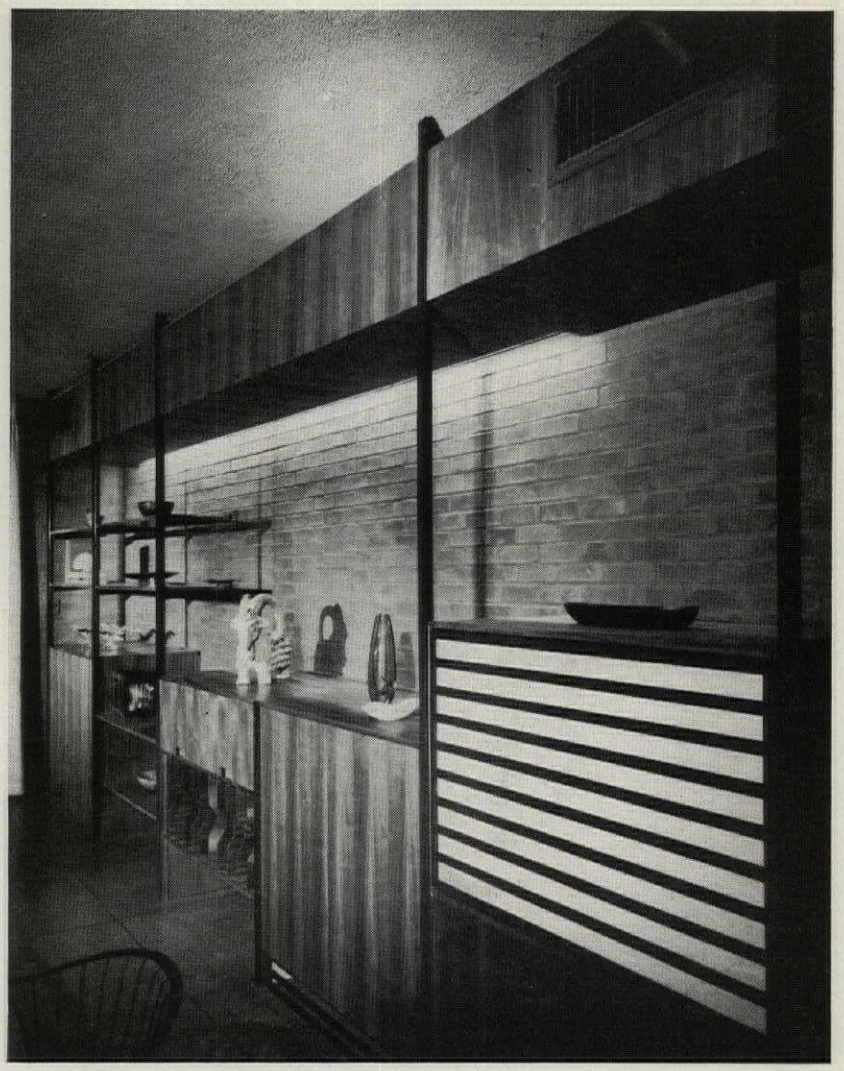




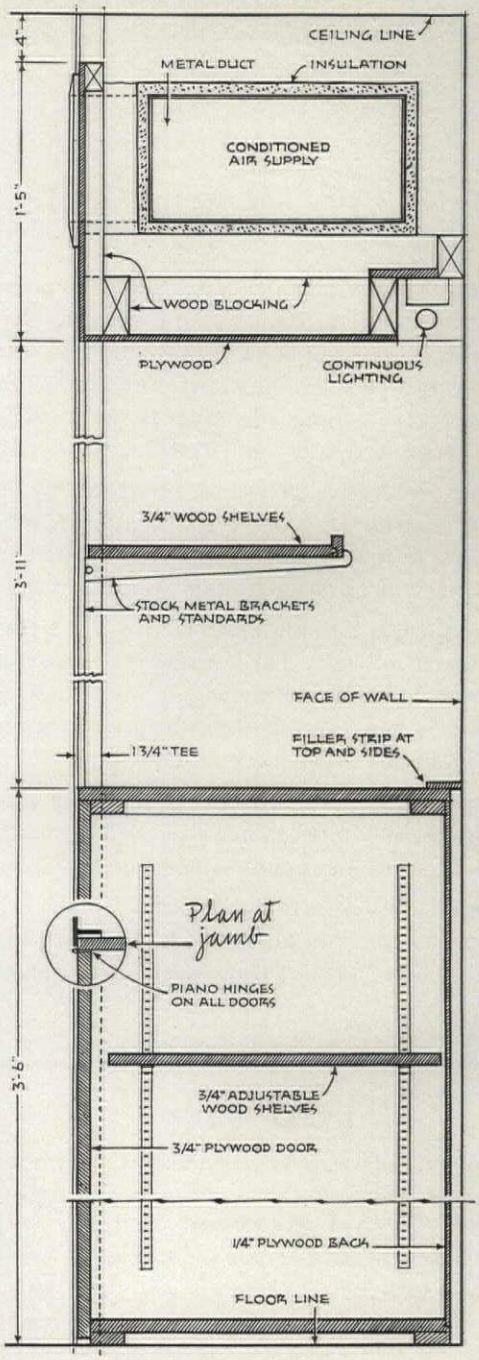
HEALTH CLINIC, Seattle, Wash.

Paul Hayden Kirk, Architect

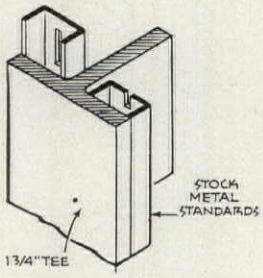
storage unit



ULRIC MEISEL

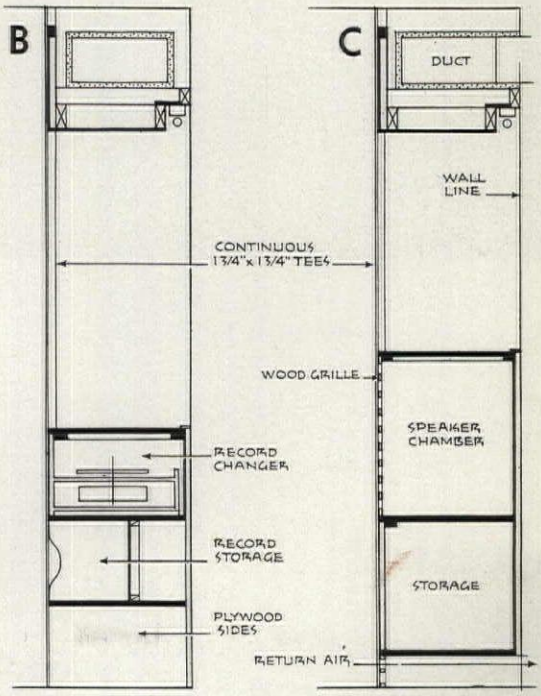


Section at A 1" SCALE

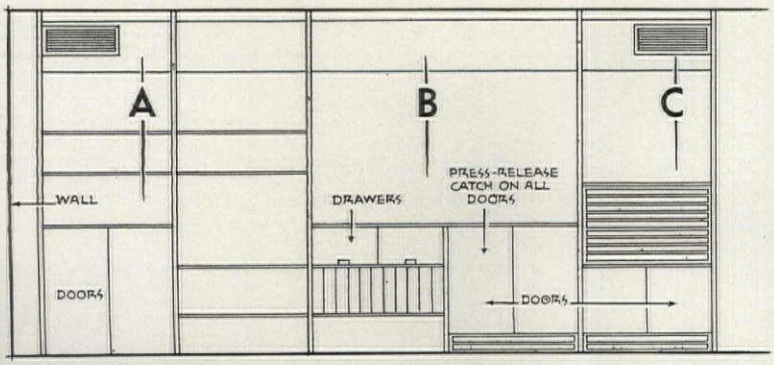


Bracket Support

Sections 3/8" SCALE

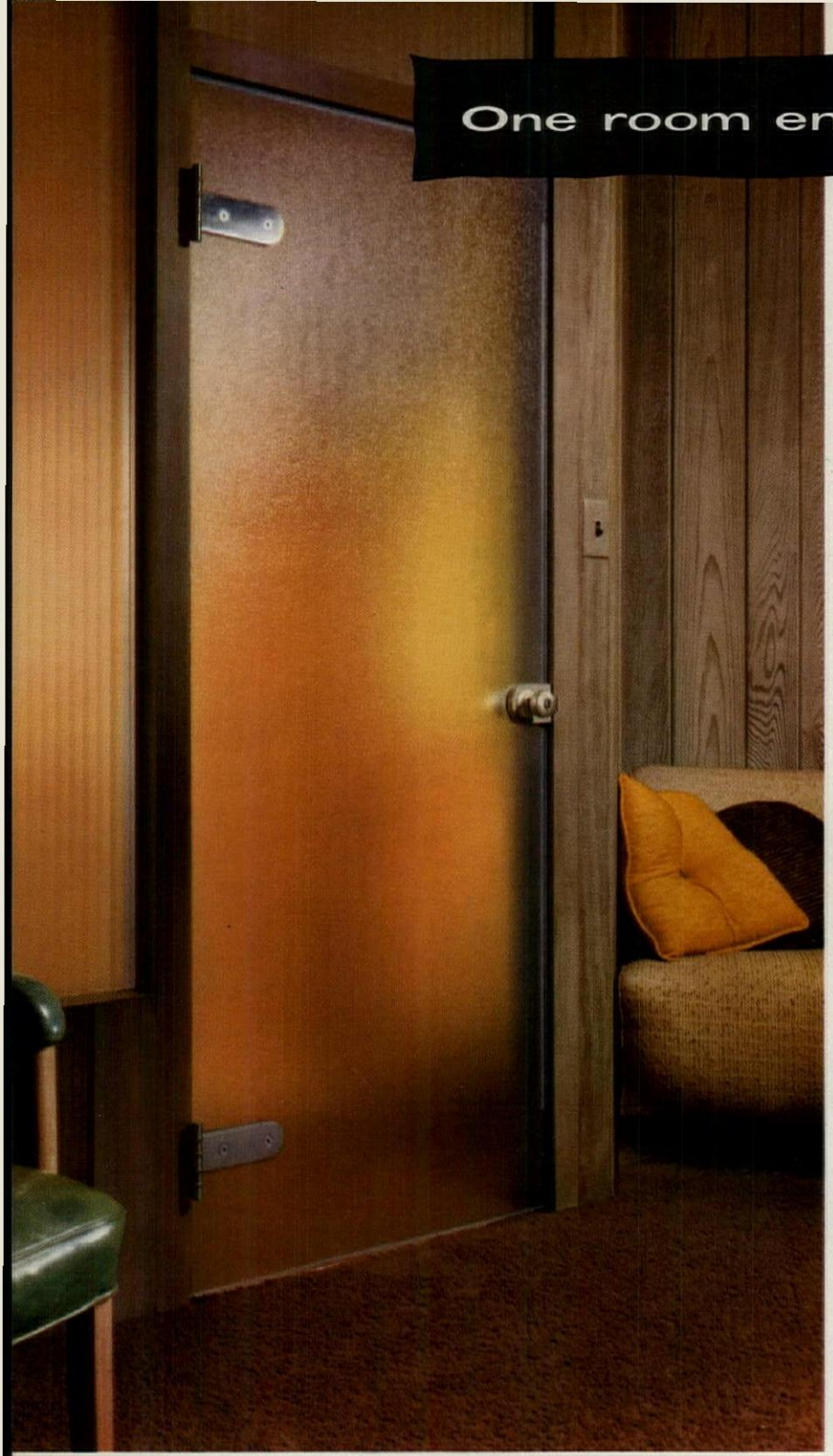


Elevation 3/16" SCALE



HOUSE, Dallas, Tex.

Enslie Oglesby, Jr., Architect



One room enhances another...

through this door

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Reversible—can be used right or left hand.

Standard Sizes—

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2'8" x 6'8"	2' 7 1/16" x 6' 7 1/16"
3'0" x 6'8"	2'11 1/16" x 6' 7 1/16"
3'0" x 7'0"	2'11 1/16" x 6'11 1/16"

For more complete information, see the Securit Door insert in Sweet's Architectural File.

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George Miles Ryan Studios

Curved mosaic tile wall/ De-Puy Sorkness Clinic, Jamestown, N. D./ Thorshov & Cerny, Architects

Louise Sloane

waiting rooms

The national, widespread trend toward specially designed doctors' offices and clinics provided rich and diversified material for the book *Doctors' Offices and Clinics: Medical and Dental* by Architects Paul Hayden Kirk and Eugene D. Sternberg, the latest PROGRESSIVE ARCHITECTURE Library Book, published this month by Reinhold Publishing Corporation. All the interiors shown in this section were selected from this book.

Although the five examples represent work of broad regional range (North Dakota, Texas, Washington, Oklahoma, Colorado), they have much in common beyond the denominator of good design. Here are patients' waiting rooms that extend themselves to relieve the fear and tedium that normally accompany this unhappy necessity. Free use of color, of warm natural materials, of light both natural and artificial, contribute to a relaxed and pleasant atmosphere. Furniture, fabrics, and accessories of a residential nature provide both comfort and psychological relief. The chill, stiff "waiting room look," with chairs in dreary alignment around the walls, has been replaced by group arrangements of furniture, placed for a feeling of homelike privacy.

Each architect has used some individual detail to help create an agreeable environment. Thorshov & Cerny, in the De-Puy Sorkness Clinic, introduce a fireplace, brightly cushioned benches, a vividly colored mosaic tile wall as appealing elements in the patients' lounge. At the Children's Clinic, Wiltshire & Fisher provide diversion with a mobile, an aquarium, in an area within sight of, but apart from, the parents' waiting room. In the Lake City Clinic, Paul Hayden Kirk orients the waiting room to a slate-paved garden, designed as virtually a part of the room itself. Paintings, lamps, a writing desk, and a color scheme of burnt orange with purplish-brown add further interest. Coston & Frankfurt, in the Bassett Clinic, use plants, bright cushions as accents, and provide both television and concealed accommodation for outer clothing in a natural birch divider unit. At the University Park Medical Clinic, Eugene D. Sternberg effectively creates interest with a double-height ceiling, curved flagstone walls in contrast with mahogany paneling; and provides a writing desk for convenience.

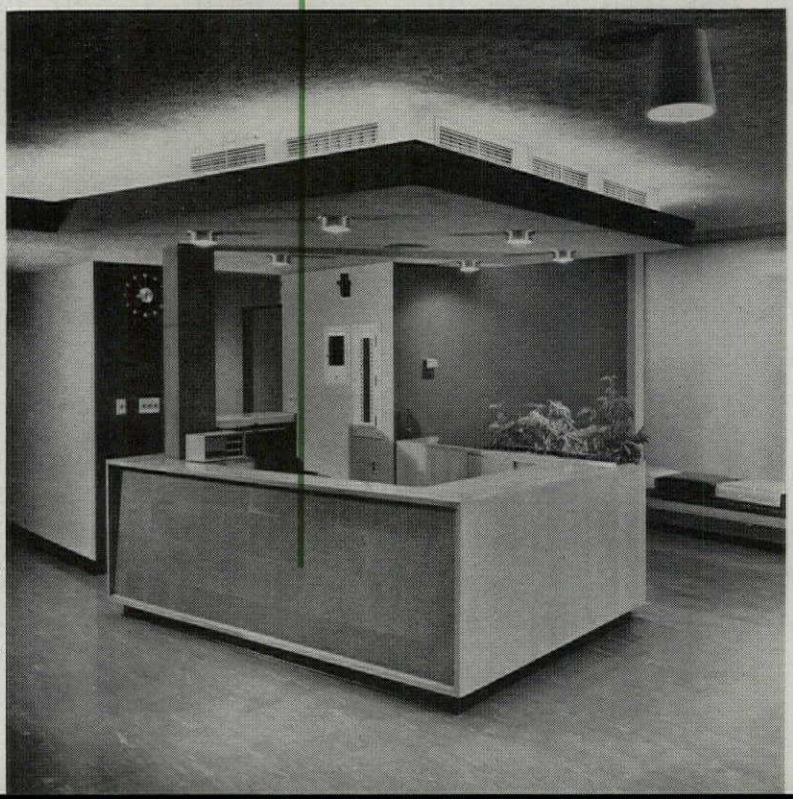
waiting rooms

client	De-Puy Sorkness Clinic
location	Jamestown, North Dakota
architects	Thorshov & Cerny, Inc.
colors-interiors	Newton E. Griffith
job captain	William J. Miller

black Naugahyde

mosaic-tile wall

cork and Formica



Photos: George Miles Ryan Studios

data

Design Theory: Basic plan to provide clean, uncluttered, pleasant interior. Chosen materials require minimum of upkeep and attention. Spacious lounge with small fireplace, curved mosaic-tile-faced wall, designed to make waiting more pleasant.

Color Plan: Dominant color and pattern in mosaic-tile wall, with alternating stripes of white, yellow, blue, bright red on medium-gray background. Furniture upholstered in black for contrast.

doors and windows

Doors: Hollowcore "Rezo" doors/ Paine Lumber Co., Oshkosh, Wis.

Windows: architect-designed, special.

Glazing: "Thermopane"/Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo, Ohio.

Vertical Blinds: Sunshade Vertical Drape, Minneapolis, Minn.

Fins: "Duran"/ The Masland Duraleather Co., 3236-90 Amber, Philadelphia, Pa.

equipment

E. H. Sheldon & Co., Muskegon, Mich.

furnishings and fabrics

Built-In: architect-designed.

Counter and Table-Tops: Formica Co., 4620 Spring Grove Ave., Cincinnati, Ohio.

Other: Huntington Chair Corp., Huntington, W. Va.

Upholstery: "Naugahyde"/ U. S. Rubber Co., Naugatuck, Conn.

Draperies: "Cohama" casement cloth/ Cohn-Hall-Marx, 1407 Broadway, New York, N. Y.

lighting

Fixtures: General Lighting Co., 1527 Charlotte St., New York 60, N.Y.

Lamps: Lightolier, Inc., 346 Claremont St., Jersey City, N.J.

walls, ceiling, flooring

Plaster: painted/ Martin-Senour Co., 2520 S. Quarry, Chicago, Ill.

Cork: Armstrong Cork Co., Lancaster, Pa.

Mosaic Tile: "Harmonitone"/ Mosaic Tile Co., Pershing Rd., Zanesville, Ohio.

Brick: Belden Brick Co., 700 Tuscarawas Ave. W., Canton, Ohio.

Ceiling: "Zonolite" vermiculite/ Zonolite Co., 135 S. LaSalle St., Chicago, Ill.

Floors: rubber and asphalt tiles/ laid with grain running same direction for "carpet" effect/ Armstrong Cork Co.

accessories

Clock: Howard Miller Clock Co., Zeeland, Mich.

client	Dr. Floyd Norman
location	Children's Clinic, Dallas, Texas
architects	Wiltshire & Fisher
interior designer	Wm. McKee

children's waiting area

Photos: Ulric Meisel

data

Design Theory: Semiseparated room for children, complete with mobile, aquarium, child-scale furniture. Combined natural and artificial lighting. Exposed-beam ceiling, generous use of natural wood for warm look.

Color Plan: Closely related natural colors—mahogany, redwood, tan, and beige.

doors, partitions, walls

All: mahogany plywood/ U. S. Plywood Corp., 55 W. 44 St., New York, N.Y.

windows

All: "Auto-Lok"/ aluminum projected/ Ludman Corp., N. Miami, Fla.

furniture

Chairs: Herman Miller Furniture Co., Zeeland, Mich.

Other: architect-designed, custom-built.

ceiling, flooring

Ceiling: perforated "Fiberglas"/ Owens-Corning Fiberglas Corp., Nicholas Bldg., Toledo, Ohio.

Flooring: rubber tile/ B. F. Goodrich Co., 36 Nicholas Ave., Watertown 72, Mass.

mahogany plywood

redwood beams

waiting rooms

Photos: Dearborn-Massar

data

Design Theory: Structural materials chosen for textural interest and contrast—brick, cedar, plate and etched glass. Room oriented to garden on the east; south windows protected by large overhang. Furniture group-arranged for effect of separation.

Color Plan: Brick walls of beige with purplish-brown manganese spots. Ceiling stained purplish-brown to match. Carpet, dusty-purple beige. Furniture black, burnt-orange and natural leather.

doors and windows

Partition: ½" plate glass, acid etched.
Windows: plate glass set in wood stops.

furnishings and fabrics

Furniture: Herman Miller Furniture Co., Zeeland, Mich.

Writing Desk: architect-designed.

Fabrics: Knoll Associates, Inc., 575 Madison Ave., New York 22, N. Y.

walls, ceiling, flooring

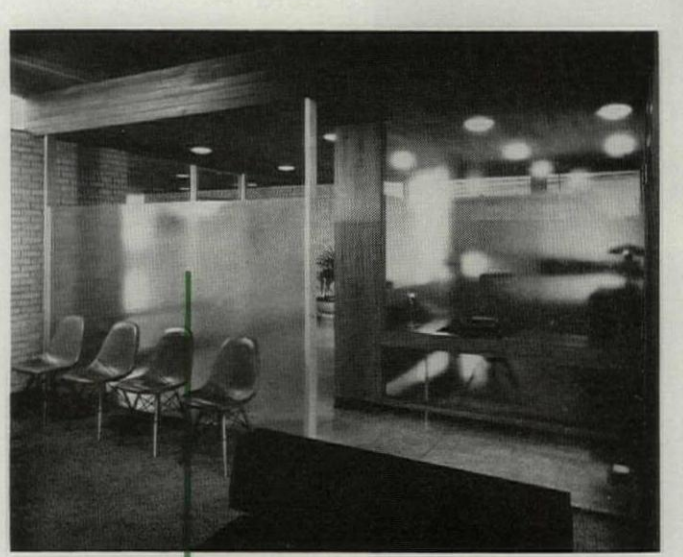
Walls: exposed masonry cavity walls of Hebron brick.

Ceiling: 1"x4" T&G cedar.
Floors: carpet.

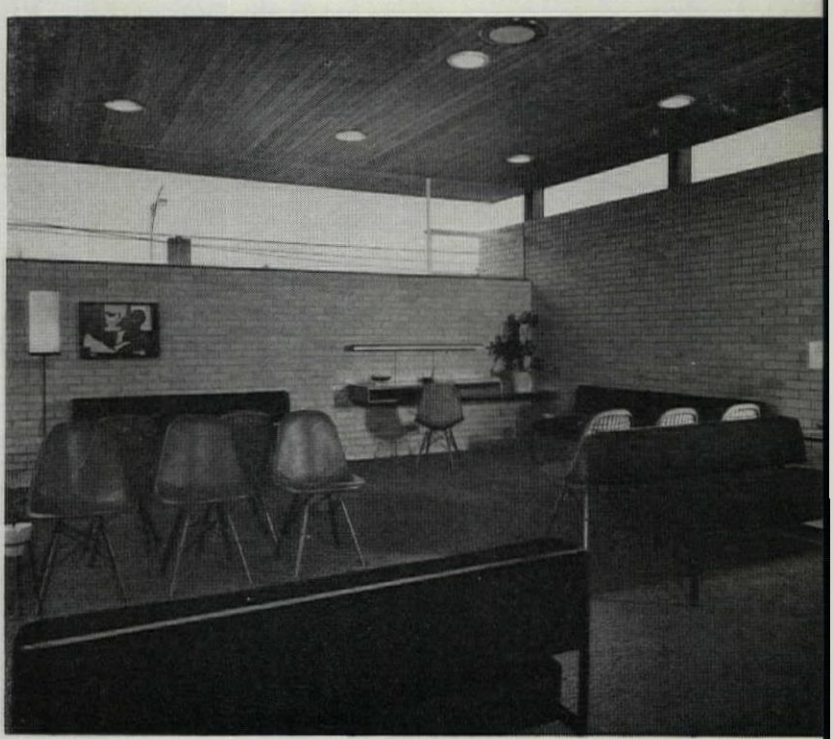
lighting

Plan: overhead recessed lighting combined with portable lamps for reading.

office area

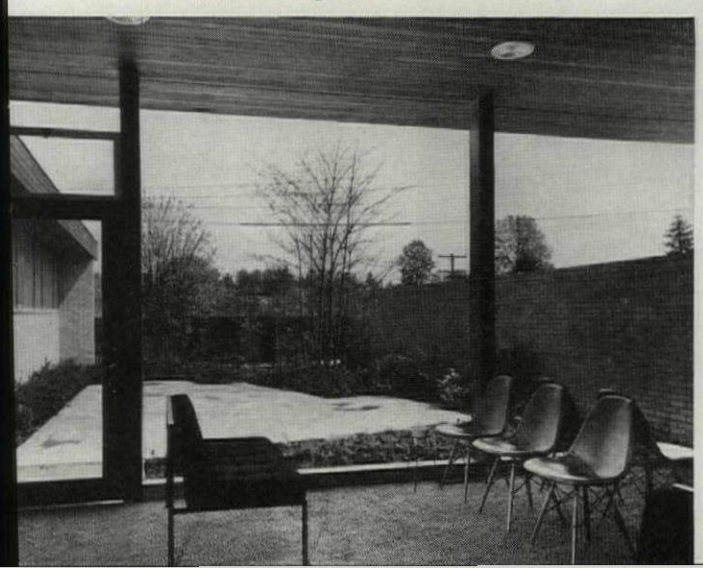


acid-etched plate glass



furniture group-arranged

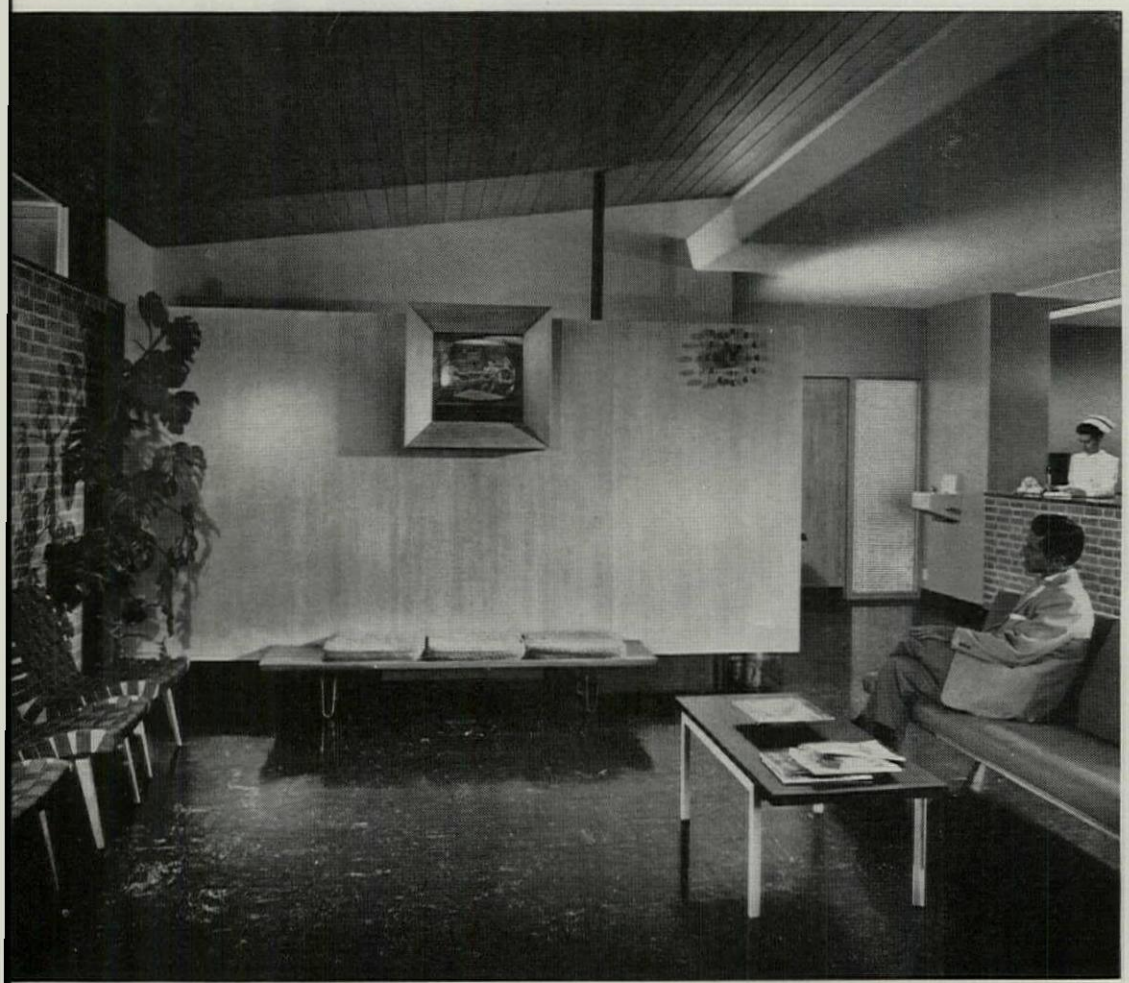
room oriented to garden



clients	Dr. B. J. Goiney & Dr. Robert Roedel
location	Lake City Clinic, Seattle, Washington
architect	Paul Hayden Kirk
mechanical engineer	Richard Stern
landscape architect	Roberta Whiteman
interiors	Del Teet Furniture Co.

waiting rooms

client: Dr. Clifford Bassett
location: Bassett Clinic, Cushing, Oklahoma
architect: Coston & Frankfurt
interiors: New Interiors



data

Design Theory: Room planned to provide a comfortable, relaxing, and colorful environment. Since patients travel as much as 40 miles, and families frequently accompany them, open plan and group seating arranged for overflow.

Color Plan: Contrast of red brick, redwood, black-and-white, and lime green.

doors and windows

Glass: Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Bamboo Blind: Holland Shade Co., 999 Third Ave., New York 22, N. Y.

furnishings and fabrics

Furniture: Knoll Associates, Inc., 575 Madison Ave., New York 22, N. Y.; Herman Miller Furniture Co., Zeeland, Mich.

Fabrics: Knoll Associates, Inc.; Schiffer Prints, 79 Madison Ave., New York. N. Y.

lighting

Lamps: The Heifetz Co., 16 E. 53 St., New York, N. Y.

walls, ceiling, flooring

Walls: hand-made Colonial brick/smooth white plaster; "Kalistron"/U.S. Plywood Corp., 55 W. 44 St., New York, N. Y.

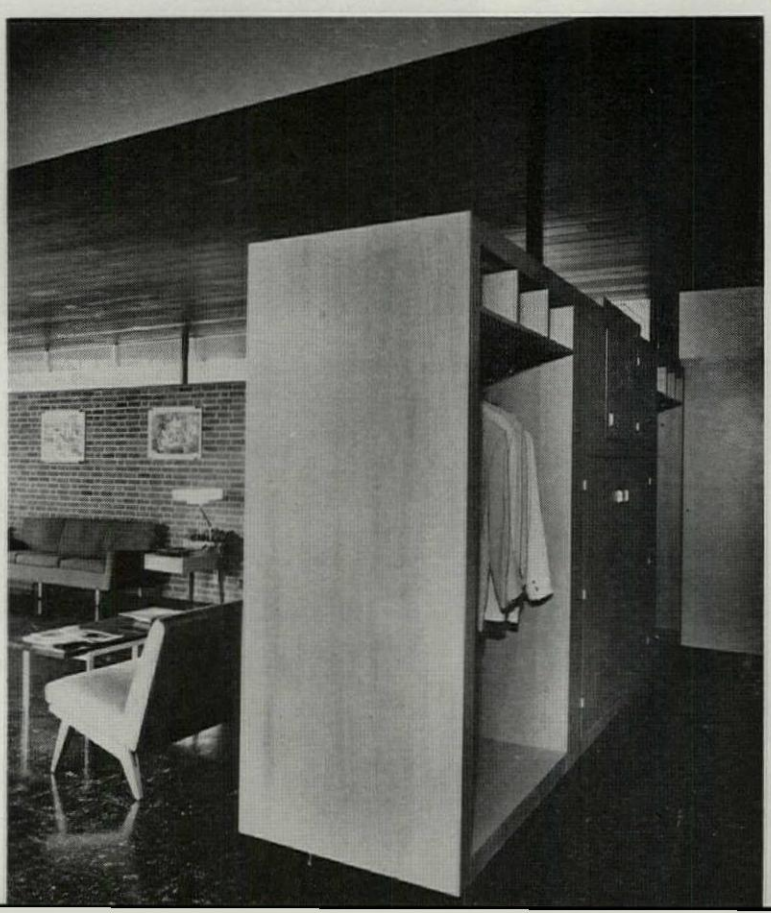
Ceiling: redwood/sand-finished plaster.

Flooring: rubber tile/Goodyear Rubber Co., 1144 E. Market St., Akron, Ohio.

accessories

Planters: Architectural Pottery, Venice, Calif.; Planting/Lavery Nursery, Cushing, Okla.

Photos: Julius Shulman



client	University Park Medical Clinic
location	Denver, Colorado
architect	Eugene D. Sternberg
associate	John Brown, Clinic Manager

data

Design Theory: Room designed to create privacy, relaxation, and efficiency of operation. Curved, flagstone walls direct visitor inside. Low ceiling protects main entrance, directs attention to receptionist's desk and pharmacy window. High, butterfly-shaped ceiling provides indirect lighting through north and south clerestory windows. Seating arranged for comfort, privacy; writing desk for convenience.

Color Plan: Dark-gray flagstone, mahogany paneling and desks. Light-cream draperies and floors. White ceiling and wall fixtures. Dark-brown, yellow, and natural birch furnishings.

doors and windows

Entrance Doors: "Kawneer VBX"/ Kawneer Co., 1105 N. Front St., Miles, Mich.

Windows: fixed glass, wood frames.

equipment

Perimeter Heating; Gas Fired Furnace: American Radiator and Standard Sanitary Corp., Bessemer Bldg., Pittsburgh 22, Pa.

Cooling Equipment: Chrysler Corp., 1119 Leo St., Dayton, Ohio.

furniture

Chairs and Tables: Herman Miller Furniture Co., Zeeland, Mich.

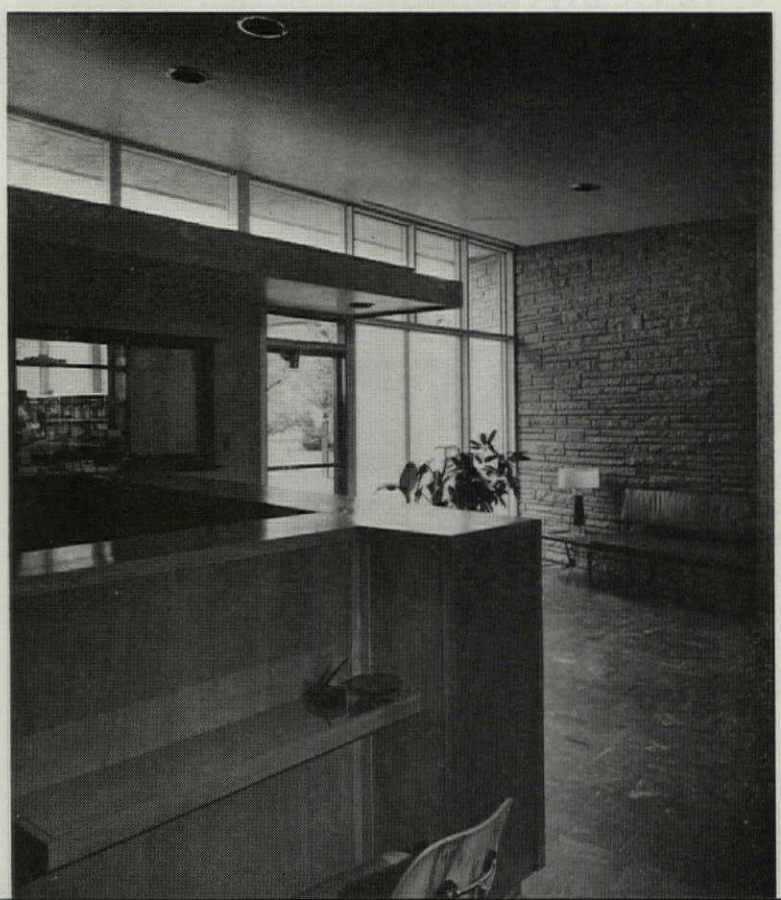
Other Furnishings: architect-designed, custom-made.

walls, ceiling, flooring

Walls: flagstone, mahogany plywood.

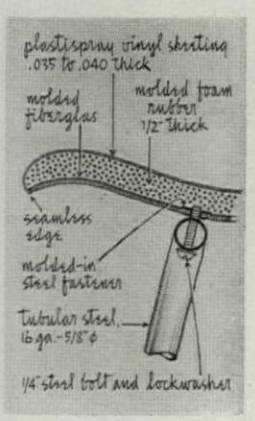
Ceiling: plaster.

Flooring: rubber tile.

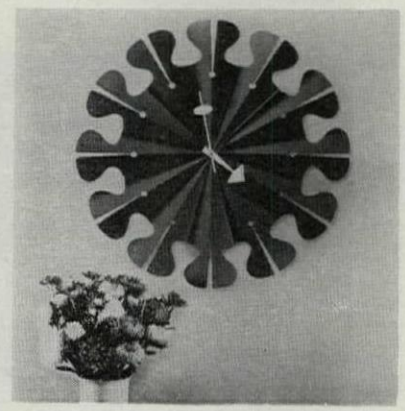


Photos: Guy Burgess

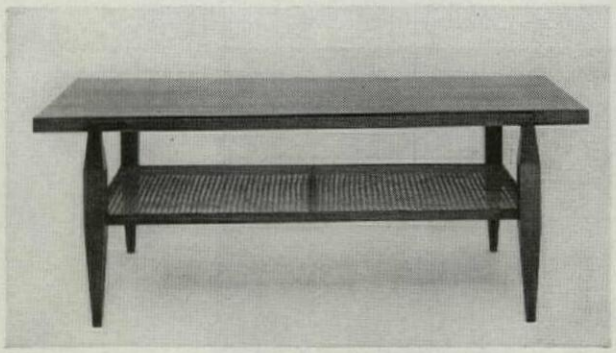
Extension Table: cast-iron pedestal legs in white or black baked enamel 72"x40" closed, extends to 112"x40"/ top in walnut or oak/ **retail:** $394; top in rosewood/ **retail:** $416; top in Micarta/ **retail:** $446/ designed by George Nelson; upholstered dining chair in walnut and birch combination/ **retail:** $84 without fabric/ **Herman Miller Furniture Co., Zeeland, Mich.**



Indoor-Outdoor Upholstered Chair: contour chair/ seating adjustment provided by ½"-thick foam-rubber cushion molded to exact shape of chair/ oval cut-out for additional seating adjustment, ventilation, light look/ "Plastispray" upholstery applied like skin, both to foam cushion and to back and underside of chair/ seamless, heavy, liquid-vinyl skin has fabric-like texture/ in high-style colors/ washable and weather-proof/ tubular legs may be painted, plated, or plastic-coated/ designed by Guy G. Rothenstein/ **retail:** $30/ **Richards-Morgenthau & Co., 225 Fifth Ave., New York, N.Y.**



Clock: translation into wood of Japanese paper fan/ electric or 8-day wind/ in seven color combinations/ designed by George Nelson/ **retail:** $32.50/ **Howard Miller Clock Co., Zeeland, Mich.**



Coffee Table: #1500/ hand-rubbed walnut/ cane shelf/ 17" high, 20" deep, 48" wide/ **retail:** $208; **Ottoman:** square, polished-brass legs/ foam rubber over flat-springs seat/ 16½" high, 18" deep, 18" wide/ requires 1 yd 50" fabric/ **retail:** $100/ both designed by Paul Palmer/ **Arch Gordon Co., Inc., 1335 N. Wells St., Chicago, Ill.**

Nurses' Station, Texas Children's Hospital, Milton Foy Martin, Architect

THE EYES OF TEXAS ON FORMICA!

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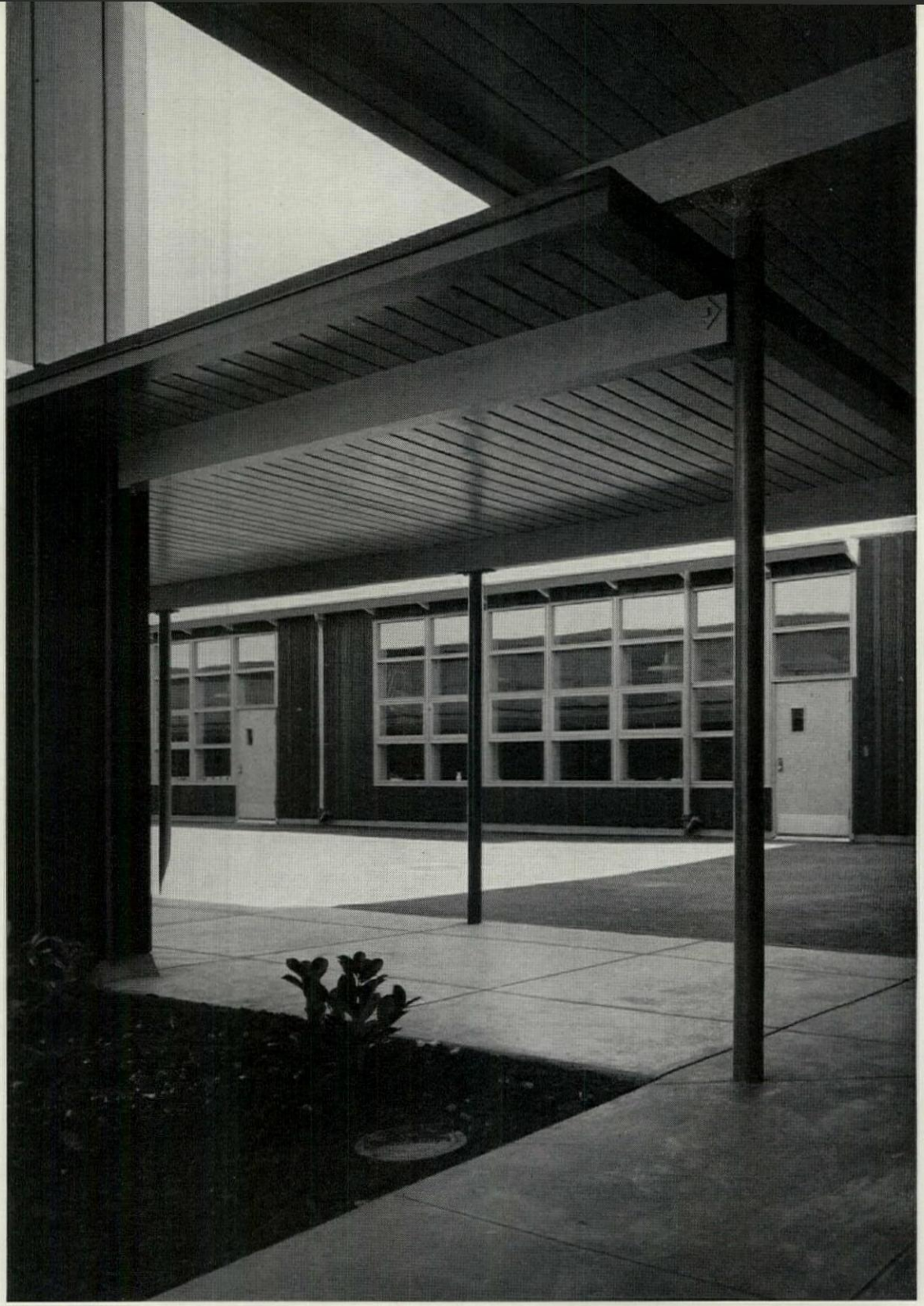
Information Desk Outpatient Lobby M. D. Anderson Hospital, MacKie and Kamrath, Architects



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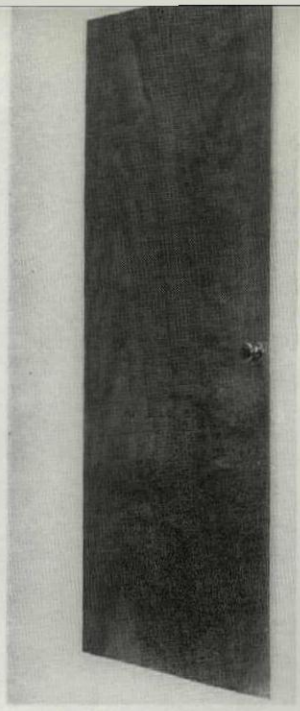
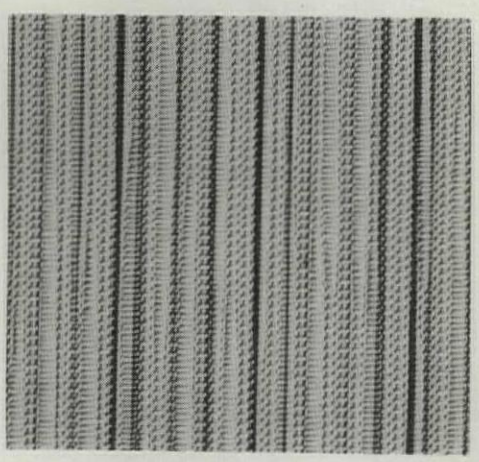
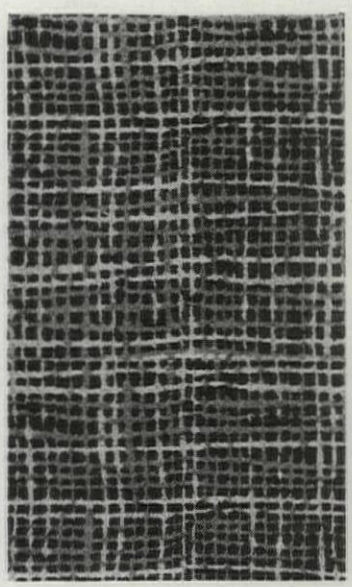


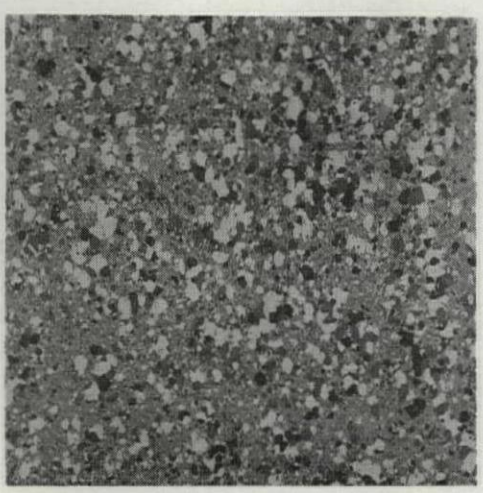
Flush Door: Gold Coast Cherry added to full line of solid-core and hollow-core flush doors/ close texture requires no stain or filler/ brushing lacquer achieves natural finish/ rotary-cut face veneer/ **The Mengel Co., Fourth St. and Colorado Ave., Louisville, Ky.**



Looped Carpet: "Devon"/ all-wool Broad-Tuft carpet/ plain fabric made by special patented process/ pile loops formed over wires and securely bound to base fabric/ rubber latex coating on back binds yarns, prevents ravelling, fraying, eliminates need for edge binding/ in fourteen colors/ **retail:** $9.95 sq yd/ **Archibald Holmes & Son, Erie Ave. and K St., Philadelphia 24, Pa.**

Mix-Match Vinyl Sheeting: "Cortez Stripe," textured gold-striated, color-related to "Mayan" design and "Inca Weave" texture/ of permanent virgin vinyl/ in eight colors/ 60-yd rolls, 54" wide/ **Columbus Coated Fabrics Corporation, Seventh and Grant Aves., Columbus 16, Ohio.**

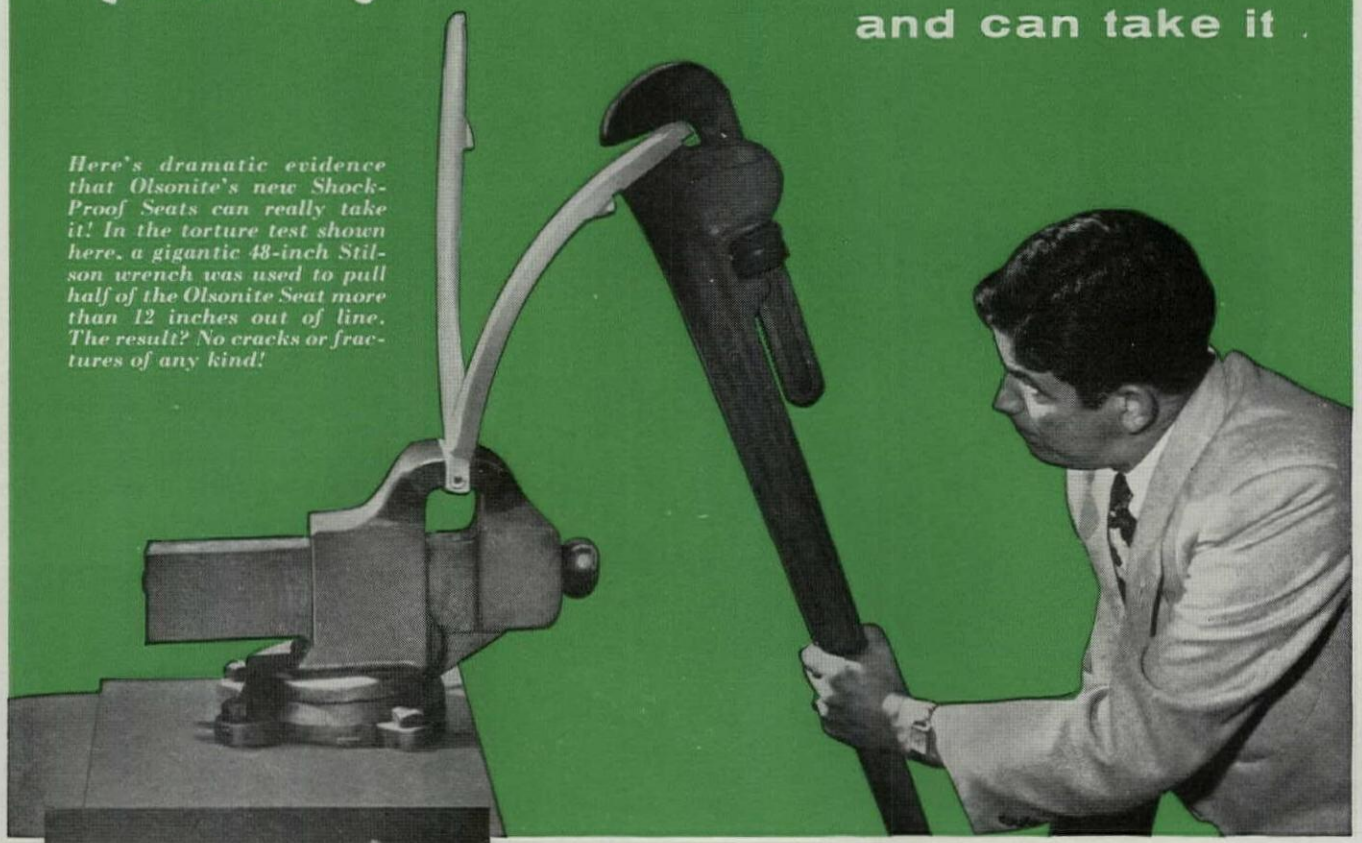


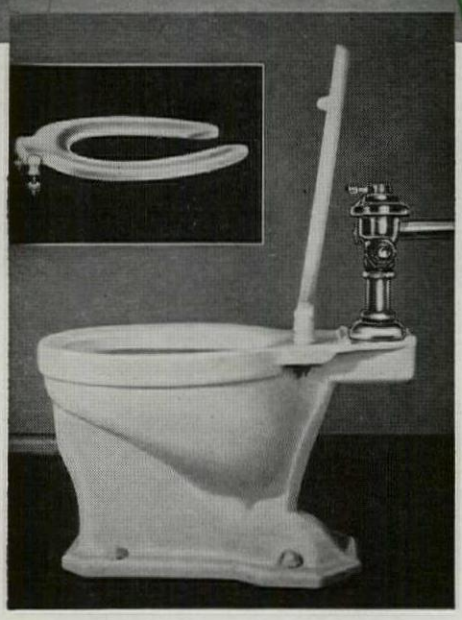


Laminate: (far left) "Homespun"/ Corlex high-pressure-laminate sink-and-counter top and wall surfacing/ design and color co-ordinated with Decoresq Corlon plastic inlaid flooring/ in charcoal and pink, red, yellow, green and taupe; **Tile:** (left) "Corkstyle"/ simulated cork design in dark or light versions/ 9" x 9" Excelon Tile, 1/16" gage/ Asphalt Tile, 1/8" gage/ **Armstrong Cork Co., Lancaster, Pa.**

NOW! a white seat that STAYS white and can take it

Here's dramatic evidence that Olsonite's new Shock-Proof Seats can really take it! In the torture test shown here, a gigantic 48-inch Stillson wrench was used to pull half of the Olsonite Seat more than 12 inches out of line. The result? No cracks or fractures of any kind!





NOW YOU CAN SPECIFY WHITE SEATS for all industrial and public toilet installations—white seats that won't fade or "yellow" for a lifetime of normal use!

With the new Olsonite White Shock-Proof Seats, it's easier to keep that clean, sanitary appearance than with black seats. Shock-Proof Olsonite Seats have also proven their ability to withstand shocks 5 times greater than ordinary solid one-piece seats. Even deliberate abuse in public toilets and industrial installations won't crack, chip or break Olsonite Shock-Proof Seats—and they won't absorb water.

Like all Olsonite Seats, Shock-Proof models are solid one-piece construction—there is no applied finish to crack or peel. They are sanitary white *all the way through*. Be sure to specify the seat that *stays white*—the seat that can "take it" without damage for a lifetime of normal use—Solid Olsonite Shock-Proof Seats.

Olsonite's complete catalog is available on request. Please write on your letterhead to:

In addition to the regular bowl model (#5) and elongated bowl (#10), the amazing new Olsonite Shock-Proof industrial and commercial seats are available with a concealed check hinge (#5CC and #10CC) made entirely of non-corrosive metal. A lug on the hinge posts locks against cutaway on insert in extended seat back, preventing the seat from being raised to more than 11° beyond perpendicular.

A-4

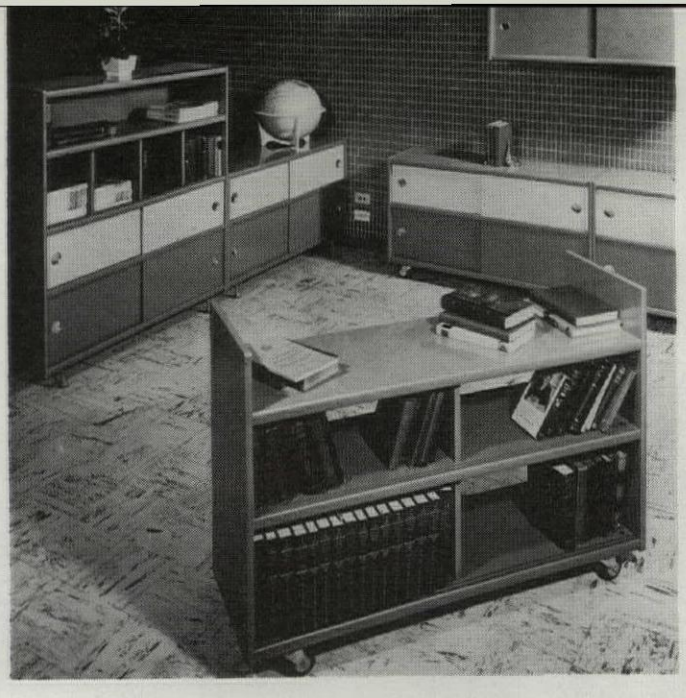
SOLID Olsonite SEATS

ORIGINATORS OF THE SOLID PLASTIC SEAT

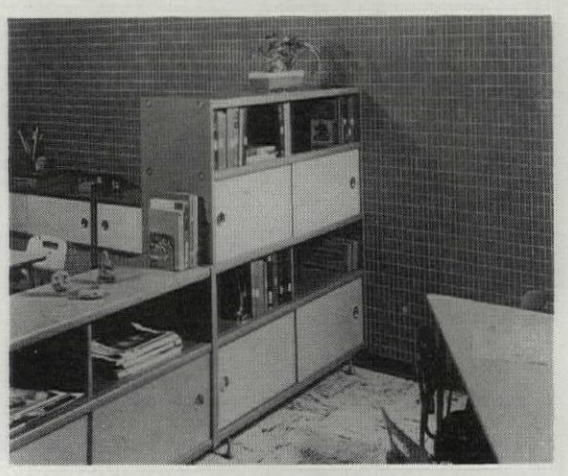
Olsonite Shock-Proof Models Are Available In White or Black

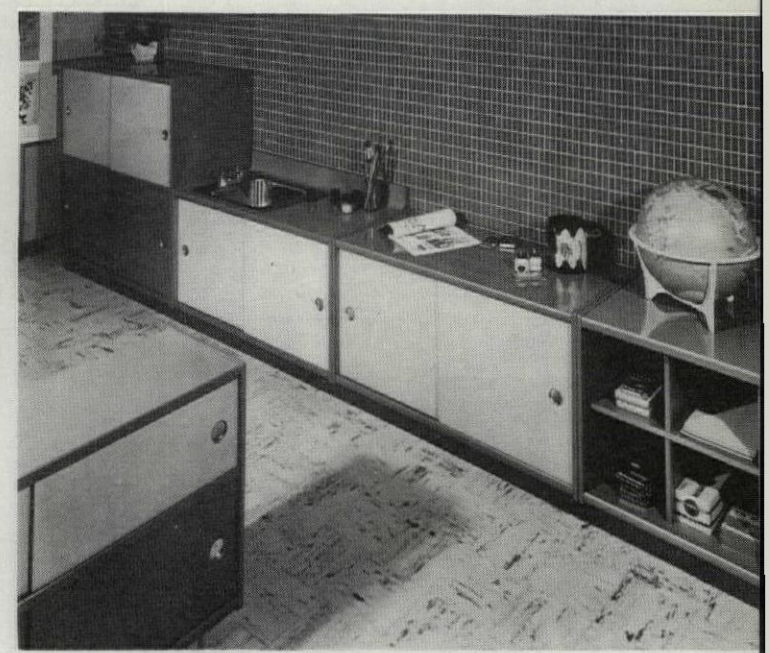
SWEDISH CRUCIBLE STEEL COMPANY

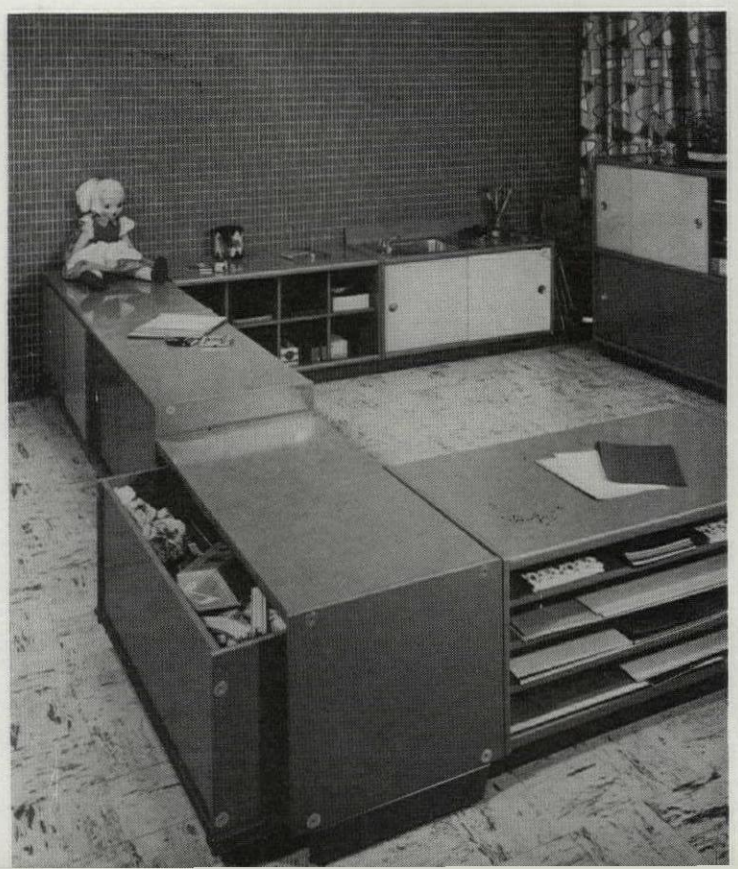
Plastics Division, 8561 Butler Avenue, Detroit 11, Michigan



Classroom Cabinets: *New concept of cabinet design utilizes interchangeable panels, shelves, and parts to provide multiple combinations. Ten basic cabinets include: one-tier, two-tier, four-tier, book truck, general storage, double-height storage, paper storage, cubicle storage, toy cart, cabinet sink. Standardized parts permit easy interchangeability: length 47½", four cabinets with shelves 15⅜" wide, six cabinets with shelves 21⅛" wide. Sliding doors, back panels may be added. Shelves may be vertically divided with partitions extending from front to rear.*







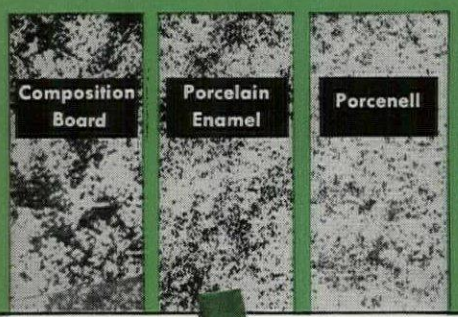
All cabinets may be fitted with interchangeable casters, legs, bases, or wall mountings. Cabinets are assembled with Phillips screws, fitted into prethreaded metal ferrules that are permanent parts of all fixed shelves. When panels are fastened into place, all other components—including doors, back panels, shelf dividers—are locked into position.

All cabinets are sage gray. Door colors are coral, blue, yellow. Panels achieve structural strength and mass without weight, through honeycomb-core construction. Top surfaces are protected by a coat of melamine plastic; edges of end panels, adjustable shelves, shelf dividers, are inlaid with strips of ethyl-cellulose plastic.

Colorful, flexible, functional, the cabinets may be arranged and rearranged to suit changing classroom needs. **Brunswick-Balke-Collender Co., 623 S. Wabash Ave., Chicago, Ill.**

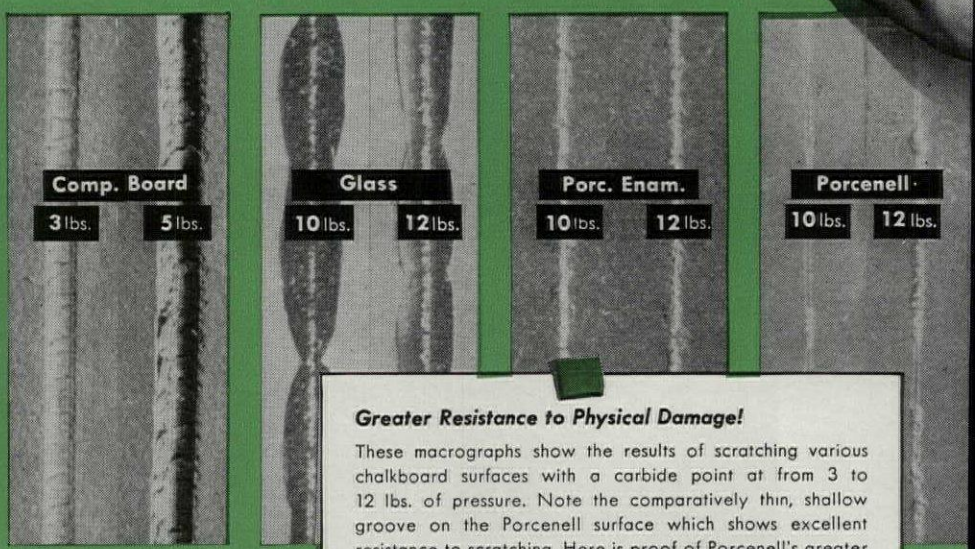
The macrographs shown below are the results of tests made at an independent laboratory. They are reproduced here as evidence of the superiority of Porcenell . . . the entirely new and different Chalkboard. Benjamin Electric Mfg. Co., for many years a leader in Better School Lighting, now brings you this further advancement in chalkboards for better seeing and improved instruction.

Lab Tests Prove Superiority of NEW CHALKBOARD!



A New High in Visibility!

Macrographs of chalkmarks on three chalkboard surfaces show dark areas as "valleys" and lighter spots as "peaks." Note that Porcenell has no extreme high or low spots, clearly pointing out the greater evenness of this surface. That means chalk "flows on" more evenly without effort, resulting in a clearer, easier-to-see image. It also means erasing without pressure, because there are no chalk traps to leave "ghosts."



Greater Resistance to Physical Damage!

These macrographs show the results of scratching various chalkboard surfaces with a carbide point at from 3 to 12 lbs. of pressure. Note the comparatively thin, shallow groove on the Porcenell surface which shows excellent resistance to scratching. Here is proof of Porcenell's greater resistance to physical damage, such as vandalism, accidental damage by maintenance people or typical schoolboy mischief.

All the Advantages of Porcelain Enamel Chalkboards . . . *PLUS* lower cost . . . less weight . . . greater chip-resistance!

New materials and new low-temperature manufacturing permit use of lighter-weight steel to lick the cost problem and make possible easier installation. Porcenell never needs replacement due to age . . . green color cannot fade . . . completely resistant to moisture.

For complete details send for **FREE PORCENELL BOOKLET!** Mail coupon to Benjamin Electric Mfg. Co., Dept. PA, Des Plaines, Ill.

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PORCENELL CHALKBOARD

Porcenell is a patented, vitreous process developed by Vitreco, Inc., a research organization jointly owned by Youngstown Sheet and Tube Co. and Poor and Company. The Porcenell development is the result of over 15 years and three quarters of a million dollars of research. In this product there has been achieved an entirely new, non-warping, lighter weight, finer, vitreous, hard chalkboard surface never before commercially available. Benjamin Porcenell Chalkboards are available through:

Beckley-Cardy Co., 1900 N. Narragansett, Chicago 39, Ill. and Educational Equipment Inc., 2623 Woodhill Road, Cleveland 4, Ohio.

Corrugated-Plastic Closures: molded of Bakelite vinyl resins/ closure strips provide tight seal for ends and edges of corrugated-plastic sheeting/ strips form resilient yet strong vertical and horizontal closures that hug wavy contours and automatically adjust to slight expansions and contractions/ closures form water- and air-tight seal around shaft of nail, bolt, or screw that acts as fastener/ in light blue, yellow, coral, ivory, white, light and dark green/ horizontal closures 35" long by 3/4" wide/ vertical closures 36" long by 1 5/8" wide/ **Hanszen Plastics Co., 835 S. Good-Latimer Expressway, Dallas 10, Tex.**

Flush Securing Device: "Flushmount"/ attaches objects flush to any surface/ two-piece interlocking unit, one attached to the object, the other attached to the surface/ units stamped out of #14 gage sheet steel of 1/16" thickness, permit secure hanging of 1/8" from surface/ cadmium-plated/ in two dimensions, 1" x 1" and 1 1/2" x 1 3/4"/ **Harvest House, 453 S. Robertson Blvd., Beverly Hills, Calif.**

Valve-Control Enclosure: enclosure for cast-iron baseboard radiation completely conceals valve control/ snap-on cover panel eliminates screws, bulges, protruding handles, may be removed when decorating is being done, and subsequently removed for venting or valve adjusting without marring paint job/ valve has hinged handle that pulls to horizontal position for adjustments, then flips to vertical position within enclosure/ **Crane Co., 836 S. Michigan Ave., Chicago 5, Ill.**

Small Commercial Refrigerator: "Reach-In"/ for small restaurants, schools, industrial and institutional cafeterias/ 18, 22, and 28 cu ft sizes/ automatic defrosting unit with special moisture evaporator does not require drain connection/ embossed-aluminum interiors, exteriors in stainless steel or white-baked-enamel over heavy gage cold-rolled steel/ three stainless steel adjustable shelves/ chromium-plated hardware/ high density Fiberglas insulation/ unit provided with keyed lock/ **Nor-Lake, Inc., Hudson, Wis.**

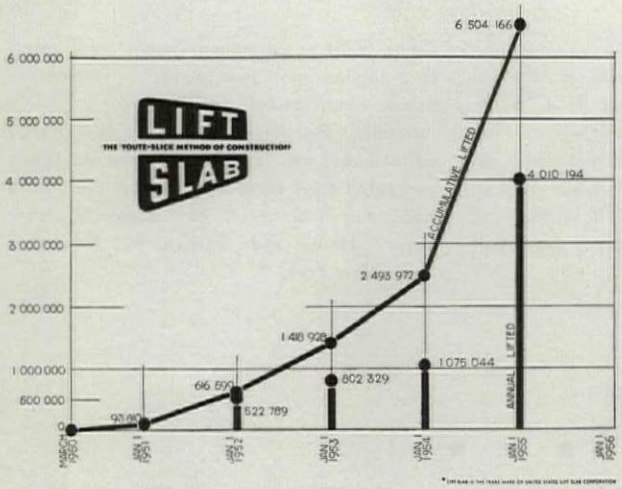
All-Nylon Carpet: "Texture-Tuft"/ of 100% DuPont Nylon/ cut-pile with slightly ribbed texture/ latex-backed/ designed to be made to individual order in size, shape, and color/ three to four weeks delivery/ **Waite Carpet Co., 556 Mt. Vernon St., Oshkosh, Wis.**

Coated Fabrics: new patterns in Elastic Naugahyde, "Polynesian" in 10 colors, "Pebble" in six colors/ new finish, "Glazed Antique", in 20 colors, 27 oz. and 40 oz. weights/ new Breathable Naugahyde pattern, "Pylon" in 12 colors/ **United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.**

Chenille Carpet: "Shagtone"/ all-wool pile chenille/ rough textured surface/ in Oriental Red, Lime, Turquoise, Ocean Blue, Sand, Moonstone Gray, Cherry Wood, or custom-dyed/ "Strata" design with color striations in Tulip Yellow, Chartreuse, Aquamarine/ in 2'-3", 3', 4', 6', 9', 12', 15', 18' widths and custom shapes/ **retail:** $25 sq yd/ **Nye-Wait Co., Inc., Auburn, N. Y.**

Color Gallery: permanent visual color reference service open year-round/ on display are actual examples of broad range of home furnishings merchandise in colors selected by editors, as well as through manufacturing and retail sales records, consumer preference polls, and findings of color authority, Faber Birren/ **House and Garden, 420 Lexington Ave., New York, N. Y.**

p/a manufacturers' literature



Since 1950, when the first Lift-Slab building was erected, approximately 12 million sq ft have been put in place—almost six million sq ft were under contract for this year alone. Because of this increasing interest and, also, because of structural problems inherent in Lift-Slab construction, United States Lift Slab Corporation has prepared an Engineering Manual exclusively for architects and structural engineers. This manual was compiled from information assembled by engineers W. Clark Craig, Fred N. Severud, and Oliver G. Bowen with a dual purpose in mind: to serve as reference material for architects or engineers contemplating use of the Lift-Slab Method for the first time; and to provide a thorough understanding of this relatively new method. Basic design data, as well as more advanced solutions to structural problems, are accompanied by practical examples already proved successful. Also included is a description of the lifting equipment, since its capabilities and limitations will influence the structural design.

Registered copies of the manual, which will be supplemented as new developments occur, are available on request to, and by approval of: United States Lift Slab Corp., Perry Brooks Bldg., Austin, Tex. —at $5 per copy. L. G.

Editor's Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their contents, to the conciseness and clarity with which information is presented, to announcement of a new, important product, or to some other factor which makes them especially valuable.

air and temperature control

101. Roto-Clone, Type-N, Hydrostatic Precipitator (277B), 24-p. booklet containing technical data on wet-type dust collector. Outlines recent improvements in design and construction; describes operation of three different models—for manual disposal, automatic dewatering, or sluicing of collected sludge. Photos, sectional drawings, engineering-data tables. American Air Filter Co., Inc., Louisville 8, Ky.

102. Central-Station, Cabinet-Type, Air-Conditioning Units (8127), 20-p. catalog describing air-conditioning equipment for industrial and commercial installations. Drawings show three types of units in combinations to give year-round temperature and humidity control; tables provide information on dimensions, capacities, and ratings. American Blower Corp., Detroit 32, Mich.

103. Built-in-Wall Air-Conditioning Units, 4-p. folder outlining features of decentralized units designed for low-cost, multiroom air conditioning. Describes installation of conditioners in special recesses provided in outer walls of building; shows placement of louvers on exterior wall. Drawings, dimensions, specifications. Amic Mfg. Corp., 21-25 44 Ave., Long Island City 1, N. Y.

104. Refrigeration Valves (W-3-S), 20-p. bulletin giving data on valves, filters, and driers for refrigerating systems. Contains drawings and rating charts for expansion, pressure-regulating, and solenoid valves; provides technical information on filter and drier units to insure effective valve operation. A-P Controls Corp., 2450 N. 32 St., Milwaukee 45, Wis.

105. Wheelco Instruments (F-6149-2), 8-p. booklet on temperature-control systems for industrial processes. Gives recommendations for choosing proper method of temperature control; provides suggestions for selection and use of sensing elements. Also contains explanation of various types of systems, where to use each one, and equipment required. Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

106. Hartzell Roof Ventilators (A-112), 12-p. catalog containing information on steel roof ventilators. Gives drawings and dimensions for penthouse, stack, and rotary types of ventilators; describes performance of fans used in venting units. Tables give air deliveries through roof ventilators. The Hartzell Propeller Fan Co., Piqua, Ohio.

107. Basic Safety Controls for Hot-Water Space-Heating Boilers (P-30), 8-p. pamphlet discussing need for proper safety controls. Explains problems of over-pressure, low-water condition, and leakage; presents description and diagrams illustrating solutions to such conditions. Also shows dangers of operating hot-water boilers with unapproved valves or without any safety controls. McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

108. Is Your Air Compressor Capacity Effective? (520-A), 8-p. guide for checking efficiency of air compressors. Explains functions of each element of compressor system; gives recommendations for more efficient performance. Drawings of equipment and piping systems; tables. Sarco Co., Inc., Empire State Bldg., New York 1, N. Y.

construction

201. Barrett Reference Manual, AIA 12-B (55), 56-p. catalog on roofing materials. Drawings and specifications explain application of built-up roofing on flat or pitched surfaces; details show installation of flashing, drainage systems, and waterproofing. Also contains directions for insulating roofs. Tabular index gives quick description of roofing materials. Barrett Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

202. Stran-Steel Structural Systems, AIA 13-G, 20-p. booklet describing all-steel structural system. Gives complete technical data for design of nailable framing members, bearing members, and galvanized roof decking; includes typical design example, details, and design tables. Photos, specifications. Stran-Steel Div., Great Lakes Steel Corp., Ecorse, Detroit 29, Mich.

203. Hasko-Struct Laminated Sandwish Panels, 8-p. pamphlet describing structural, sandwich panels made of self-extinguishing, foamed-plastic core with glass-fiber cloth or polyester-laminate surfaces. Provides typical assembly details; gives data on glass-fiber shapes for joining panels. Tables contain information on physical properties, maximum loads, and deflections. Haskelite Mfg. Corp., 701 Ann St., N. W., Grand Rapids 2, Mich.

204. Leap Prestressed-Concrete Products, 10 pages of data sheets on prestressed-concrete roof slabs, channels, tee joists, and bleacher seats. Gives drawings and typical construction details of each product; also provides dimensions and tables of safe loads. Lakeland Engineering Assoc., Inc., 211½ S. Tennessee Ave., P. O. Box 495, Lakeland, Fla.

205. Lapidus Cavity-Wall Blocks, 4-p. folder featuring concrete block invented by Architect Morris Lapidus. Describes masonry unit with integral cavity which eliminates need for exterior or interior wall treatments; gives details, physical properties, and cost comparison with familiar types of construction. Lapidus Block Corp., 9031 Ft. Hamilton Pky., Brooklyn 9, N. Y.

206. Marble Curtain Walls, 8-p. publication showing use of marble in recently completed hospital. Describes building and explains reasons for choosing marble curtain walls; gives marble-setting details. Also

includes details of new method of installing angles for relieving strains in thin-wall construction. Photos. Marble Industry of New York, 8 W. 40 St., New York, N. Y.

207. Technical Data on Southern Pine, AIA 19-A-1, file folder enclosing six architect's bulletins. Nos. 1 and 2 cover grades and dimensions of southern pine; No. 3 explains new column formula developed to simplify design of wood columns and eliminate inconsistencies in existing formulas; No. 4 gives information on design and specification of plank-and-beam roof systems; No. 5 provides instructions for finishing interior pine surfaces; and No. 6 presents description of wood-preservative and fire-retardent treatments. All contain drawings, photos, and/or charts. Southern Pine Assn., National Bank of Commerce Bldg., P. O. Box 1170, New Orleans 4, La.

208. Perforated-Metals Catalog, 118-p. handbook containing information on perforated materials used in architecture and industrial design. Shows patterns and dimensions for standard perforations—round, square, triangular, oblong, and ornamental designs; includes data on fabrication of perforated metals as well as perforated hardboard, plastic, rubber, and fibers. Tables of gages and weights. Standard Stamping and Perforating Co., 3131 W. 49 Place, Chicago 32, Ill.

209. Unistrut System of Fluorescent Fixture Suspension, AIA 14-G (FF-4), 6-p. circular illustrating lightweight-metal channels for hanging lighting fixtures. Shows installation of channels; gives recommended hanger-rod spacing; and provides information on all parts of assembly. Unistrut Products Co., 1013 W. Washington Blvd., Chicago 7, Ill.

210. How To Use Novoply, AIA 23-L (55), 20-p. booklet explaining characteristics of pressed, masticated wood panels. Lists physical properties; gives recommendations for installation of panels, including details of edge treatment, joints, and fastening devices. Also illustrates use of material for sliding doors, partitions, furniture, and wall paneling. Photos, instructions for finishing. United States Plywood Corp., 55 W. 44 St., New York 36, N. Y.

doors and windows

301. Marcolite Roof Scuttle, AIA 12-P, 4-p. brochure describing aluminum-framed roof scuttle with translucent glass-fiber panel. Explains construction of scuttle and operation of counter-balancing device; gives specifications and dimensions. Also contains design data on manually operated ventilating skylights. The Marco Co., 45 Greenwood Ave., E. Orange, N. J.

302. Hardware for Labelled Fire Doors, AIA 27, 8-p. booklet containing minimum recommended standards for fire-door hardware. General notes contain suggestions for specification of hinges, locksets, and door closers; schedules list hardware for hollow-metal, metal-clad, and composite-core wood doors. National Builders' Hardware Assn., 515 Madison Ave., New York 22, N. Y.

303. Nordahl Sliding-Door Frames (452), 14-p. brochure on prefab, wood, sliding-door frames. Gives instructions for installing frame and hanging door; provides details of frames for lath-and-plaster or drywall construction. Also contains data on sliding-door hardware for wardrobes. Nordahl Mfg. Co., 180 W. Alameda Ave., Burbank, Calif.

304. Glass-Clad Buildings, AIA 26 (G42285), 8-p. report on glass curtain walls. Lists properties of many opaque, translucent, and clear glass materials; provides large-scale details of typical horizontal and vertical sections. Discusses factors to consider in selecting curtain-wall materials: texture, color, ease of cleaning, breakage, solar-heat transmission, and leakage. Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

305. Magnalite Diffusing Glass, AIA 26-A-4 (M-1955), 4-p. folder illustrating properties of obscuring-diffusing glass. Shows three different glass patterns; provides data on light distribution, thicknesses, and standard sizes. Photos of recent installations. J. Merrill Richards, 25 Huntington Ave., Boston 16, Mass.

306. Stanley Magic-Door Controls, 16-p. booklet containing design data on automatic door operators. Describes use of controls to solve traffic problems and eliminate outside-air infiltration; provides details of operation as well as layout diagrams. Gives technical information on both carpet-actuated and photoelectric operators. Magic Door Div., The Stanley Works. New Britain, Conn.

307. Wascolite Pyrovent, Pyrodome, 4-p.

308. Wascolite Airdome, Hatchway, 4-p. Two folders giving information on dual-purpose plastic skylights. First circular describes two mechanically operated automatic fire vents—aluminum vent and special skylight which also acts as vent in case of fire; includes photos, details, and specifications. Second folder provides data on combination skylight-ventilator as well as skylight-hatchway unit. Wasco Products, Inc., 87 Fawcett St., Cambridge 38, Mass.

electrical equipment, lighting

401. Luminous Ceilings Made with Rigid-Vinyl Sheets (J-852), 16-p. brochure illustrating use of vinyl-plastic sheets for luminous ceilings. Many photos show luminous-ceiling installations in schools, offices, libraries, and homes; pictures also indicate several different patterns of sheeting. Describes characteristics and fire ratings of vinyl plastic. Bakelite Co., 300 Madison Ave., New York 17, N. Y.

★ **402. Engineered Architectural Lighting,** 36-p. catalog prepared to provide architects and engineers with technical information on cold-cathode lighting equipment. Explains advantages of cold-cathode lighting system; gives performance data on lamps, dimmers, and ballasts. Also features colored inserts containing photos, description, and details of several recent installations. Cold Cathode Lighting Corp., 42-40 27 St., Long Island City 1, N. Y.

403. Lighting for Industry, AIA 31-F-2, 112-p. handbook covering industrial-lighting requirements. Explains basic engineering principles and economics of lighting; gives data for solution of specific industrial-lighting problems, covering both indoor and outdoor installations. Photos, typical layout drawings. Holophane Co., Inc., 342 Madison Ave., New York 17, N. Y.

404. Louvron Flourescent Fixtures, AIA 31-F-23 (13), 8-p. pamphlet showing louvered lighting fixtures. Outlines features of design; describes construction with steel, polystyrene plastic, or perforated steel cocooned in diffusing plastic. Drawings of surface-mounted or hung fixtures; tables of performance characteristics and dimensions. Lightolier, Inc., Jersey City 5, N. J.

405. Wakefield Lighting: As Flexible As Your Classrooms, AIA 31-F, 44-p. report prepared by Darell Boyd Harmon & Associates on effect of vision on learning. Reviews activities taking place in modern classrooms; gives recommendations for installation of lighting systems as flexible as classrooms. Also shows how existing schoolrooms can be rehabilitated with proper lighting. Photos, drawings. The Wakefield Co., Vermilion, Ohio.

(Continued on page 185)

PROGRESSIVE ARCHITECTURE, 430 Park Avenue, New York 22, N. Y. **I should like a copy of each piece of Manufacturers' Literature circled. We request students to send their inquiries directly to the manufacturers.**

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Rigid quality controls for every operation help the Acushnet Process Company, rubber products plant, maintain high standards and uniformity in the rubber parts and products it produces for a widely diversified market. Good daylighting is essential to provide the working conditions that promote efficiency and morale; so Coolite, Heat Absorbing and Glare Reducing glass, was installed to flood this new building with copious quantities of softly-tinted, glareless daylight.

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ALABAMA METAL LATH

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Alabama studless partition cut costs three ways

Full scale laboratory tests have proved the quality construction of metal lath and plaster 2″ solid partitions. Experience has proved they offer these economic advantages:

1. Reduced material and lower erection costs because studs are eliminated.

2. The 2″ thickness saves one square foot of usable floor area every four running feet of partition, when compared with conventional-thickness partitions . . . provides more rental area brings greater investment return.

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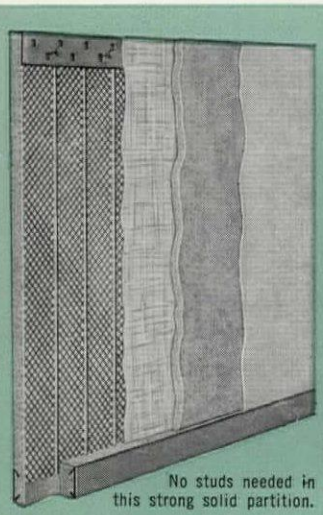
In addition Alabama Studless Partitions effectively protect against fire for one hour, resist the transmission of sound and stand up exceptionally well against impact.



No studs needed in this strong solid partition.

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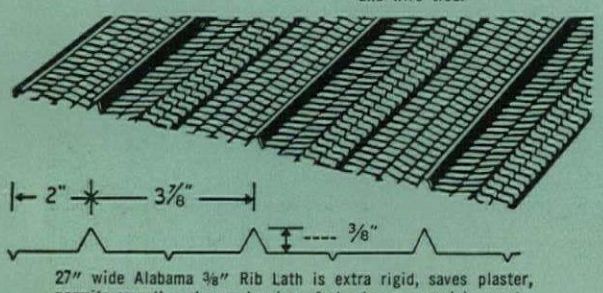

27″ wide Alabama ⅜″ Rib Lath is extra rigid, saves plaster, permits smooth and even lapping of sheets . . . precision made.

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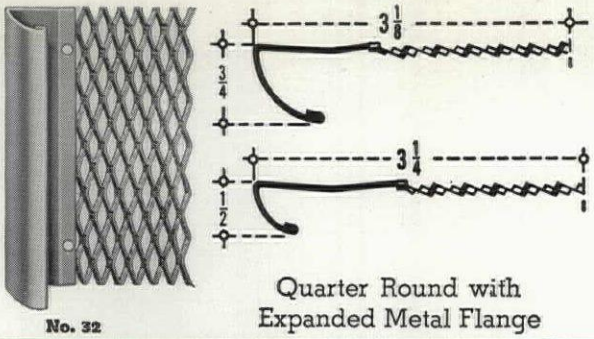
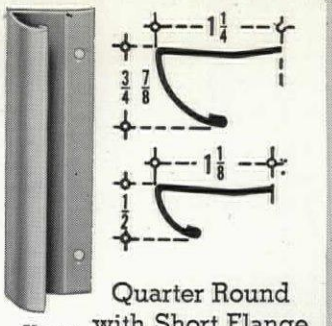
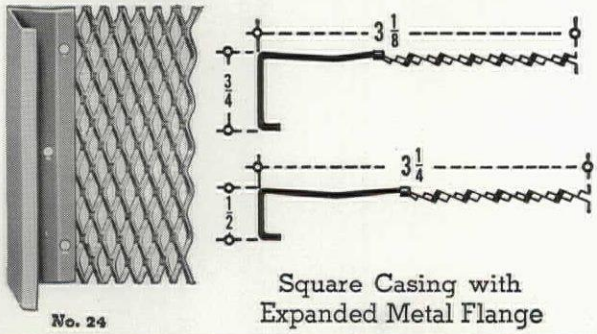


No. 32 Quarter Round with Expanded Metal Flange

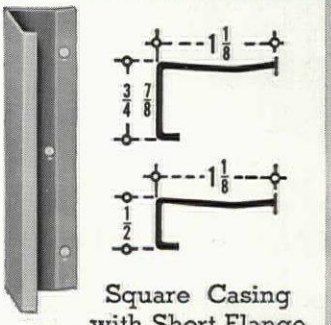


No. 16 Quarter Round with Short Flange

SQUARE

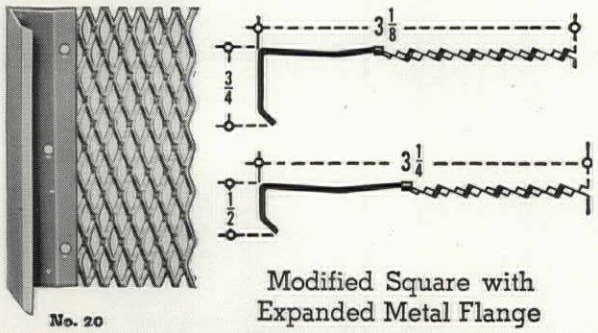


No. 24 Square Casing with Expanded Metal Flange

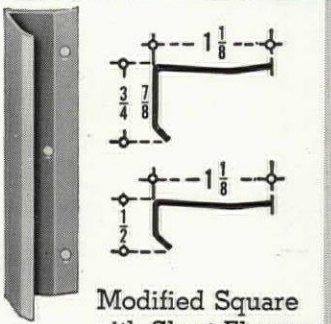


No. 12 Square Casing with Short Flange

MODIFIED SQUARE



No. 20 Modified Square with Expanded Metal Flange



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get better looking, longer lasting building interiors . . . at than half the cost of other wall opening finishes . . . when specify Bostwick Door and Window Casings. Only one allation operation is required because these casings provide screeds and trim.

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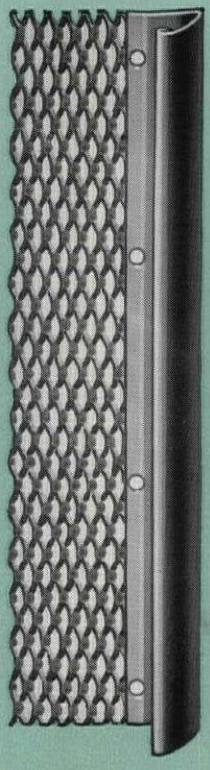
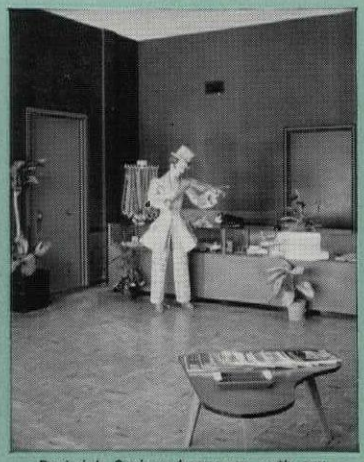
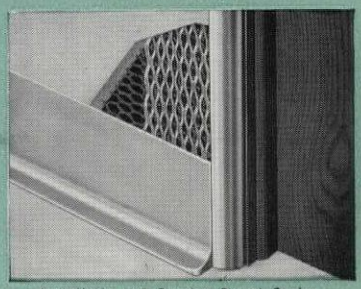


Every Bostwick Casing is perfectly formed.



Bostwick Casings harmonize with any interior design.



Installation of Quarter Round Casing with Expanded Metal Flange.

CECO STEEL

In construction products

CECO ENGINEERING

makes the big difference

SUSPENDED CEILING UNDER CONCRETE JOISTS — In the foreground, Ceco Steel Furring Channels are shown beneath Ceco-Meyer Concrete Joist Construction, ready for application of metal lath for a fire-safe ceiling. In the background, Ceco Diamond Mesh Lath has been tied to channels, forming the plaster base for a fire-safe suspended ceiling and wall.

FURRED CEILING ON STEEL JOISTS—Here you see how Diamond Mesh Metal Lath is tied to furring members attached to Open-Web Steel Joists. Notice also that Rib Lath has been used for centering above the joists.

SUSPENDED CEILING WITH MACHINE-APPLIED PLASTER — Scratch coat as well as brown coat can be successfully applied to Ceco Metal Lath, as demonstrated by this plasterer at the San Mateo County Community Hospital, San Mateo, California (Architects: Stone and Mulloy; General Contractor: Robert E. McKee Company; Lathing Contractor: Jack Dymond Lathing Corporation; Plastering Contractor: E. E. Parker, Inc.).

CECO Diamond Mesh Metal Lath

CECO 3/8" Rib Lath

CECO 1/8" Flat Rib Lath

World's finest firesafe ceilings proved by test of tim

Specify Plaster on Metal Lath for

Modern CECO Metal Lath and plaster provide high fire resistance...yet can be easily shaped to any design

or imperishability, the ceilings of a aveman's home set a standard that is ard to beat. Formed of solid stone, ese monolithic structures are in as ne condition today as when inhabited ousands of years ago. But now that an has come out of the ground and eated his own ceilings, materials ust be more adaptable. And filling is bill best, as proven through a half ntury of use, are metal lath and plas- — easily shaped to any design . . . d permanent. When plaster is bond- to a continuous web of Ceco Metal th, the result is a ceiling resistant to e, cracks and earthquake . . .

- **a truly monolithic ceiling, with the characteristics of a single solid slab of stone . . .**
- **a ceiling easy to decorate, easy to keep clean, easy to live under . . .**
- **a ceiling ideal for the finest modern structure**

Flames naturally rush upward in a burning building. The most effective . . . least expensive . . . way to fireproof is to place a fire-safe membrane between the floor structure and the fire below. This is best done by providing a *suspended, furred* or *contact* ceiling made of plaster on Ceco Metal Lath.

Write Ceco for fire ratings of various types of material and construction. Specifications for lathing and furring also are available on request.

Specify Ceco Lathing Products for your next fireproofing requirement. Ceco manufactures a full line of quality Metal Lath and Accessories, warehoused coast to coast. See your Ceco dealer for fast service — or write us.

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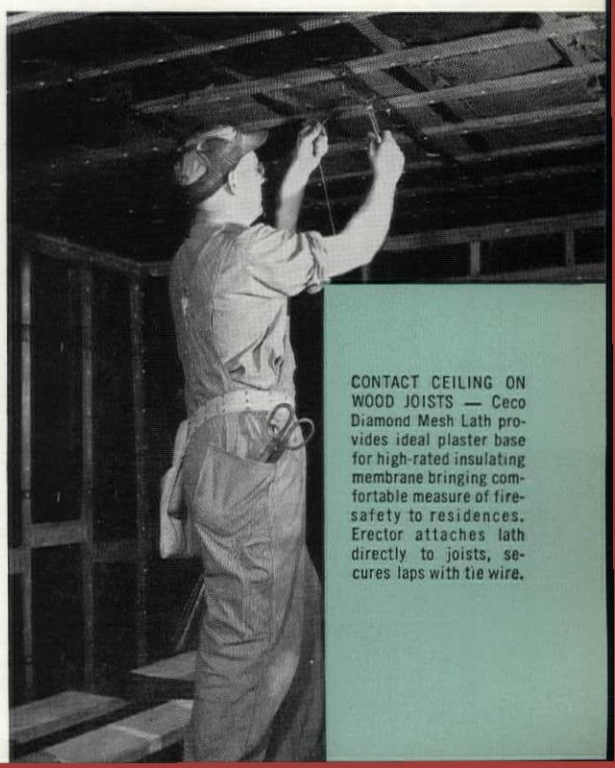
SUSPENDED CEILING — Diamond Mesh Lath is tied to channels with tie wire to form a non-combustible plaster base for a suspended ceiling. With plaster applied, this creates an insulating membrane between the floor structure and any possible fire below . . . eliminates need for encasing each individual structural member . . . provides fireproofing to satisfy codes.



CONTACT CEILING ON WOOD JOISTS — Ceco Diamond Mesh Lath provides ideal plaster base for high-rated insulating membrane bringing comfortable measure of fire-safety to residences. Erector attaches lath directly to joists, secures laps with tie wire.

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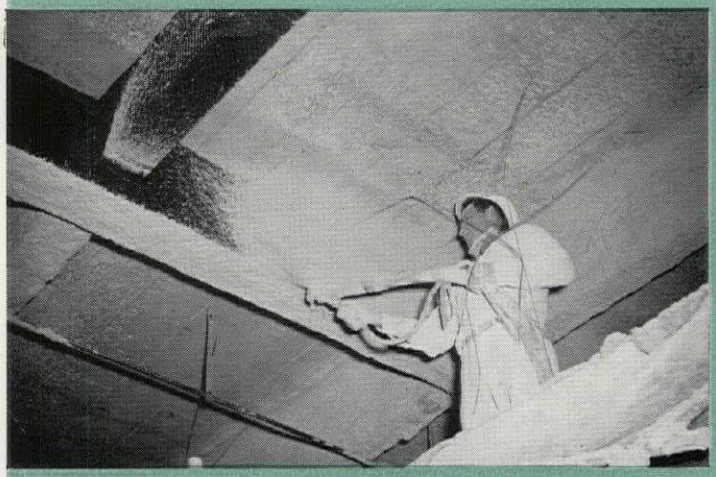
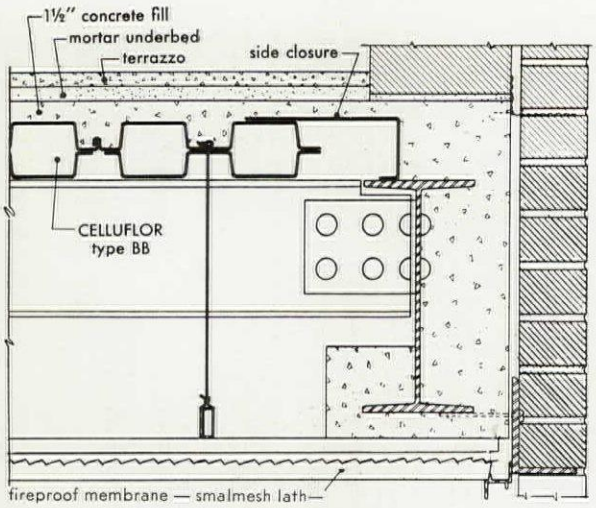
METAL LATH PRODUCTS

Machine applied, lightweight-aggregate plaster may now be used in almost any type of building, bringing costs of the finest interior surfacing well within those of lesser materials.



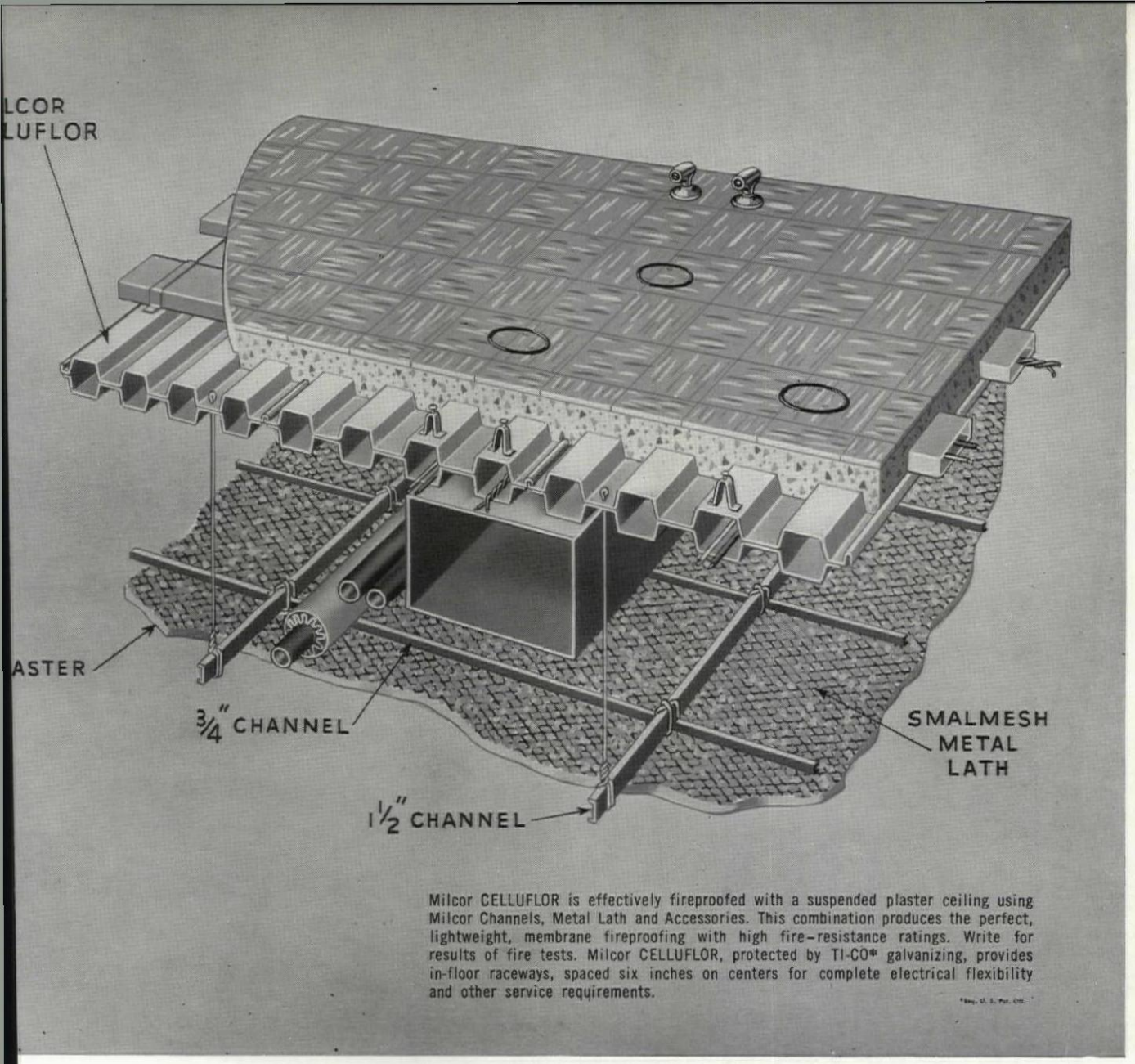
Membrane fireproofing of beams and girders is machine applied. Modern plastering machines move lightweight-aggregate plaster up to a distance of 75 feet for fast, uniform application.



Detail shows membrane fireproofing with Milcor lath suspended from Milcor CELLUFLOR.

New Methods Cut Costs in Fireproofing Cellular Steel Floors

Specify Plaster on Metal Lath for



Milcor CELLUFLOR is effectively fireproofed with a suspended plaster ceiling using Milcor Channels, Metal Lath and Accessories. This combination produces the perfect, lightweight, membrane fireproofing with high fire-resistance ratings. Write for results of fire tests. Milcor CELLUFLOR, protected by TI-CO* galvanizing, provides in-floor raceways, spaced six inches on centers for complete electrical flexibility and other service requirements.

*Reg. U. S. Pat. Off.

Machine-application of plaster to metal lath marks dramatic progress in membrane fireproofing

In recent years the use of cellular steel floors has established a new concept of electrical flexibility, as well as erection and maintenance economies in modern buildings.

Now the increasing use and acceptance of the plastering machine is proving to be another revolutionary development in the industry. The application by machine of scratch, brown and finish coats of plaster to metal lath is thoroughly practical. Savings in time and cost are substantial.

Membrane fireproofing of cellular steel floors by machine application of plaster over metal lath affords the advantages of practical fire protection in combination with important cost-reducing factors. Together these developments make one of the building industry's most interesting stories.

Write for Catalogs on Milcor Metal Lath Products and Milcor Celluflor, also for Bulletins on Membrane Fireproofing and Machine Application of Plaster.

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Metal lath membrane fireproofing of steel columns is unequalled for simplicity and economy.

Build better with
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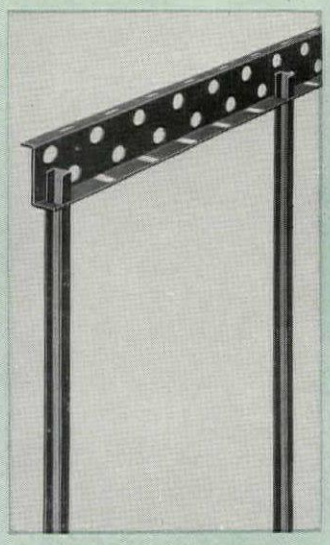
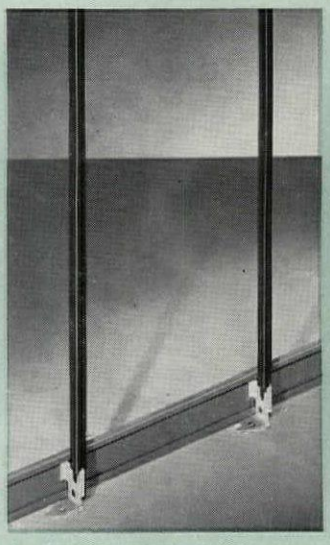
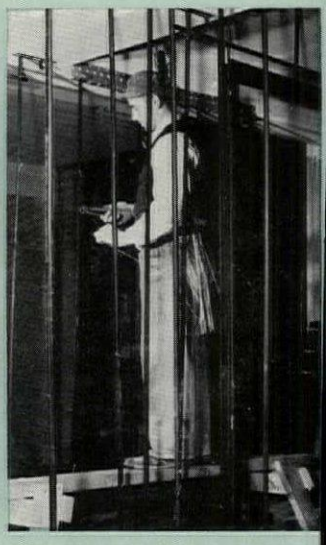


Gold Bond "Z" Ceiling Runners are easily attached with concrete stub nails or rawl drives. Steel channel studs fit into runners and the vertical web compensates for variation in ceiling height automatically.

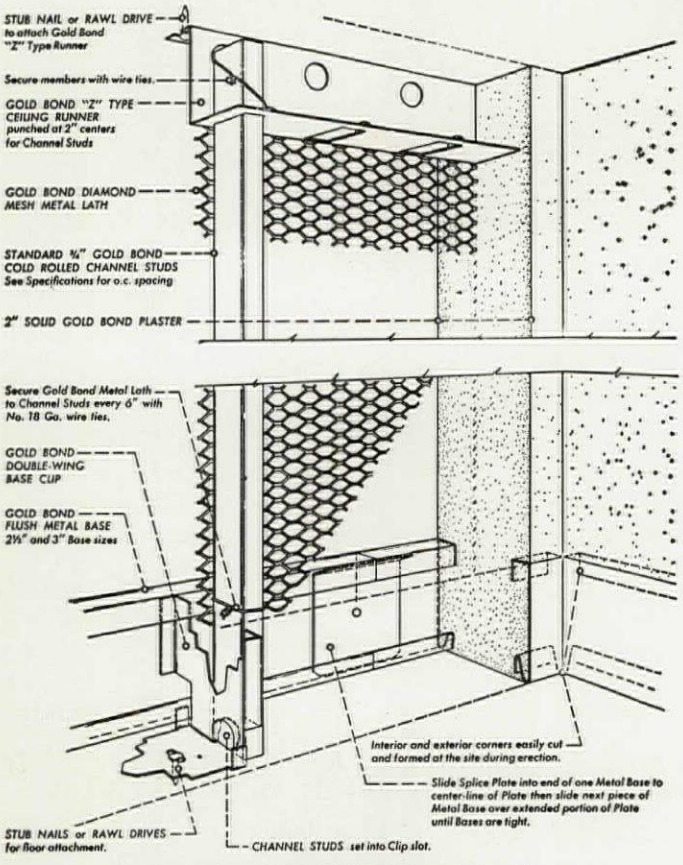


Gold Bond Metal Base Clips are nailed to floor every 12 or 16 inches. Sections of Gold Bond Metal Base are quickly snapped on both sides of base clips, and the framework is ready for lathing.



Big, easy-to-handle 27″ wide sheets o Gold Bond Diamond Mesh Lath are fastene to studs with tie-wire. Maximum sound in sulation and floor-line partition strength are assured by filling base with a plaster grout

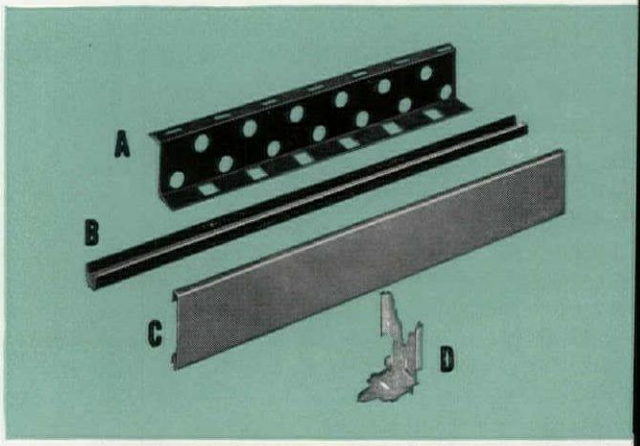
TECHNICAL DETAILS



Perspective of 2" Solid Plaster Partition
Showing Assembly With Gold Bond Flush Type Metal Base

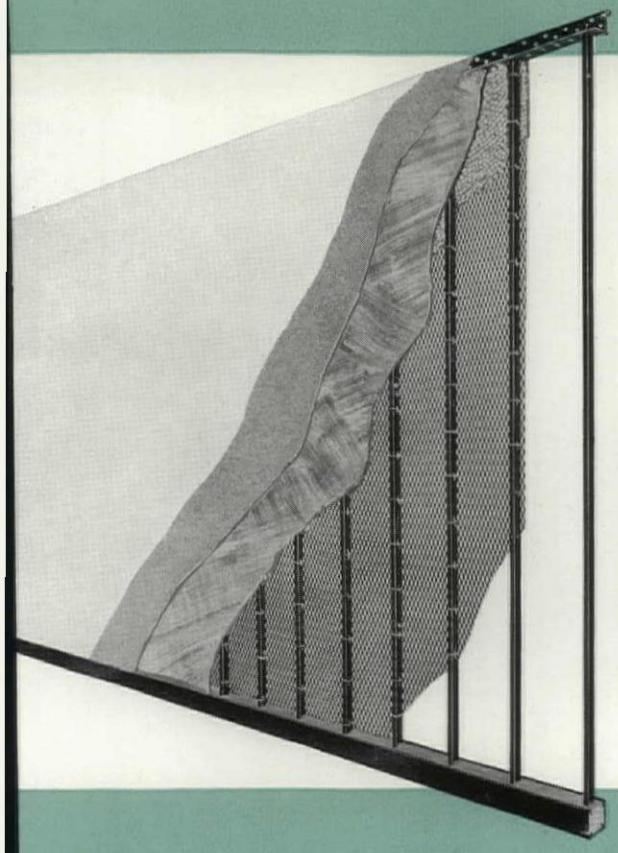
Save money from

2″ solid metal



Four separate parts, easily combined, form the basic framework for the 2-inch solid partition assembly: A) Gold Bond "Z" Ceiling Runner; B) Gold Bond Channel Studs; C) Gold Bond Metal Base; D) Gold Bond Metal Base Clip.

Specify Plaster on Metal Lath f

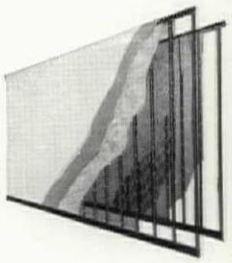


Gold Bond 2″ Solid Metal Lath and Plaster Partition System

Gold Bond 2-inch Solid Metal Lath and Plaster Partition System with channel studs occupies a minimum amount of floor and building space. The four metal units making up this economical system form a durable, space-saving, non-bearing partition for use in interior wall construction.

Gold Bond Hollow Wall System

Gold Bond Hollow Wall System is the companion to the Gold Bond 2″ Solid Partition. It uses the same basic component parts as the 2-inch System but is a double wall rather than a single wall with no connections between partition faces. It is excellent for party walls where reduction of noise transmission is required. Installation and concealment of utilities is greatly simplified. The Hollow Wall System has a one-hour fire rating and a 48.1 decibel sound-insulating rating.



"start to finish" with Gold Bond®

lath, plaster, and channel partitions

IN CONSTRUCTION — No other durable construction *with comparable fire and sound resistance* can be built as inexpensively as a solid partition.

IN SPACE — Architects of buildings costing $12 per sq. ft. save $3 on floor space for every lineal foot of 2-inch solid partition compared to wood studs or masonry partitions.

IN WEIGHT—Metal Lath solid partitions with sanded plaster weigh less than 18 pounds per square ft. This low weight can save over 100 pounds per lineal foot of 10-ft. high partition compared with cinder blocks.

IN MAINTENANCE — Metal Lath reinforces the partition to make it highly shockproof. Impacts are absorbed with minimum chances of cracking plaster. Smooth plaster surfaces are easy to clean and redecorate whenever necessary.

IN ADDITION — the Gold Bond 2″ Solid Metal Lath, Plaster and Channel Stud Partitions form an effective sound barrier with a sound transmission loss rating of 39.4 decibels. The combination of steel and gypsum plaster has a one-hour fire rating.

Build better with Gold Bond® Building Products

For complete information on Gold Bond Metal Lath and Plaster, write to:

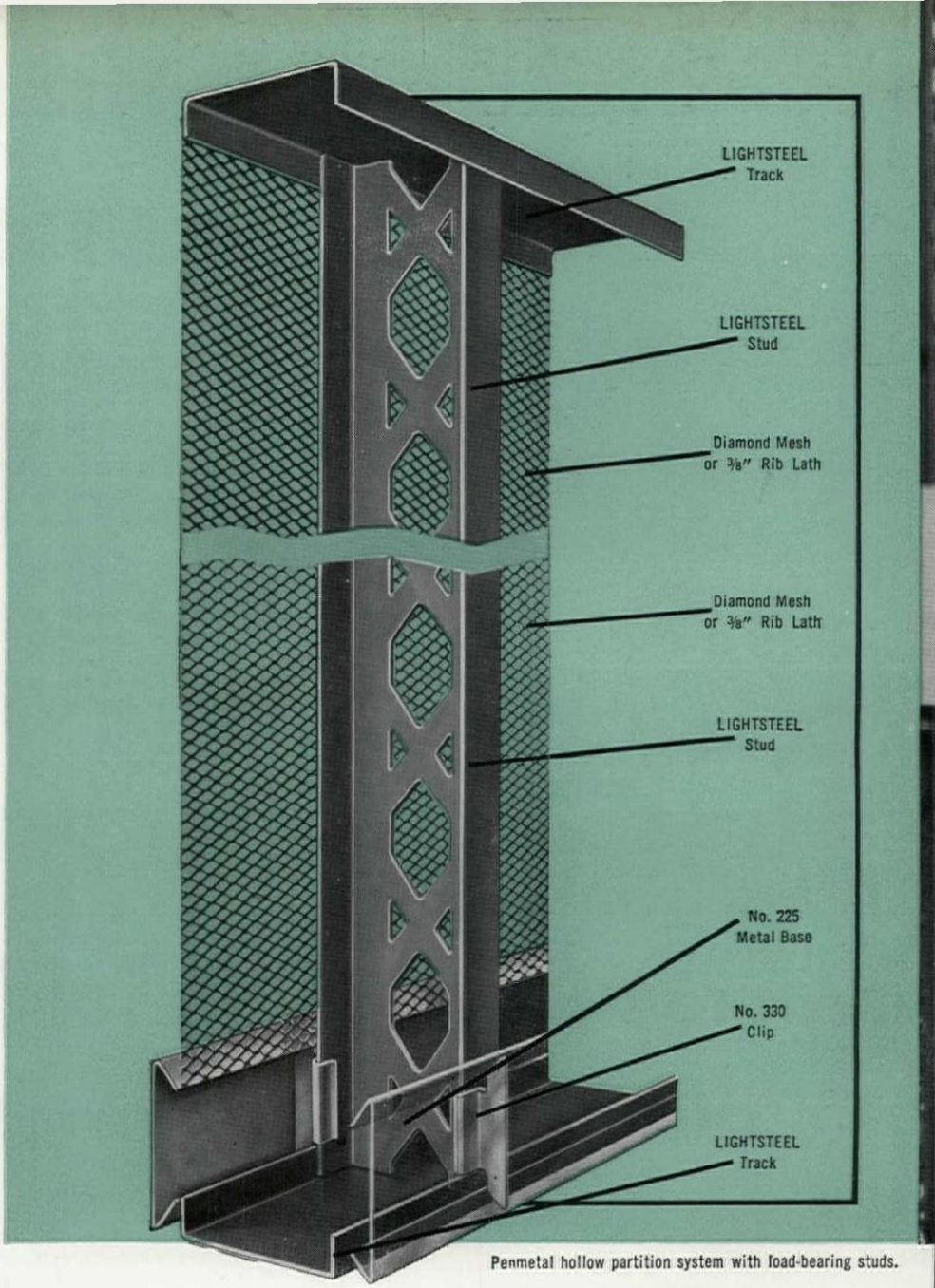
NATIONAL GYPSUM COMPANY

BUFFALO 2, NEW YORK

ting Quality and Genuine Economy

METAL MARK
Penmetal
1869
OF QUALITY

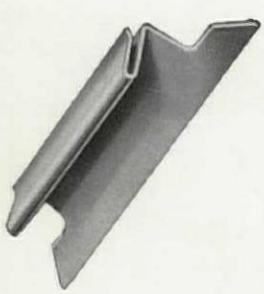
Penn Metal Company manufactures a complete line of metal lath and accessories in addition to LIGHTSTEEL sections



Penmetal hollow partition system with load-bearing studs.

Here is a low-cost, easy-to-erect partition with load-bearing studs

This "packaged" load-bearing partition consists of Penmetal LIGHTSTEEL structural studs, fastened at top and bottom to LIGHTSTEEL track and braced with LIGHTSTEEL bridging. With metal lath wire-tied to both sides of the studs, and then plastered, it provides a light-weight, fire-safe construction that cuts the transmission of sound by as much as 46 decibels.



No. 330 clip furnished for 2½", 3" or 4" base to provide ½", ⅝", ¾" or ⅞" plaster grounds. Penmetal base is flush with the plaster surface and provides plaster ground and finish trim in one unit.

Specify Plaster on Metal Lath for

Wall panels are easy to handle and erect. Photo also shows the use of LIGHTSTEEL joists.

The sections are fabricated from structural grade steel by cold forming and are designed specifically for strength, light weight and low cost. They offer all the benefits of conventional steel sections, yet you do not pay for extra load-carrying capacity you do not need.

You save on erection, too. Sections are designed to fit together for ease of assembly and welding in the shop or at the job site. Because of their light weight, complete wall panels can be readily trucked to the job site and erected in short time. Still further economies can be effected by using openings in the studs for the installation of wiring and piping.

An additional feature of this partition is the exclusive Penmetal No. 330 clip which firmly attaches metal base to the studs. Flush with the plaster surface, the base is in keeping with modern trends toward simple lines and straight surfaces.

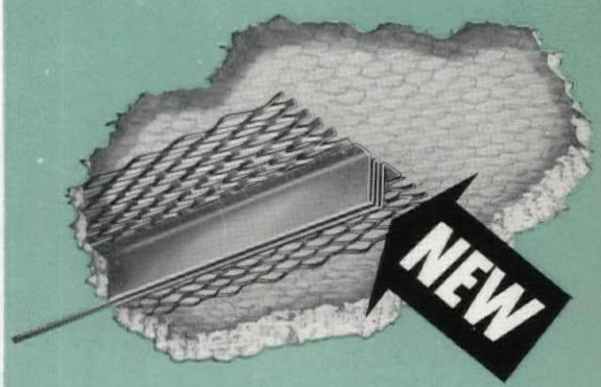
Write for answers to any questions you may have about this "packaged" partition.

PENN METAL COMPANY, INC.

General Sales Office: 205 East 42nd Street, New York 17, N. Y. • *Plant:* Parkersburg, W. Va.

District Sales Offices: Boston, New York, Philadelphia, Chicago, Detroit, Dallas, Seattle, San Francisco, Los Angeles

Lasting Quality and Genuine Economy



Penmetal Expansion Joint*

FOR ACOUSTICAL PLASTER CEILINGS AND EXTERIOR STUCCO

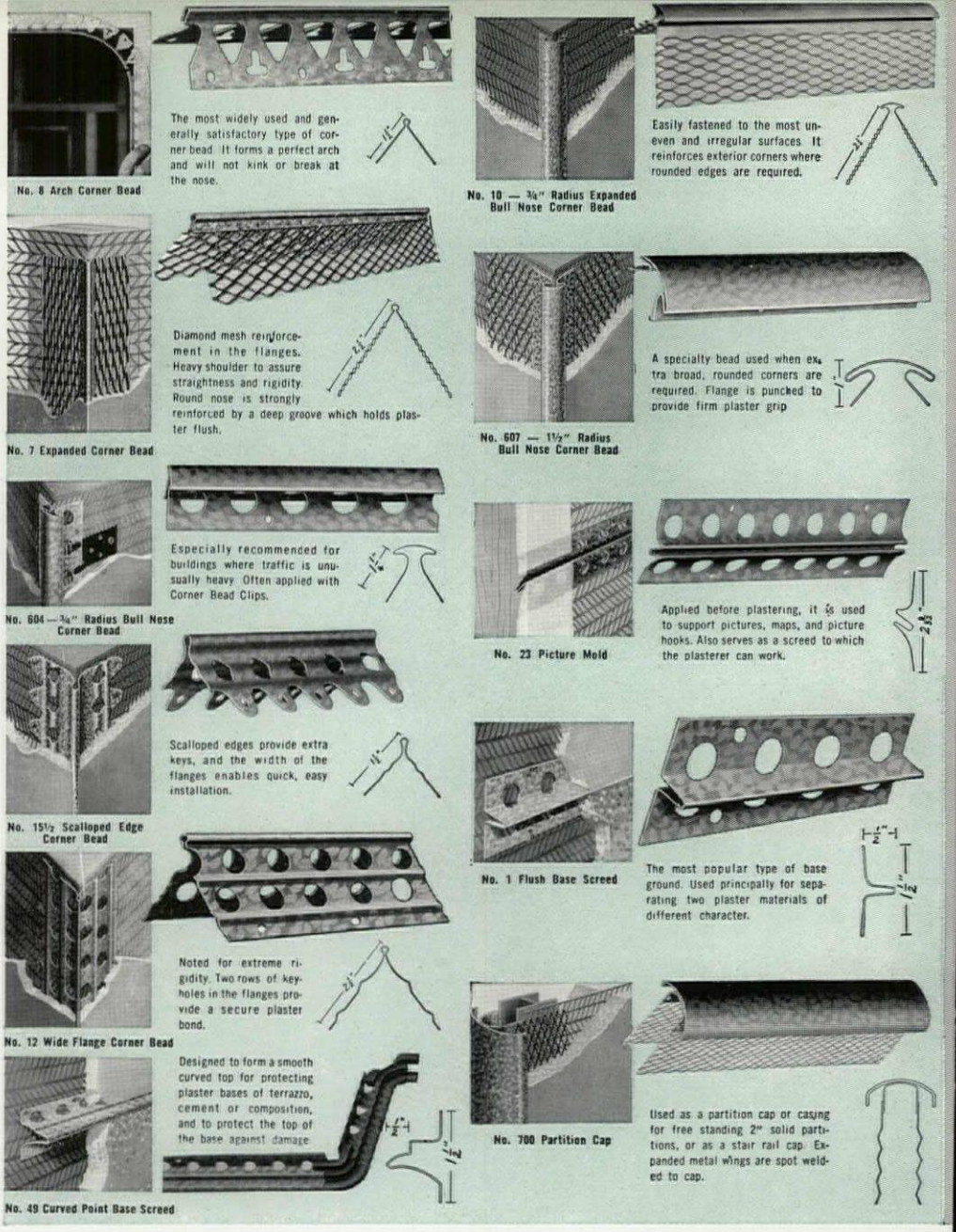
This unique expansion joint takes up the stresses due to expansion and contraction of plaster or stucco. Also provides a work stop, essential in acoustical plastering. Saves time and labor, too, being a one piece joint and ground.

Write for address of nearest dealer.

*Patent Applied For

TRUSCON
MARK OF MERIT
PRODUCTS

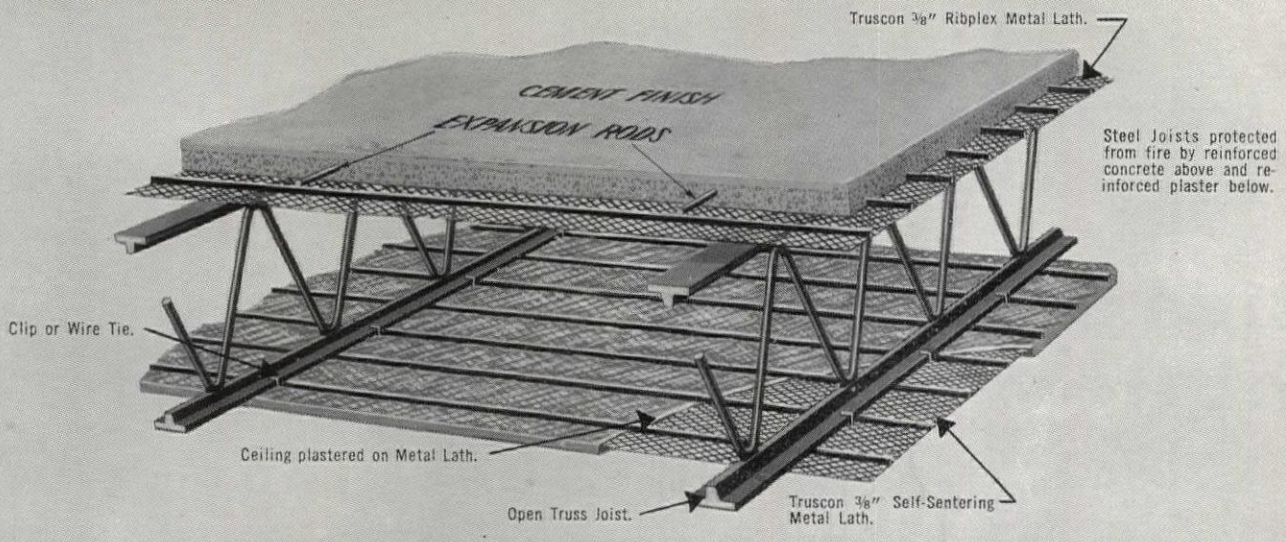
A NAME
YOU CAN
BUILD ON



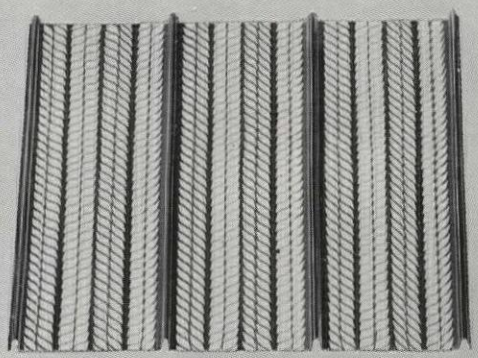
The Metal Lath Accessories illustrated above are among the more than 40 different items for better plastering in Truscon's complete line. They are easy to erect, easy to form, easy to work over, and assure the finest quality of finished work because of their precision manufacture.

Truscon metal lath accessories assure finest plastered interiors

Specify Plaster on Metal Lath for

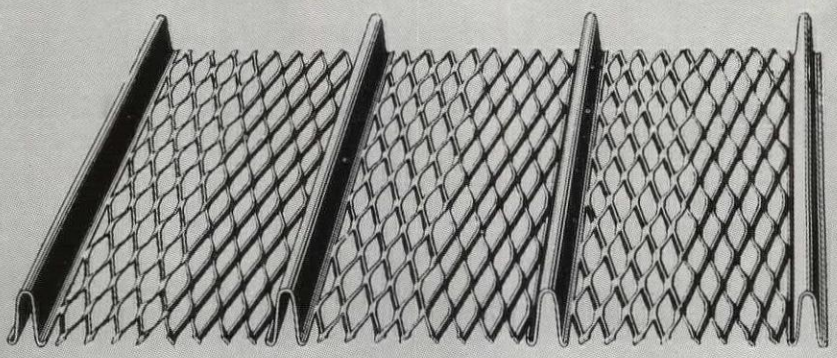


Metal Lath and plaster ceiling on the underside of steel joists



Truscon 3/8" Ribplex

The extreme rigidity of this lath is due to the 3/8" ribs spaced on 4" centers. It is a perfect lath as a combination form, centering and reinforcement for concrete slabs in steel joist construction. The lath is securely attached to top of joists with top lath clips or by wiring.



Truscon 3/4" Self-Sentering

This lath is most effective as a centering and reinforcement for concrete roofs and floors, and for use on much greater spans than are permissible with 3/8" Ribplex. 3/4" ribs are spaced 3 3/8" on center and connected by a diamond mesh — cut and drawn from one sheet of steel.

Truscon Rib Laths offer maximum centering advantages

Metal Lath Centering with Truscon Rib Laths offer an economical method which provides both reinforcing for the concrete and a rigid form which does not need to be stretched taut. The Rib Lath is quickly placed and tied or clipped to the supporting steel joists. After concrete has hardened, the slab and steel joists are bonded together in a rigid floor system.

Truscon 3/8" Ribplex, used as a centering for the top slab, will not exert a lateral pull on the top chords or flanges of the steel joists. Consequently, there is no need for costly temporary bracing. 3/8" Ribplex centering eliminates any danger of twisted or weakened joists.

Truscon 3/4" Self-Sentering Lath comes in sheets 29" wide, widest of any material made for a similar purpose. The decreased number of laps results in substantial savings in erection labor.

For complete information on Truscon Metal Lath Centering, write to

TRUSCON STEEL DIVISION
REPUBLIC STEEL

1070 ALBERT STREET **YOUNGSTOWN 1, OHIO**

Export Department: Chrysler Building, New York 17, N. Y.

Lasting Quality and Genuine Economy

Loading Table for 3/8" Ribplex

Thickness of Slab Above Mesh	Weight of Concrete (Lbs. per Sq. Ft.)	Weight of Lath Lbs. per Sq. Yd.)	Safe Superimposed Loads (Lbs. per Sq. Ft.) Span in Inches			
			12	16	19	24
2"	24	3.4	950	536	380	238
2"	24	4.0	1090	613	433	271
2 1/2"	30	3.4	1200	675	429	300
2 1/2"	30	4.0	1360	766	544	340
3"	36	3.4	1450	815	578	362
3"	36	4.0	1650	930	625	412

Loading Tables for 3/4" Self-Sentering

Thickness of Slab Above Mesh	Weight of Slab Per Sq. Ft. (Lbs.)	Weight of Lath Per Sq. Ft. (Lbs.)	Maximum Span for Centering Wet Concrete	Safe Superimposed Loads (Lbs. Per Sq. Ft.) Span in Feet			
				3'	4'	5'	6'
2"	24	.60	3'-3"	325	170	98	59
2"	24	.75	3'-7"	438	233	138	87
2 1/2"	30	.60	2'-11"	422	222	129	78
2 1/2"	30	.75	3'-3"	.....	302	180	114
3"	36	.60	2'-8"	518	273	160	98
3"	36	.75	2'-11"	.....	373	224	142
3 1/2"	42	.60	2'-5"	.....	325	190	117
3 1/2"	42	.75	2'-9"	.....	442	267	170
4"	48	.60	2'-3"	.....	378	222	138
4"	48	.75	2'-6"	.....	514	310	198

to lower costs . . . to simplify installation of services . . . specify this

fireproof, fast-erecting hollow partition system

using TRUSSTEEL* studs and U. S. G. metal lath

FIREPROOF—one to 2½ hour rating, depending on type of metal lath and plaster used.

GOES UP FAST—TRUSSTEEL Studs require little, if any, cutting or fitting on the job. Attachment shoe allows quick adjustment (up to 4 in.) for varying ceiling heights. Metal lath is easily attached with wire ties.

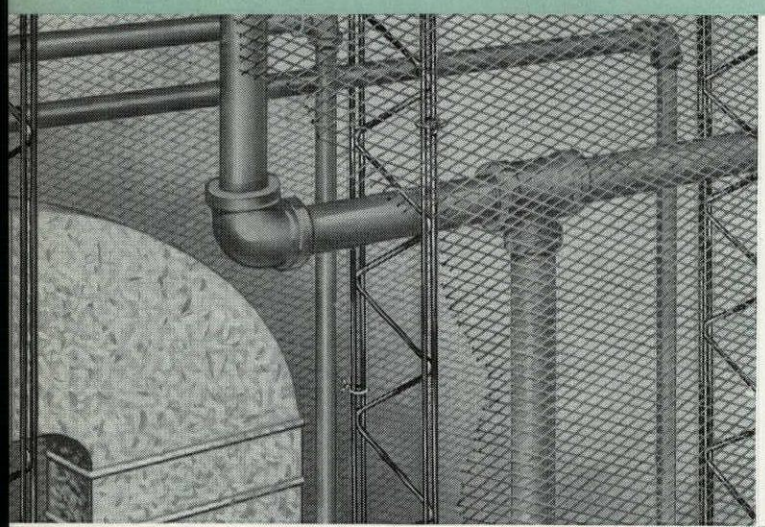
ECONOMICAL—TRUSSTEEL Studs cost no more than wood yet permit easier concealment of conduits, ducts, plumbing and other services; ample strength without bulk for savings on structural steel.

LIGHTWEIGHT—finished partition weighs as little as 11½ lbs. per sq. ft. permitting installation most anywhere without additional structural framing.

RESISTS SOUND TRANSMISSION—sound ratings from 40.5 db. to 54.7 db. depending on lath attachment.

STRONG—equal in strength, *after plastering*, to any comparable non-bearing steel stud partition.

VERSATILE—TRUSSTEEL Studs are available in various widths for finished wall thickness of 4 to 8 in. *T. M. Reg. U. S. Pat. Off.



FOR MORE INFORMATION AND DETAILS:

See Sweet's, section 11; contact your U. S. G. Architects' Service Representative or Sales Representative; or write Dept. PA-5, 300 W. Adams St., Chicago 6.

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The Greatest Name in Building

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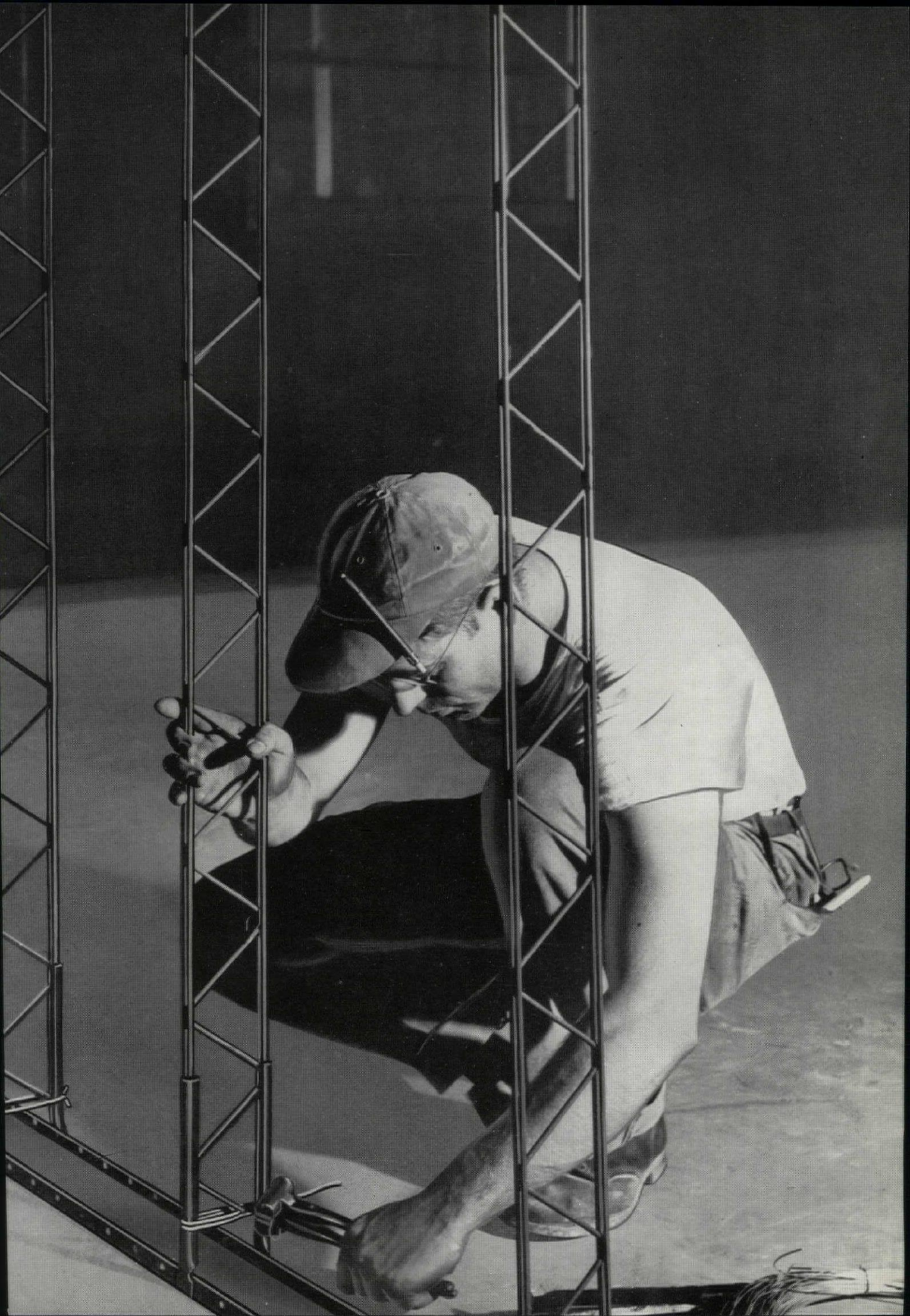


Fire Safety—
Number One Concern
of
Every Architect

In spite of organized effort against it, the nation's annual fire toll continues its appalling increase. Ten years ago losses averaged a million dollars a day. Last year they averaged more than two and a half million dollars a day.

The architects and builders of America hold the key to eventually winning the fight with this ruthless destroyer of life and property.

Plaster on Metal Lath—
Number One Fire Protection

The built-in fire protection of metal lath and plaster has been demonstrated again and again during the past half-century. Repeated tests have established authoritative fire resistance ratings for plaster on metal lath. Countless fire tragedies have been prevented in existing buildings because architects have specified plaster on metal lath.

Send for Metal Lath Technical Binder

Complete technical data on fireproofing, partitions, ceilings and other types of metal lath and plaster construction is available from the Metal Lath Manufacturers Association. Products or systems of each of the member companies, whose advertisements are on preceding pages, are not confined to those listed in their individual advertisements. See Sweet's Files, Architectural, for general specification data and for manufacturers' catalogs.

METAL LATH MANUFACTURERS ASSOCIATION

Engineers Building ★ Cleveland 14, Ohio

finishers, protectors

501. Masonry Preservation, AIA 7-B-2, 16-p. booklet discussing problems and solutions in waterproofing masonry structures. Contains information on joint failures, effects of water infiltration from outside, and effects of vapor migration from inside; explains preparatory steps for waterproofing buildings. Also provides data on products used for exterior-masonry protection. The Tremco Mfg. Co., 8701 Kinsman Rd., Cleveland, Ohio.

insulation (thermal, acoustical)

601. Sound Absorption Coefficients of Architectural Acoustical Materials, AIA 39-B (XV), 36-p. index of acoustical products. Summary tables provide data on thickness, noise-reduction coefficients, light reflectance, and flame resistance of materials identified by trade names; manufacturers' tables give more detailed information on each product. Includes diagrams showing recommended methods of mounting acoustical materials; also contains coefficients of othe building materials. Acoustical Materials Assn., 59 E. 55 St., New York 22, N.Y.

602. Vibration, Shock, and Noise Control, AIA 39-D, 4-p. folder containing technical information on vibration-control mountings. Gives performance data on mountings designed for business machines and air-conditioning equipment as well as for heavy industrial equipment; provides material on steel-spring isolators in addition to rubber and cork insulation. Selector chart; specifications. The Korfund Co., Inc., 48-15 32 Place, Long Island City 1, N. Y.

603. Fesco Board, AIA 37-B-2, 4-p. publication illustrating features of fireproof roof-deck insulation made of expanded-perlite particles, mineral binders, and fibers. Outlines properties of material; gives details showing use with concrete, wood, or steel decks. Performance-data tables; specifications. F. E. Schundler & Co., Inc., 504 Railroad St., Joliet, Ill.

604. The Silent Treatment, AIA 39-B, 8-p. booklet on vermiculite acoustical plastic. Describes outstanding properties of material, including fire ratings; contains data on application by trowel or machine. Photos show use in several noteworthy buildings; specifications. Vermiculite Institute, 208 S. LaSalle St., Chicago 4, Ill.

sanitation, plumbing, water supply

★ **701. Ice Skating Rinks: Their Construction and Maintenance,** 36-p. report on construction of artificial ice-skating rinks, prepared for architects, engineers, and owners. Presents data for design of rinks; gives recommendations for selection of piping material. Explains factors causing corrosion in refrigerating pipes and outlines methods for controlling deterioration. Photos, drawings; suggestions for minimizing maintenance. A. M. Byers Co., Clark Bldg., Pittsburgh 22, Pa.

702. Transite Gas-Vent Pipe (TR-119A), 28-p. booklet on asbestos-cement pipe for venting domestic gas appliances. Details show proper methods of installing base, supports, and capping; sections show several different types of pipe. Gives dimensions, shapes, and fittings for all types. Johns-Manville, 22 E. 40 St., New York 16, N. Y.

703. Monoxivent Underfloor Exhaust-Eliminating Systems (55-40), 12-p. brochure on exhaust-eliminating systems for automotive-service buildings. Sketches show various types of duct systems; details illustrate how system is installed. Also contains data on blowers as well as special instructions for installations in multistory and existing structures. Tables. Kent-Moore Organization, Inc., 5-105 General Motors Bldg., Detroit 2, Mich.

specialized equipment

801. Corbin Letter Boxes (WP25), 6-p. circular showing letter boxes designed for installation in apartment and office buildings. Describes key, latch, and combination boxes; gives specifications and dimensions. Photos, specifications. Corbin Wood Prod-

(Continued on page 186)

p/a manufacturers' literature

(Continued from page 185)

ucts Div., The American Hardware Corp., New Britain, Conn.

802. Top-Running Overhead Cranes (T202), 20-p. publication containing information on overhead cranes. Discusses special features of construction; provides description, dimensions, and load-carrying capacities for motor-driven, hand-geared, or push-type cranes. Also contains material on electrical controls. Chicago Tramrail Corp., 1330 S. Kostner Ave., Chicago 23, Ill.

803. Appliances and Equipment for Home Planning, portfolio containing helpful information for architects' files. Three folders enclose data on: electrical living and air conditioning; kitchen planning and equipment; and laundry planning and equipment. Each folder includes pamphlets of design data as well as spec sheets on different models available in each piece of equipment. Consumer Service Dept., Westinghouse Electric Appliance Div., Mansfield, Ohio.

surfacing materials

901. Bolta-Wall Vinyl Surfacing, AIA 28-C, file folder enclosing several pages of data on fire-retardant vinyl surfacing material. Features actual color samples of bamboo, wood, leather, and mat-plastic textures. Also includes architect's specifications and laboratory reports on fire tests. Building Materials Div., Bolta Sales, Inc., Lawrence, Mass.

902. Cold Spring Granites, 32-p. catalog containing information on granite. Gives data on cost, sizes, and finishes; provides diagrammatic details showing use of granite as wall surfacing or column facing. Color photos of 14 different shades of granite; specifications. Cold Spring Granite Co., Cold Spring, Minn.

903. Mosaic Tile Book of Beautiful Homes (12), 16-p. brochure illustrating many unusual uses of tile in contemporary homes (available to architects by enclosing business letterhead with P/A coupon). Describes features of different tile materials; contains suggestions for proper selection of tile. Color photos show tiles used in bathrooms and kitchens, as paving and flooring material, for fireplaces, and for counter tops. The Mosaic Tile Co., Zanesville, Ohio.

interior furnishings

30. Draft-A-Matic Desk, 8-p. circular describing drafting desk which features movable belt to bring drawings within easy reach of draftsman. Shows operation of self-healing plastic belt and special rollers mounted on drafting board; illustrates adjustability of drafting-board slope and desk height. Dimensions. The General Fireproofing Co., 500 Fifth Ave., New York 36, N. Y.

31. Architects Manual for Venetian Blinds, AIA 35-P-3, 28-p. brochure describing heavy-duty blinds. Outlines features of construction; provides data on head mechanisms, aluminum slats, and Nylon-cotton cord; gives instructions for proper installation of blinds. Also contains data on giant-sized and motorized blinds; dimensions; specifications. Levolor Lorentzen, Inc., 720 Monroe St., Hoboken, N. J.

32. What Everyone Should Know About Genuine Mahogany, 32-p. pamphlet on mahogany furniture. Discusses properties of mahogany; answers common questions on colors, grain patterns, veneers, and finishes; gives information on construction of mahogany furniture. Photos, drawings. Mahogany Assn., Inc., 666 Lake Shore, Chicago 11, Ill.

33. Infinity Fabrics, AIA 28-D (502), 16-p. booklet illustrating drapery fabrics of contemporary design. Shows many patterns in Orlon-silk and rayon-backed-linen fabrics; pictures fireproof mohair-type material and special diffusion cloth for eliminating glare. Also includes data on demountable traverse drapery track; color chart. Edwin Raphael Co., Inc., Holland, Mich.

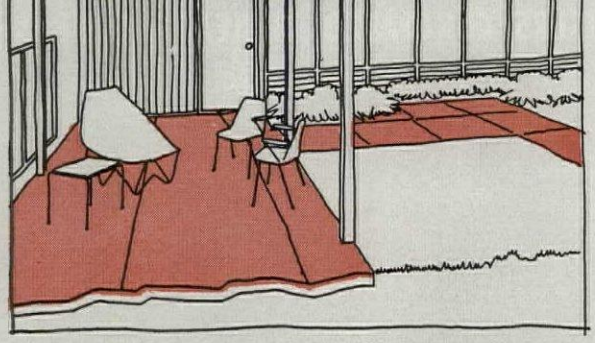
MODERN DOOR CONTROL BY *LCN* · CLOSERS CONCEALED IN HEAD FRAME

SOUTHWESTERN MICHIGAN TUBERCULOSIS SANATORIUM, KALAMAZOO, MICHIGAN

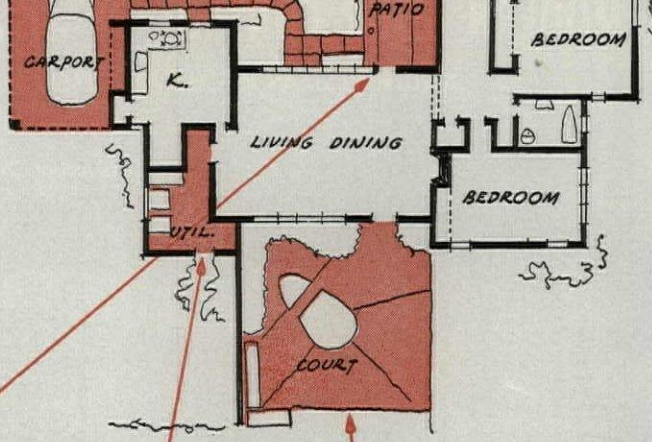
LCN CLOSERS, INC., PRINCETON, ILLINOIS

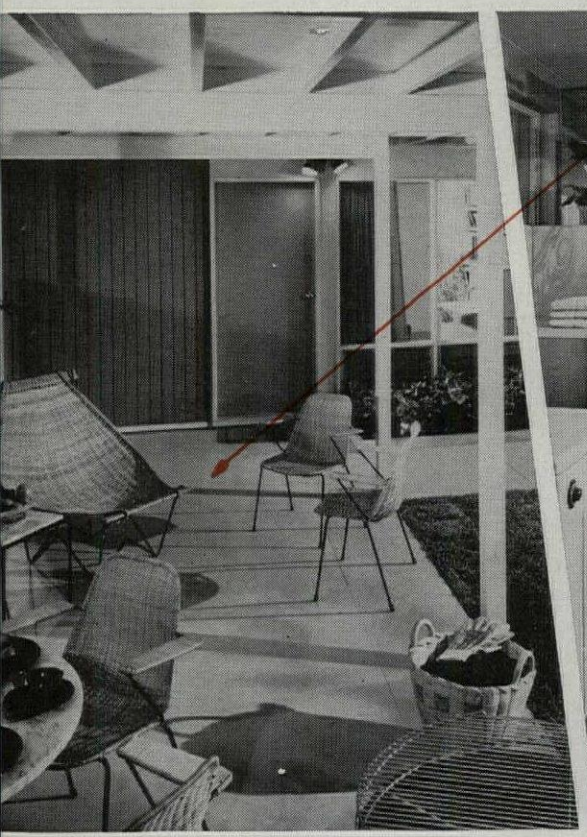
Construction Details on Opposite Page

Lee Black and Kenneth C. Black, *Architects*

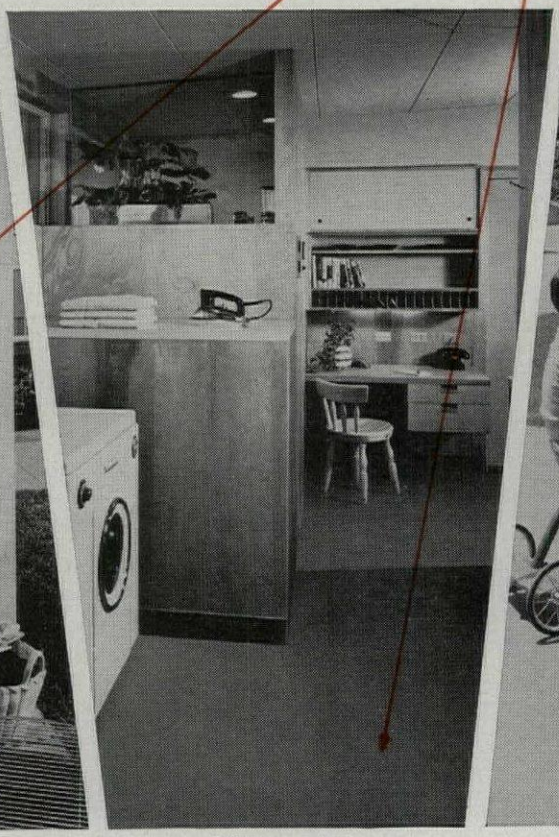


Fused color. *Not a paint or coating! Colorundum is troweled into the concrete topping and becomes an integral part of the surface, producing beauty and durability.*

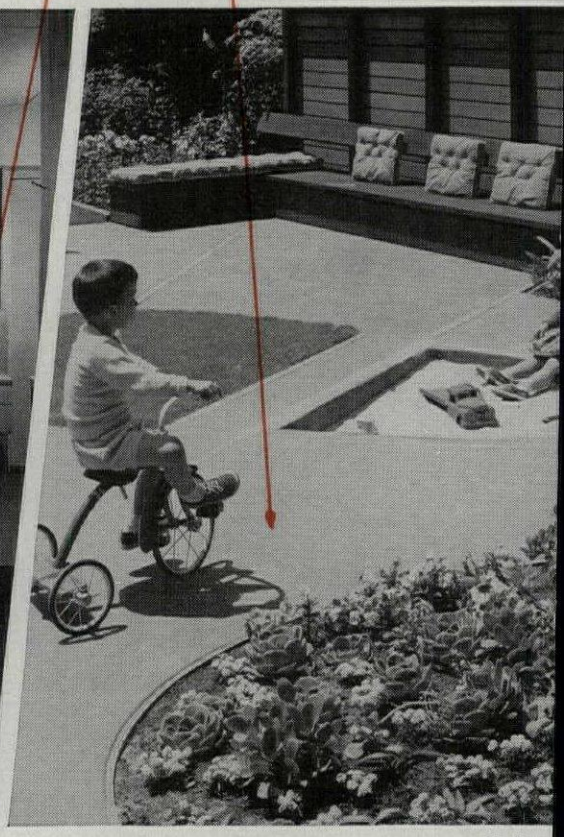




Nat'l Homes Corp. photo



J. Shulman photo



E. Brau

Beautify concrete floors

Colorundum floors give luxury appearance and extra wear resistance at low cost

Subsidiary of Sun *Chemical Corp.*

A. C. Horn Co., Inc.

Dept. H11-1117, Long Island City 1, N. Y.

Please send me complete information on Colorundum.

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*Firm*_____

*Address*_____

*City*_____ *Zone*____ *State*_____

Here's a simple and economical solution to the problem of exposed carpeted areas of drab, colorless concrete. It's called Colorundum. A fused-color concrete floor it provides lends a dramatic and practical to patios, walkways, and service floors. Colorundum cuts air condit costs, too, because its color properties keep sunlit areas substantially than ordinary concrete. Yet its cost is just a fraction of that of tile

Colorundum is far more resistant to traffic than ordinary concrete It is a balanced formulation of nonslip aggregate (next to the diam hardness), water-repellent compounds, and durable colors . . . conta silica, quartz, or sand. It is easy to keep clean, and since it contains no it will not rust or stain.

Colorundum is available in eleven decorator colors.

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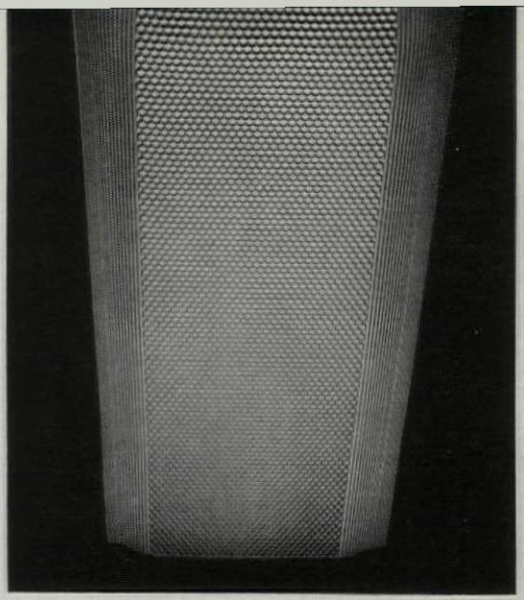
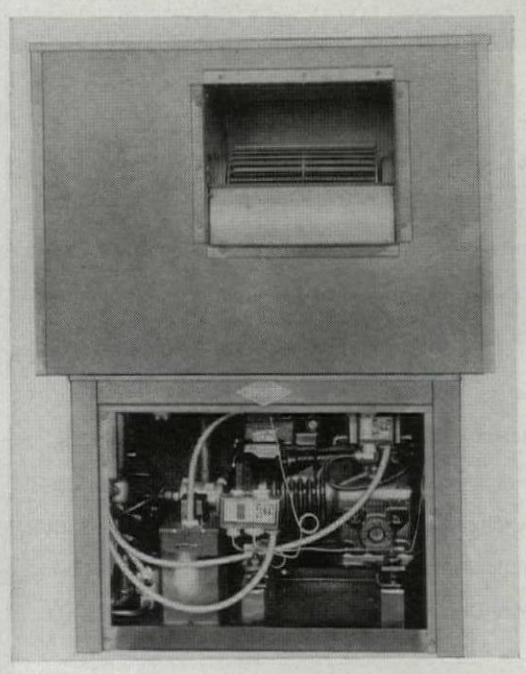


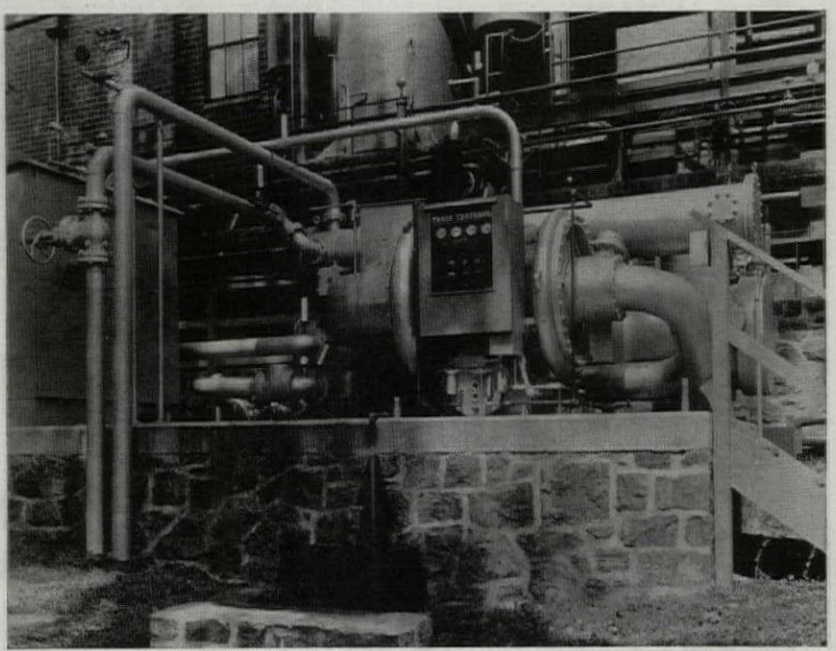
New low-brightness, "curved-lens" panel (above) *for fluorescent-light troffer fixtures concentrates light from tubes and reflector at angles below glare zone. Side prisms bend down light that otherwise escapes at high angles. Corning Glass Works, Corning, N. Y.*

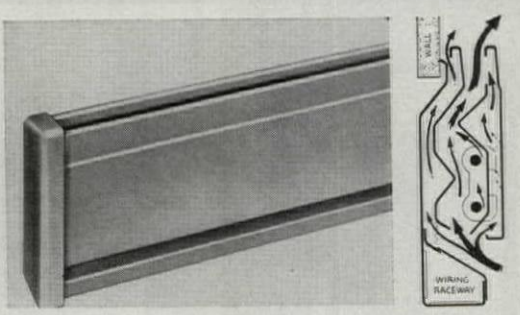
Combination air and water-cooled residential air conditioner has been specifically designed for use in either water-short or high-water-cost areas (below). *Uses less than 10% of water required by conventional types. Union Asbestos & Rubber Co., Heating and Cooling Div., 332 S. Michigan Ave., Chicago, Ill.*



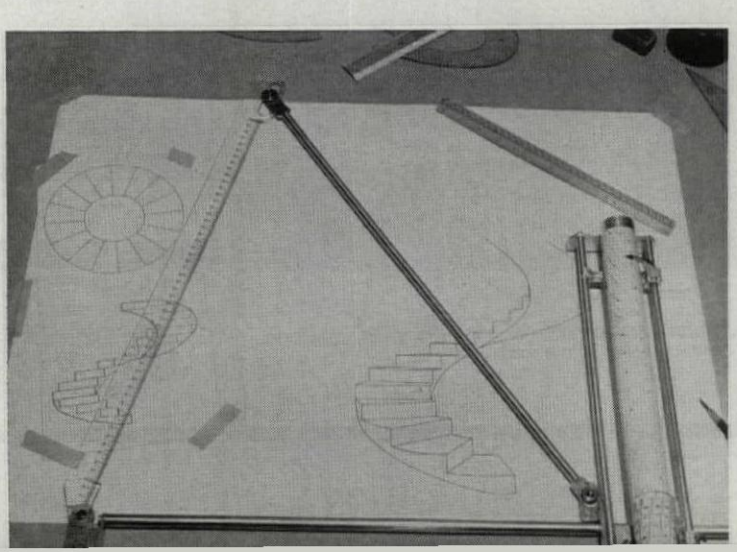
First American prototype of the French Perspectograph accurately transcribes plans and elevations into perspective drawings in fraction of time formerly required (right). *Instrument is designed to operate on the principle of cylindrical panorama perspective. By means of a calibrated sweep-arm and an abacus chart of curves, it enables user to translate orthographic drawings into a perspective by merely plotting perspective points and connecting them. Cost is approximately $275. Perspectograph Corp., 285 Madison Ave., New York 17, N.Y.*

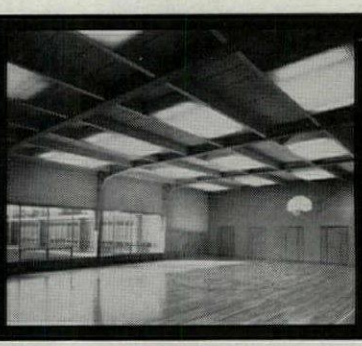
CenTraVac line of centrifugal water chillers is now available for outdoor installation without protective enclosures (below). *All sizes from 50 to 800 tons of refrigeration capacity can be obtained with this optional feature. Especially suitable for existing buildings where equipment-room space is at a premium. The Trane Co., La Crosse, Wis.*

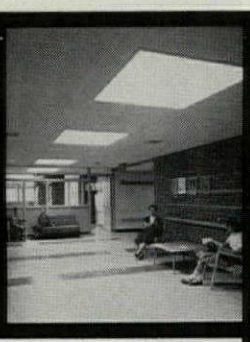




Electric baseboard has a surface temperature that stays below 125 F (above). *Efficient operation results from improved design of interior air passages and heat-reflecting power of aluminized steel. Passages channel air over heating elements and reflective baffle increases flow of warmed air. Available in two lengths: 32" and 48"; height: 6"; 160-w per ft. Cavalier Corp., Electric Heating Div., Chattanooga 2, Tenn.*

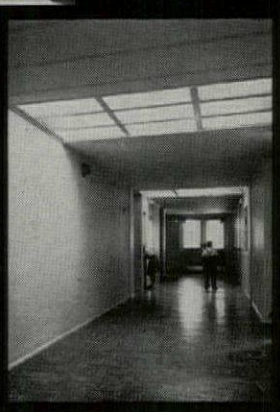






more than 9000 schools daylighted with

WASCOLITE SKYDOMES®



Wascolite Skydomes — the first prefabricated plastic skylights — have helped change the design of the American classroom. Handsome, trouble-free and inexpensive, they bring even, balanced daylight to every desk, and to every part of the building — in more than 9000 schools across the nation!

Now Wasco engineering has developed a complete line of toplighting units that provide daylighting plus — ventilation, fire-venting, added insulation and access to the roof. Incorporated into a toplighted school, these exclusive Wascolite products provide important extra functions at practically no extra cost. For complete details, see Sweet's Catalog or write Dept. PA11.

Patent No. 2610593, 2693156 and pats. pending

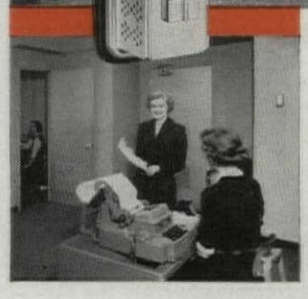
WASCOLITE HATCHWAY—Daylighting plus safe, well-lighted access to the roof.

WASCO PRODUCTS, INC.

Bay State Road, Cambridge 38, Mass.

Wasco Chemical (Canada), Ltd., 3229 Yonge St., Toronto, Ontario

for the *New Look* Office Building...



Individual Room Temperature Control by *Johnson*

First use of Alcoa's striking new, colored aluminum curtain walls is in the company's own sales center* in Cincinnati. Finished in gold and blue aluminum, with contrasting natural-finish aluminum windows and trim, it brings a truly distinctive new look to the building scene.

IDEAL INDOOR WEATHER

Equally modern are the building's mechanical features, notably the air conditioning system and its Johnson-engineered Control System. Johnson *Individual Room* Thermostats permit the occupants of each office to enjoy the temperature of their choice—a refreshing, comfortable temperature that increases employee satisfaction and helps them do better work.

DOUBLE DUCT SYSTEM

Conditioned air is supplied by a high pressure primary air system with Johnson *Individual Room* Thermostats controlling the hot and cold duct dampers in high-velocity mixing boxes serving each room. Refrigeration is furnished by a 50-ton Trane Centravac unit under the control of a highly accurate Johnson T-800 Thermostat.

To save personnel time and for extra operating economy, a special 7-day program clock automatically places the primary air system in and out of operation on a predetermined cycle throughout the week.

WASTE-FREE AIR CONDITIONING

All Johnson Thermostats, Valves, Dampers and other apparatus are combined into a single, highly efficient control system that not only insures ideal temperatures but makes possible waste-free heating and cooling performance.

Whether your temperature control problems involve a smaller building or a towering skyscraper, a specially planned system of Johnson *Individual Room* Control can provide it with the same superior standards of comfort and economy enjoyed by Alcoa's new building. Johnson originated the idea of *individual room* temperature control over 70 years ago and today offers you more specialized experience than anyone else! The recommendations of a nearby Johnson engineer are yours without obligation. Johnson Service Company, Milwaukee 1, Wisconsin. Direct Branch Offices in Principal Cities.

**Aluminum Company of America, Cincinnati sales office. Paul Schell, architect, Pittsburgh; Martin C. Knabe, structural engineer, Pittsburgh; Theo. E. Rockwell, mechanical engineer, Pittsburgh; Henry Niemes & Co., Inc., mechanical contractor, Cincinnati.*

JOHNSON CONTROL

TEMPERATURE AIR CONDITIONING

PLANNING • MANUFACTURING • INSTALLING • SINCE 1885

p/a products

(Continued from page 189)

air and temperature control

Concealed Air-Conditioning Unit: new room conditioner, developed for concealed installation, presents several advantages of centralized systems. Air-cooled conditioner is located in attic, basement, or crawl space, close to outside wall; unit is connected to supply and return registers in room by short duct run. Additional feature is that two rooms or zones can be alternately cooled by using two branch supply trunks and manually operated damper. Bryant Div., Carrier Corp., 300 S. Geddes St., Syracuse 1, N. Y.

Dryomatic T-150 Dehumidifier: adsorption-type dehumidifier for factories and warehouses is designed to maintain humidities as low as 10 percent. Features of dual-tower machine, using silica gel as drying agent, are: four-way valve alternately directs air from one silica-gel tower to other —assuring constant flow of dry air even as one tower is regenerating; thermostatic control of regeneration cycle makes unit self-adjusting to atmospheric conditions. Unit has dry-air output of 150 cu ft per min and removes four to five lb of water per hr. Dryomatic Corp., Alexandria, Va.

construction

T-Bar Grating: designed for use with concrete or asphaltic filler, steel grating eliminates need for formwork. Bottom flanges of T-bars form retaining surface for filler; upright sections of T-bars provide reinforcement; and cross bars give armored surface. T-sections range from 1″x1″x⅛″ to 6″x6″x½″, according to bearing strength required for floor. Blaw Knox Co., Farmers Bank Bldg., Pittsburgh, Pa.

Fenestra Nonpiercing Roof-Deck Fastener: zinc-coated, sheet-steel fastener secures insulating panels to ribbed, steel roof decking. Triangular-shaped fastener does not pierce metal deck, but fits snugly into ribs of decking to prevent movement of panels or loss because of high winds; fastener is also claimed to eliminate need for asphalt as adhesive between vapor seal and insulation. Detroit Steel Products Co., 3204 Griffin St., Detroit 11, Mich.

doors and windows

"Jack-Knife" Window: new type of window, which folds at center, is especially suited to air-conditioned and multistory buildings. Since window frame hinges at center, exterior-glass surfaces can be cleaned from interior of building; continuous hinge also reduces possibility of air or water infiltration. Window is closed with locking key to eliminate pneumatic or mechanical closing devices; folded window can project inside or outside, horizontally or vertically. Marmet Corp., Wausau, Wis.

Rolling-Glass Doors in Color: heavy-gage, aluminum-framed, rolling-glass doors are

now available in black, bronze, copper, clear aluminum, and fadeproof colors. New hardcoat color process insures penetration of metal and is said to resist chipping or peeling. Doors feature top-hung track-and-roller construction, center-locking hardware, and complete weatherstripping. Sliding or stationary screens are also made in colors. Trendware Inc., 1105 Fair Oaks Ave., S. Pasadena, Calif.

electrical equipment, lighting

Fluorescent-Lamp Starters: two new starters have been developed to improve fluorescent-lamp performance. Automatic-reset starter, used with 20-w lamps, is for hard-to-start conditions — high humidity, ungrounded fixtures, low line voltage, or lack of protective reflector; starter consists of glow switch and heater to operate bimetallic element, which automatically opens circuit after cutting out defective lamp. Thermal starter, used with 40-w lamps, is intended for preheat fluorescent installations where high-voltage conditions reduce lamp life by starting lead lamp instantly; unit, equipped with both thermal and glow switch, provides long preheat time to insure normal operation. Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.

finishers and protectors

Syntex Colored Topping: concentrated-latex compound provides decorative, wear-resistant top coating for asphalt surfaces. Compound, diluted with equal volume of water, is claimed to have excellent bonding qualities; low-temperature flexibility insures resistance to cracking or crazing. Available in red or green nondusting colors. Industrial Products Div., The Flintkote Co., 30 Rockefeller Plaza, New York 20, N. Y.

Rustrem Nonfading Green Paint: new coating, containing chromium-oxide pigment, is formulated for severe moisture and corrosive conditions, especially those of tropical climates. Since pigment is said to be unaffected by sunlight, color will not fade; in addition, paint is claimed to withstand constant exposure to moisture and salt-laden air. Recommended for wide range of exterior applications—particularly on metal roofs, flashing, and window frames. Speco, Inc., 7308 Associate Ave., Cleveland 9, Ohio.

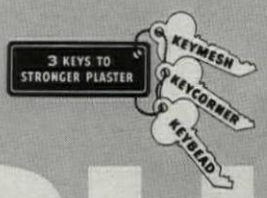
insulation (thermal, acoustical)

Noise-Stop Baffle: glass-fiber baffle was developed to reduce noise impact in areas not suitable for conventional acoustical treatments or where extremely low-cost installation is desired. Incombustible baffle is made of glass fibers bonded into board; plastic-film casing acts as drumhead to transmit sound waves into noise-absorbing board. Units, weighing six lb, are hung from wires by steel hooks, providing effec-

(Continued on page 196)


why invite FIRE?
KEYMESH lath for over-all reinforcement. Made of galvanized woven wire. Especially recommended for ceiling construction.
KEYCORNER strip lath, preformed to fit snugly in corners. Lies flat when applied to joints. Galvanized to prevent rust streaks.
KEYBEAD corner lath with precision formed bead for outside corners. Open mesh assures strong, solid plaster corners.

you multiply fire resistance for pennies per square foot with



KEYMESH

Some types of walls and ceilings invite fire.

When you use lath and plaster, plus KEYMESH, you cut fire hazard immeasurably. Just compare the difference.

With frame construction, a ceiling with exposed joists is gone in 15 minutes. Finished with gypsum lath, lightweight aggregate plaster and Keymesh, it stands up an hour and 38½ minutes.

With open web steel joists, the ceiling fails in 7 minutes when joists are exposed. Add gypsum lath and 1″ of lightweight aggregate plaster over KEYMESH and the ultimate fire resistance is 4 hrs. and 26 min.

With most types of light construction you'll find that lath and plaster with KEYMESH reinforcement can make the difference between "heavy loss" and "light damage" to buildings. You can do this at negligible cost . . . for pennies per square foot of finished surfaces.

Firesafety is not the only advantage of using KEYMESH reinforcing lath. Beauty, durability, and economy must be part of everything you design. With Keymesh you get all these plus other important advantages for your clients such as lower insurance rates and complete adaptability for any type of decoration.

Before you specify or build again, weigh these facts.

Fire Test Results on various types of construction by authoritative Testing Laboratories

CEILING CONSTRUCTION WOOD JOIST FLOORS	ULTIMATE FIRE RESISTANCE	PROTECTION OF JOISTS
Exposed joists.	15 min.	None
Gypsum wallboard ½″ thick finished with casein paint.	25 min.	15 min.
Metal lath, ¾-in. sanded gypsum plaster 1:2 for scratch and 1:3 for brown coat.	45 min.	12 min.
Gypsum lath, ½-in. of gypsum lightweight aggregate plaster reinforced with **KEYMESH**-type reinforcing lath.	1 hr. 38½ min.	36 min.

WALL CONSTRUCTION ON WOOD FRAMING	ULTIMATE FIRE RESISTANCE
½″ fiberboard.	5 min.
Metal lath with ¾-in. sanded gypsum plaster.	15 min.
Tongue-and-grooved wood.	20 min.
⅜-in. perforated gypsum lath with ½-in. sanded gypsum plaster.	30 min.

CEILING CONSTRUCTION STEEL JOIST FLOORS	ULTIMATE FIRE RESISTANCE
Ceiling unprotected.	7 min.
Ceiling of gypsum lath and ½″ lightweight aggregate gypsum plaster.	55 min.
⅜″ gypsum lath covered with 1⅛″ of gypsum plaster with lightweight aggregate.	1 hr. 43 min.
Gypsum lath and ½-in. gypsum plaster with lightweight aggregate reinforced with **KEYMESH**-type galvanized reinforcing lath.	3 hrs. 28 min.
⅜″ gypsum lath, reinforced with 20-gauge, 1″ **KEYMESH**-type lath; then covered with only 1″ of lightweight aggregate gypsum plaster.	4 hrs. 26 min.

STEEL COLUMNS	ULTIMATE FIRE RESISTANCE
Structural Steel, unprotected 10 sq. in. min. area of steel.	15 min.
Gypsum lath, one layer, ⅜″ perforated, ½-in. gypsum plaster mixed with lightweight aggregate.	1 hr.
One layer ⅜-in. perforated gypsum lath, 1-in. thickness of gypsum plaster, 100 scratch, 100 brown, mixed with lightweight aggregate.	2 hrs.
Two layers ½-in. long-length gypsum lath, 1½-in. gypsum plaster mixed with lightweight aggregate. *Lath wrapped with one layer 20 gauge galvanized 1-in.* **KEYMESH**-*type reinforcing lath.*	4 hrs.

KEYSTONE STEEL & WIRE COMPANY

Peoria 7, Illinois

KEYMESH • KEYCORNER • KEYBEAD • KEYWELD
KEYSTONE NAILS • KEYSTONE TIE WIRE
KEYSTONE NON-CLIMBABLE AND ORNAMENTAL FENCE

see our CATALOG in SWEET'S FILE

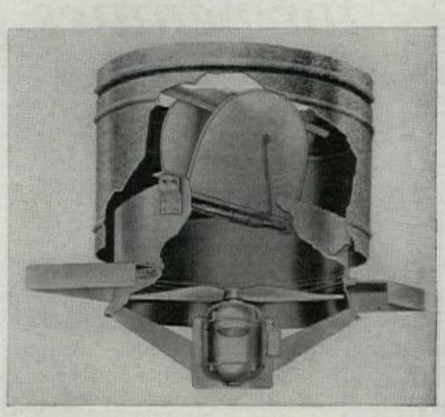
Keymesh is a registered Trademark of the Keystone Steel & Wire Company

p/a products

(Continued from page 193)

tive acoustical treatment despite ceiling obstructions. Owens-Corning Fiberglas Corp., Toledo 1, Ohio.

specialized equipment



Sky-Blast Roof Ventilator: automatic, all-steel roof ventilator provides additional fire protection for industrial buildings. Heat melts fusible link which releases steel torsion springs; arms on spring raise dampers —permitting heat, smoke, and fumes to escape from building. Manufactured in 24" to 60" sizes; actuated by temperatures of 135 F to 360 F, depending on size. Propellair Div., Robbins & Myers, Inc., Springfield, Ohio.

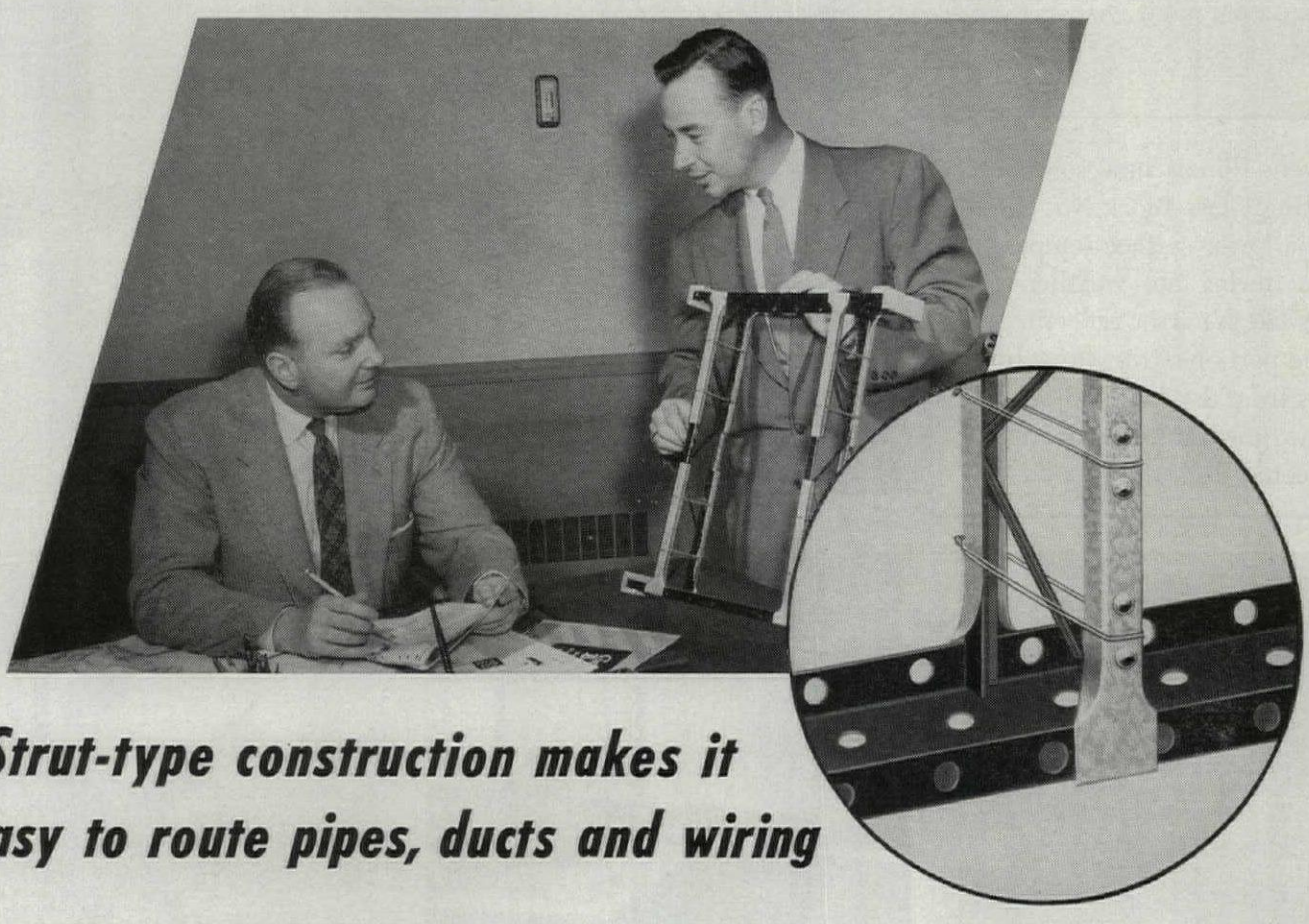
traffic

Moving Sidewalk: new type of conveyor can turn corners and carry passengers in two directions at once. Rubber carpet is fastened to train of platforms, which run on steel track; carpet, anchored to platforms under tension, stretches around curves. Two-way passenger traffic is possible because conveyor can turn around and travel continuous circuit. Conveyor, designed to operate at 1⅔ mph, will also accommodate modest inclines. Hewitt-Robins Inc., Stamford, Conn.

LinkBELTwalk: conveyor transports passengers on horizontal plane or on inclined ramps. Rubber-covered belt moves over closely spaced steel rollers; conventional head and foot pulleys guide belt, while automatic take-up device controls tension. Balustrades support moving handrail; adjustable, rubber threshold plates provide safe entry and exit. Operating speed is 132 ft per min. Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill.

Trav-O-Lator: new passenger conveyor adapts principles of escalator to horizontal travel. Continuous series of metal-treaded platforms move on wheel-and-track system; cleated treads permit use of comb device to insure safe transition to or from conveyor. Installations of unlimited length can be made in series, with grades up to 14°; can be safely operated at speeds up to 180 ft per min. Otis Elevator Co., 260 Eleventh Ave., New York, N. Y.

You'll want to see Gold Bond's NEW HOLOSTUD WALL SYSTEM



Strut-type construction makes it easy to route pipes, ducts and wiring

Here's a non-load bearing partition system that's especially designed to simplify vertical or horizontal routing of utilities. Just a glance at this system will show you how the strut-type construction of the Gold Bond Holostud allows more room for ducts, plumbing and electrical conduits. This exceptionally strong, rigid system may be used with either metal or gypsum lath. Fire, sound and shock resistant properties are excellent.

Your Gold Bond representative will show you full construction details of Gold Bond Holostuds with a portable display such as shown above. In a few seconds, he will demonstrate the fast, simple erection of the system and show you how each part is engineered for maximum strength and easy attachment.

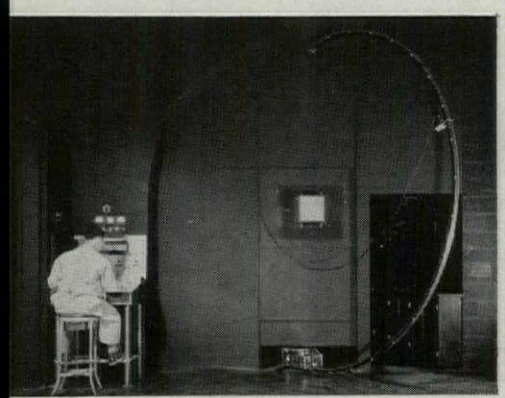
If you would like to see this all-new Gold Bond Holostud Wall System, call your Gold Bond representative, or write Dept. PA-115,

NATIONAL GYPSUM COMPANY • BUFFALO 2, NEW YORK

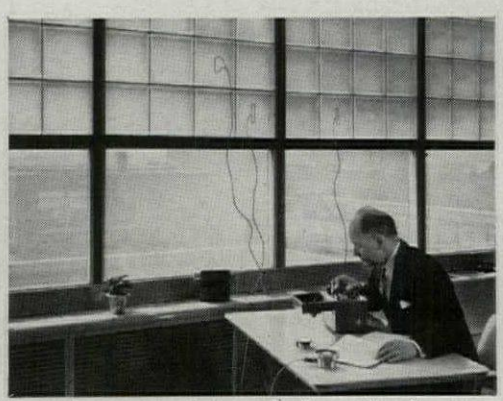
Build better with Gold Bond® . . . LATH AND PLASTER

Owens-Illinois' NEW SOLAR SELECTING Glass Block cooler in hot weather

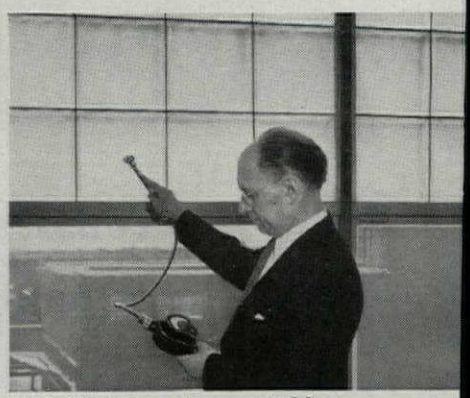
Owens-Illinois new solar selecting Glass Block No. 80-F has a lower surface temperature during hot weather. It acts like a mirror reflecting a good portion of the direct hot rays from the sun, and at the same time transmits cool light reflected from the ground.



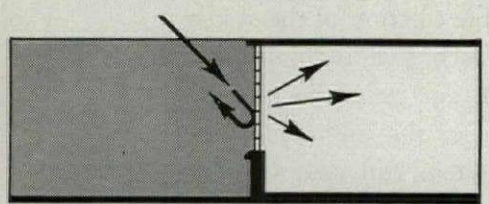
Because of its light-selecting principles this new block has a much lower surface brightness than other glass block. Maximum surface brightness as measured at the Daylighting Laboratory is less than 1400 foot-lamberts.



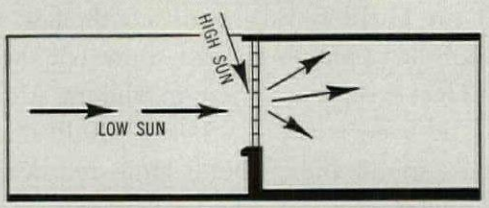
Thermocouples applied to the face of the 80-F block during hot weather (outside temperature 90°) showed that the roomside surface temperature was 14 degrees less than a conventional type light-directing block.



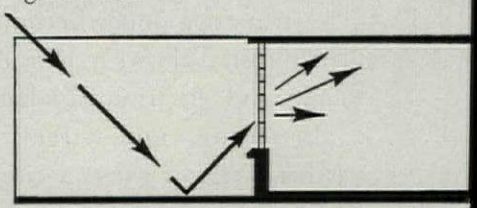
A similar test using a portable pyrometer confirmed the findings of the test using thermocouples by showing the same 14 degrees lower temperature on the roomside surface of the 80-F glass block.



Rejects hot summer sun—This diagram shows how the 80-F block reflects a major portion of the light from the sun at the critical 45° angle thus reducing brightness and solar heat transmission during hot weather.



Uniform light transmission—Prismatic design is selective and controls the amount of light transmitted from the various sun positions, thereby providing more uniform light transmission all day long.



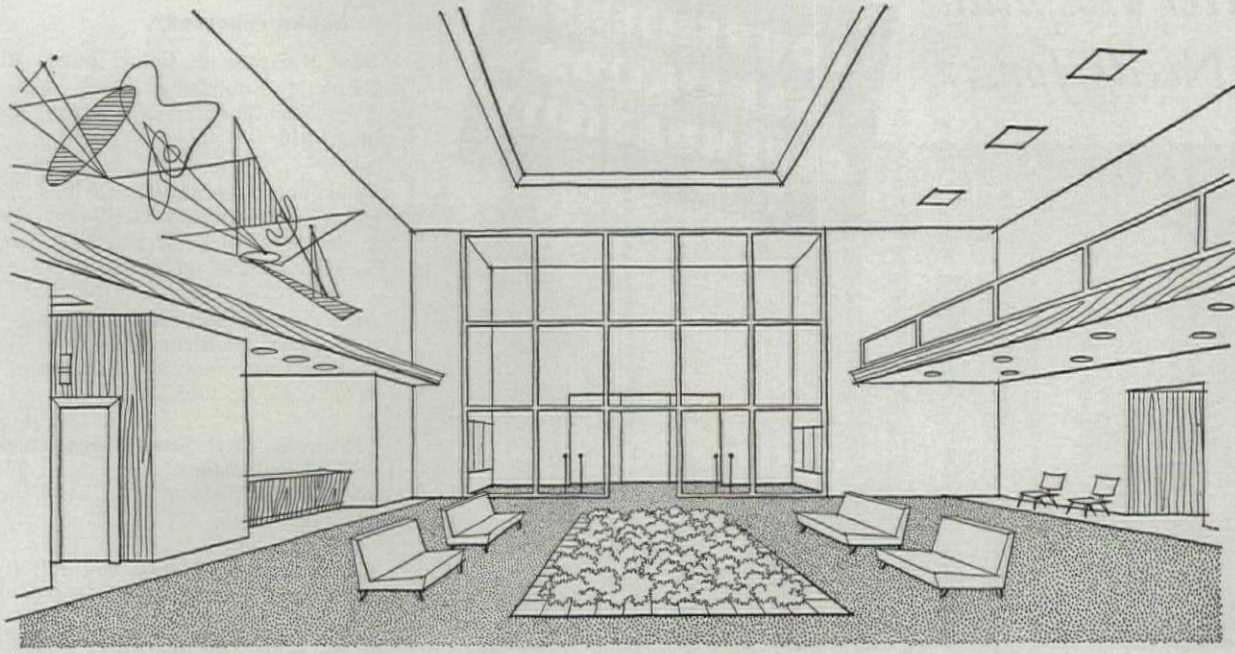
Transmits ground-reflected light—This diagram shows how the 80-F transmits the cool light reflected from the ground. This feature is especially important when the sun is not on the fenestration.

Complete information available

Send for the free, technical bulletin that gives the details. Just write "No. 480F" on your letterhead and mail to Kimble Glass Company, subsidiary of Owens-Illinois, Dept.PA-11, Box 1035, Toledo 1, Ohio.

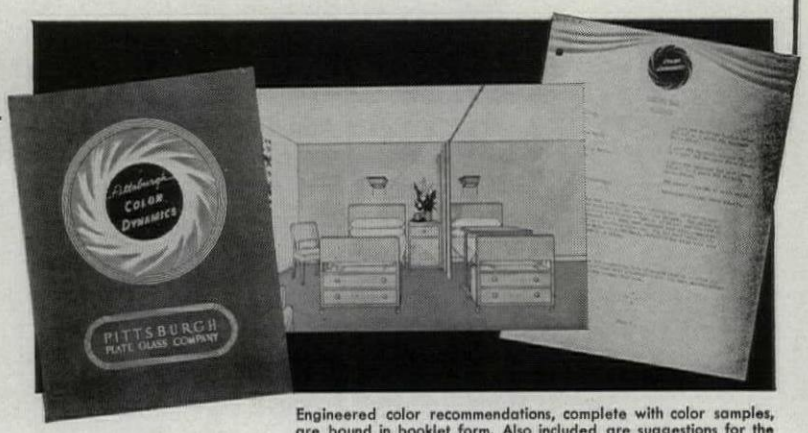
OWENS-ILLINOIS GLASS BLOCK
AN (I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO



Why not add a comprehensive

Engineered Color Study to your plans?



Engineered color recommendations, complete with color samples, are bound in booklet form. Also included are suggestions for the correct types of coatings for every kind of material and construction.

TODAY, nearly everyone who owns or operates an industrial, commercial or service enterprise recognizes the importance of the effect of color environment on people.

● **You can often make** your plans more acceptable to clients by including a detailed color program. Why not let us submit *engineered* color recommendations to go with your plans? These recommendations are based upon the principles of COLOR DYNAMICS, Pittsburgh's modern painting system which has demonstrated its ability to improve productive efficiency, morale and well-being in many fields.

● **We'll be glad** to make such a detailed study without cost or obligation to you. Simply call your nearest Pittsburgh Plate Glass Company branch and arrange to have one of our color experts see you at your convenience. Or mail this coupon.

Additional information on COLOR DYNAMICS in Sweet's Architectural File, Section 14/Pi.

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Paint Division, Dept. PA-115
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p/a reviews

books received

New Horizons in Color. Faber Birren. Reinhold Publishing Corp., 430 Park Ave., New York 22, N.Y., 1955. 224 pp., illus., $10

Television Techniques. Hoyland Bettinger. (Revised by Sol Cornberg.) Harper & Brothers, 49 E. 33 St., New York 16, N. Y., 1955. 228 pp., illus., $5

Air Conditioning Refrigerating Data Book. The American Society of Refrigerating Engineers, 234 Fifth Ave., New York 1, N. Y., 1955. $7.50

California Civil Engineering Registration Examinations. August E. Waegemann, 2833 Webster St., San Francisco 23, Calif., 1955. 287 pp., $7

Time-Saver Standards. 3rd Ed. By the Editors of Architectural Record. F. W. Dodge Corp., 119 W. 40 St., New York, N Y., 1954. 888 pp., illus., $12.50

Household Equipment. 4th Ed. Louise Jenison Peet & Lenore Sater Thye. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y., 1955. 444 pp., illus., $6

decorative exteriors

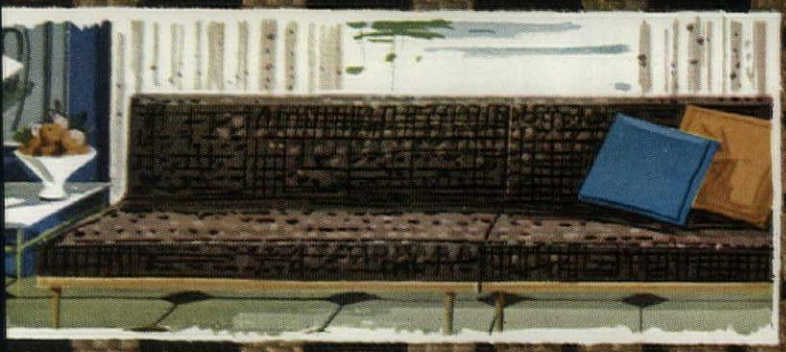
The Shingle Style. *Vincent J. Scully, Jr. Yale University Press, New Haven, Conn.,* 1955. *174 pp., illus., $6.50*

Now that this generation's Battle of the Styles has been fought and won, we can take time to consider what has been gained and what has been lost in current design of domestic architecture. A good way to take stock is to read Vincent Scully's *Shingle Style* and look well at houses of the type illustrated in his book.

"Shingle Style" is a term coined by Scully for the New England seaside resort houses built between 1872 and 1885. In these houses, built to serve as summer cottages for the wealthy, Scully sees a strong vein of creative inventiveness and the most original architectural productions of the period, during which civic building used Baroque forms and mansard roofs and for city housing there were built rows upon rows of brownstone fronts.

The change in social customs after the Civil War which made it fashion-

(Continued on page 203)



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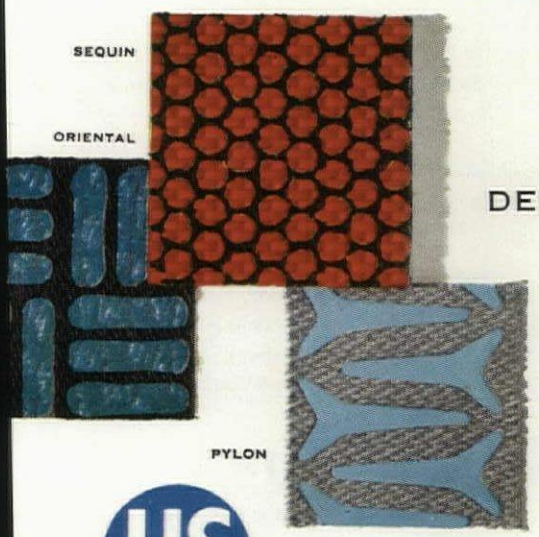

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(Continued from page 200)

able to summer by the seashore demanded a new form of domestic architecture. The architects melded together four sources of inspiration to design these large frame houses with rambling plan, heavy, cloaking roofs, and ubiquitous porches. These, Scully cites as Richardsonian in plan, "Queen Anne" and contemporary "English Tudor" in roofing (with wood shingles replacing the tiles used in England), Colonial in the use of wood, and Japanese in the flow of living spaces from porch to living room.

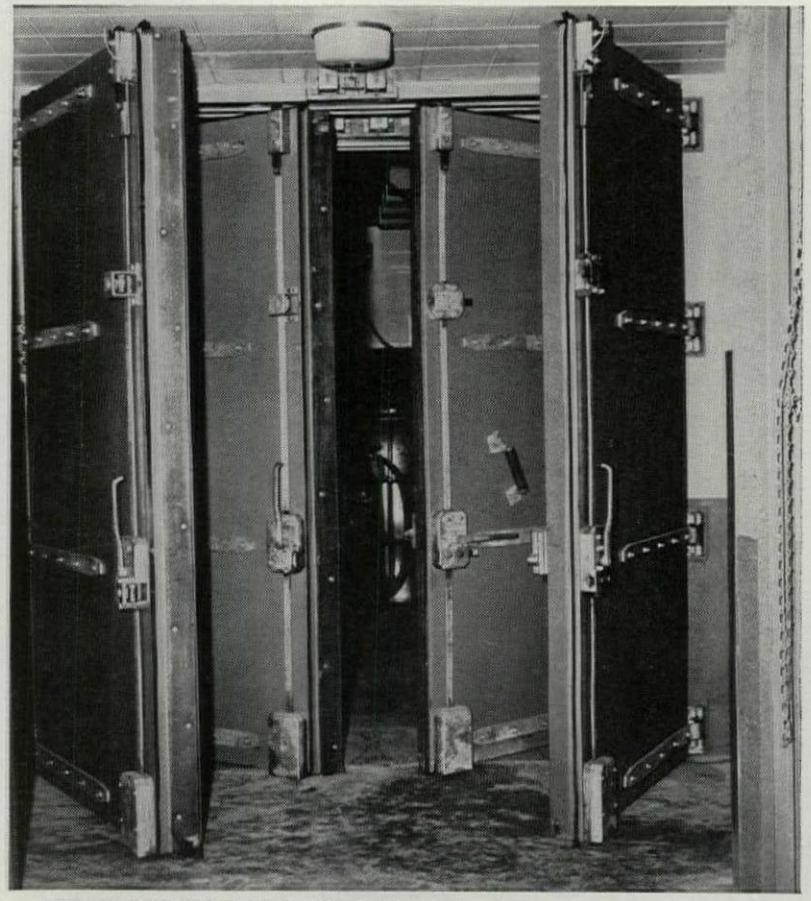
There is a good account of the Colonial Revival of the 1870s and descriptions of the early work of McKim in Newport. The earlier Colonial Revivals—of the 1820s, which bore fruit in the rebuilding of the tower of Independence Hall in Philadelphia, and of the 1850s, which witnessed the "restoration" of Carpenters' Hall in the same city—he does not note, but he emphasizes the Colonial Revival of the 1870s, which was vastly stimulated by the Centennial Exposition in 1876.

Also, there is a good account of the influence of Norman Shaw and the Jacobean forms, called "Queen Anne" which was admired at that time. However, there is no mention of the article entitled, "The Long Shadow of Norman Shaw," by W. Knight Sturges, which appeared in the December 1950 issue of the *Journal of the Society of Architectural Historians* and which covered much of the same material with illustrations and quotations.

Scully writes with a compelling enthusiasm which is challenging. Not only is his text entertaining, but also the footnotes which are copious and provocative. As for instance on page 29, note 32: "Charles Locke Eastlake was less important in American architecture in the 70's than has occasionally been supposed." Perhaps that statement could be amplified to —Eastlake's influence on the Shingle Style was negligible but Eastlake

(Continued on page 206)

JAMISON sound reduction doors lead in engine test cell use



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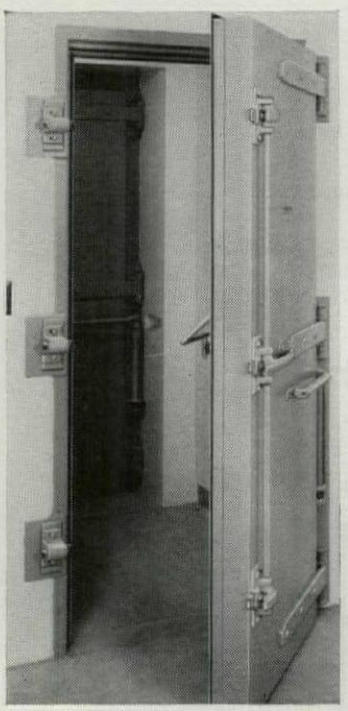

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Catalog 270 explains these tests in detail and gives useful data on Milcor Celluflor. A copy will be sent to you upon request.

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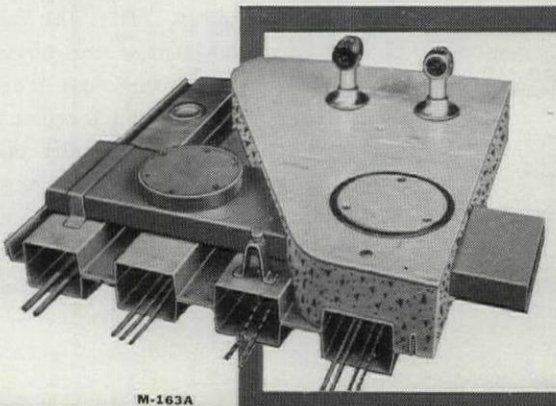

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M-163A

reviews

(Continued from page 203)

ornament was used extensively on window and door frames of middle-class brick row houses in the '70s.

The great contribution of this book is the attention which it focuses on a form of American architecture from which we have been averting our eyes for about 40 years, now. He has read the architectural articles in *Harper's*, the *American Architect and Building News*, and reviewed the volumes of plates of contemporary architecture and culled many illuminating quotations which show that the ideals of architects remain more nearly the same than the forms which they create.

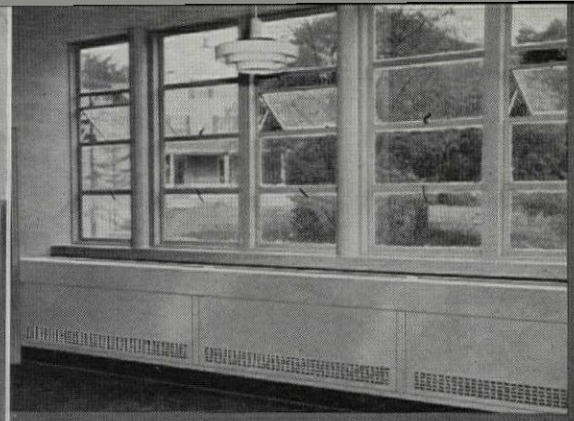
The final chapter is "Conclusion: Frank Lloyd Wright." Disarmingly, the second paragraph begins, "It will not be possible here to discuss the events which took place after 1885 in American domestic architecture." After that statement, it is perhaps captious to say that the jump from the Eastern resort cottages to Wright seems a little abrupt. What happened was that, in the East, Palladian Colonial Revival and neo-Classicism became more dominant, while in the Middle West the architects continued, with modifications, the forms initiated in the resort cottages. It is from the main stream of Middle West domestic architecture that Wright evolved his own personal style, aided by his genius and an appreciation of Japanese house construction.

It is stimulating to compare contemporary houses with those designed by William Emerson and John Calvin Stevens, and to note that both have the free plan and a strong horizontal line, and both show a preoccupation with materials. In the earlier houses, often the ground-floor wall was built of seashore stone projecting far beyond the mortar, so that a very uneven texture was obtained.

Perhaps Scully also could have dwelt more upon the texture of the shingles of these houses. Only one illustration (figure 90) of the 162 is

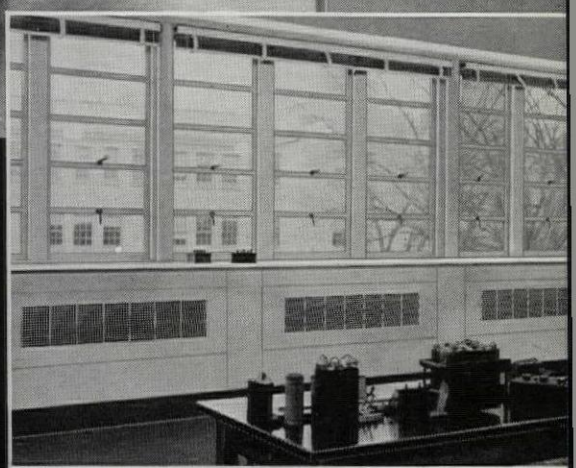
(Continued on page 210)

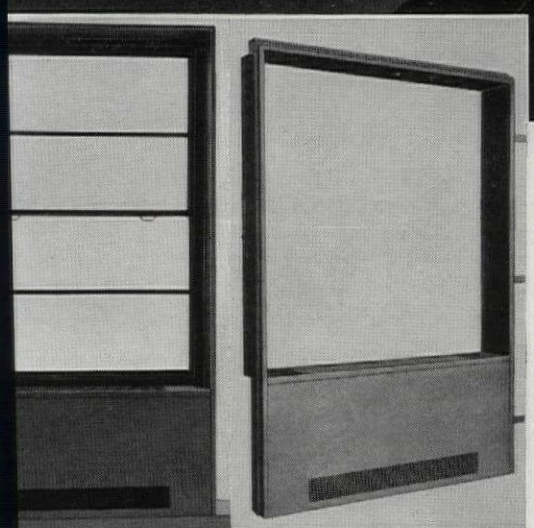
Perforations for warm-air circulation are in the splay type stool of this Milcor Wall Unit. Cold-air entry is at bottom. Supporting posts are recessed.



This Milcor multiple Wall Unit enclosure has a flat, perforated stool and perforated front panel.

Milcor multiple Wall Unit enclosure is recessed into window opening in science laboratory of a leading university.





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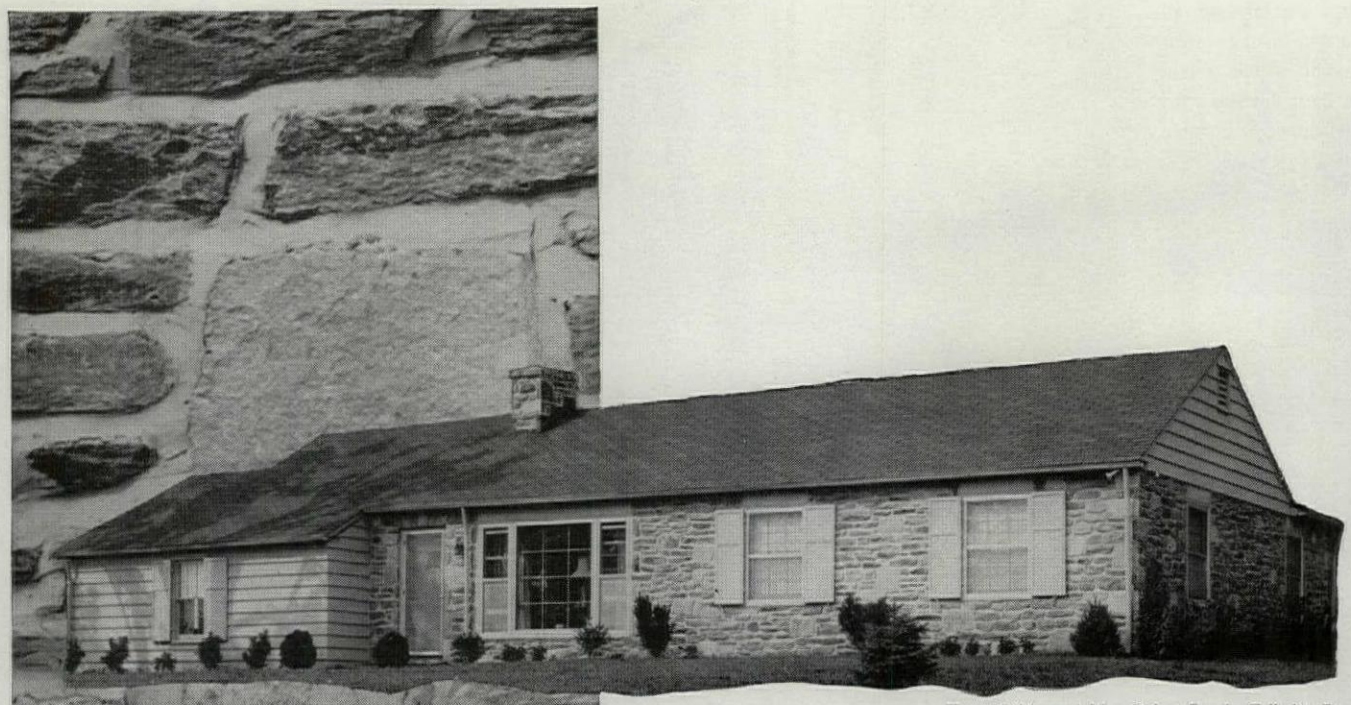

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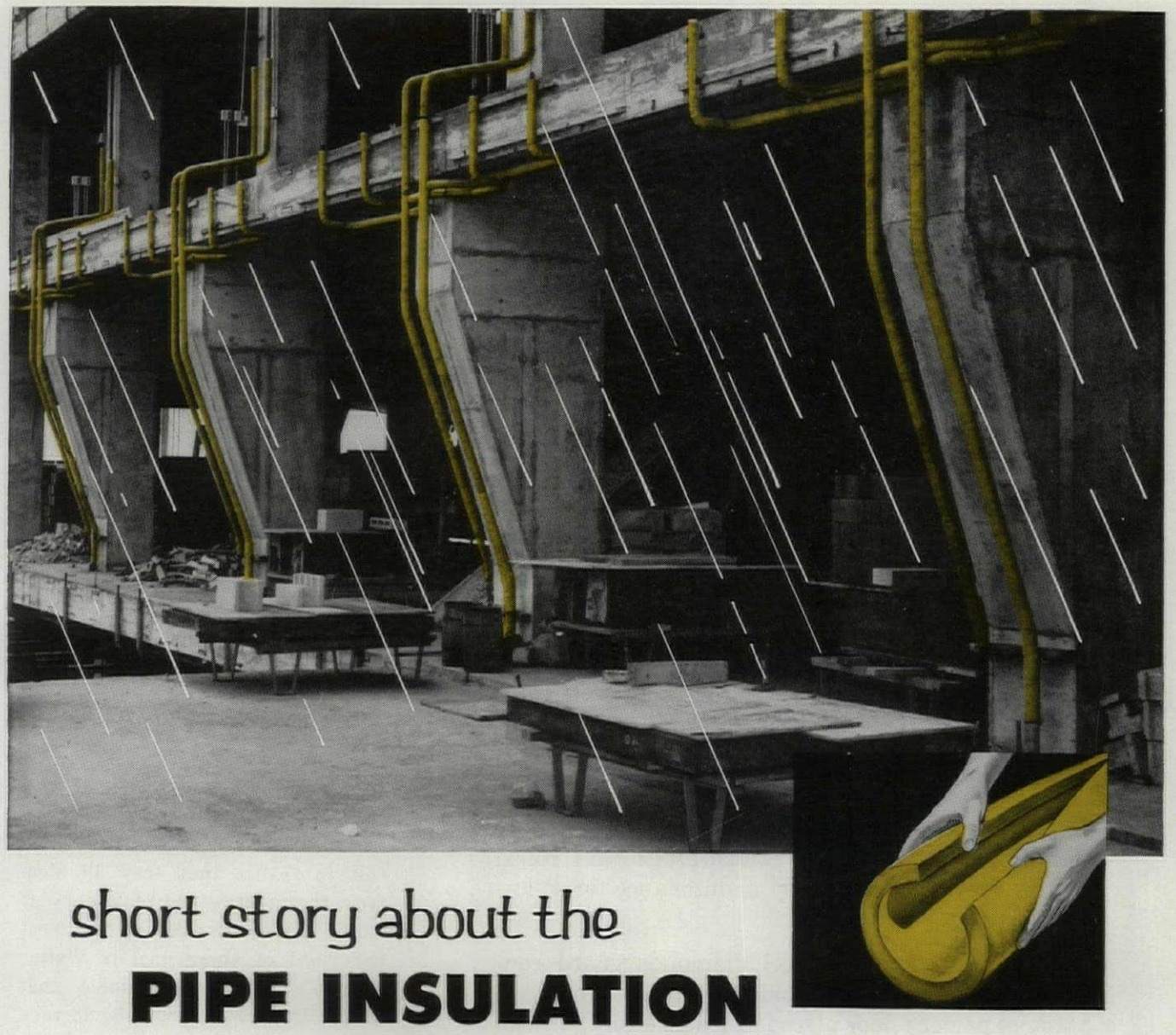

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reviews

(Continued from page 206)

detailed enough to show the shingle pattern clearly. Yet it is the use of shaped shingles, sawtooth, pointed, rounded, scalloped, inverted bell shape, diamond, and the varying patterns which they make, which differentiates the use of shingles in the '70s and '80s from the shingles which have been used continuously in the East from the 17th Century on. Indeed, a more precise name might be "The Decorative Shingle Style."

AGNES ADDISON GILCHRIST

far-thinking organizer

Walter Gropius, Work and Teamwork. *S. Giedion. Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y., 1954. 249 pp., illus., $10*

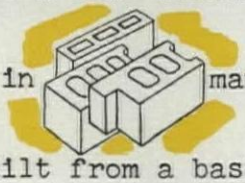
Modern architecture presents many faces to the world. Confronted with these innumerable and apparently irreconcilable variations, it is difficult to realize that they all stem from the practice and philosophy of a few great men. One of the most important of these men is Walter Gropius. It was inevitable that sooner or later someone should take on the necessary job of documenting his work and analyzing his fundamental contributions to contemporary design. That the job has been done by a scholar of Dr. Giedion's stature is cause for gratitude; if the reader succeeds in overcoming his resistance to the joltingly pedestrian prose, a text mercilessly divided and subdivided into headings and subheadings and relentlessly pinned to the page by marginal titles and definitions, he will be rewarded by an accurate, thoughtful, and scientific study.

Although literary qualities may be lacking, there is no question about the book's significance. To analyze, with surprising perspective, the work of a man who has helped shape the modern movement, and to do it during that man's lifetime, is a notable achievement. The text divides

(Continued on page 214)

JOE THE ARCHITECT SCORES AGAIN

or How to Soothe a Troubled Client

Once upon a time Joe the Architect was busy  at his drawing board when in stormed Herman his client. Now Herman was a home builder --- a worried home builder --- at work on some new homes. Costs, cried Herman,  I'll be eaten alive by costs. Cease worrying, soothed Joe, I have a capital idea that won't take much capital. So Joe the Architect told Herman the Home Builder all about versatile Concrete Masonry and especially about its low  in-the-wall cost. Concrete Masonry is a natural for a home builder. Not only is the initial cost low, but block comes in  many shapes and sizes and will give individuality to houses built from a basic plan. Joe went on and on and Herman sat enthralled. Concrete Masonry is also a tip-top material for interiors, Joe said  weaving his magic spell. Many of the most expensive dwellings have handsome, sound-absorbing, exposed block interior walls. That ought to save finishing costs shouted Herman, anxious to get in on the act. Of course, you know, said Joe  that Concrete Masonry is firesafe, vermin-proof and is a breeze to maintain. Righto, said Herman. So arm in arm, Joe the Architect and Herman the Unworried Home Builder went to see Sam the Concrete Masonry Man -- a local NCMA member -- for all the details.  And they built happily ever after.

MORAL: *If you're a worried home builder or even an unworried architect, find out how your local NCMA Member can help you out with all the answers about versatile Concrete Masonry.*

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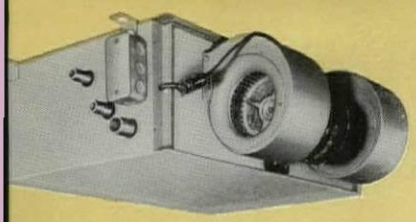
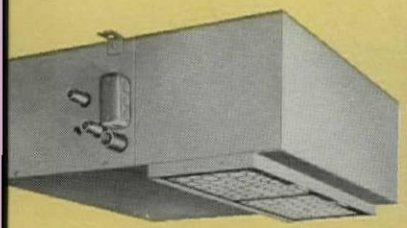
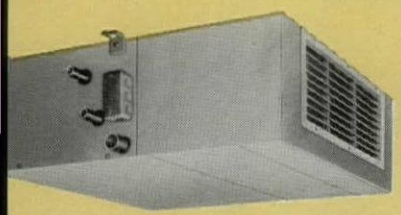




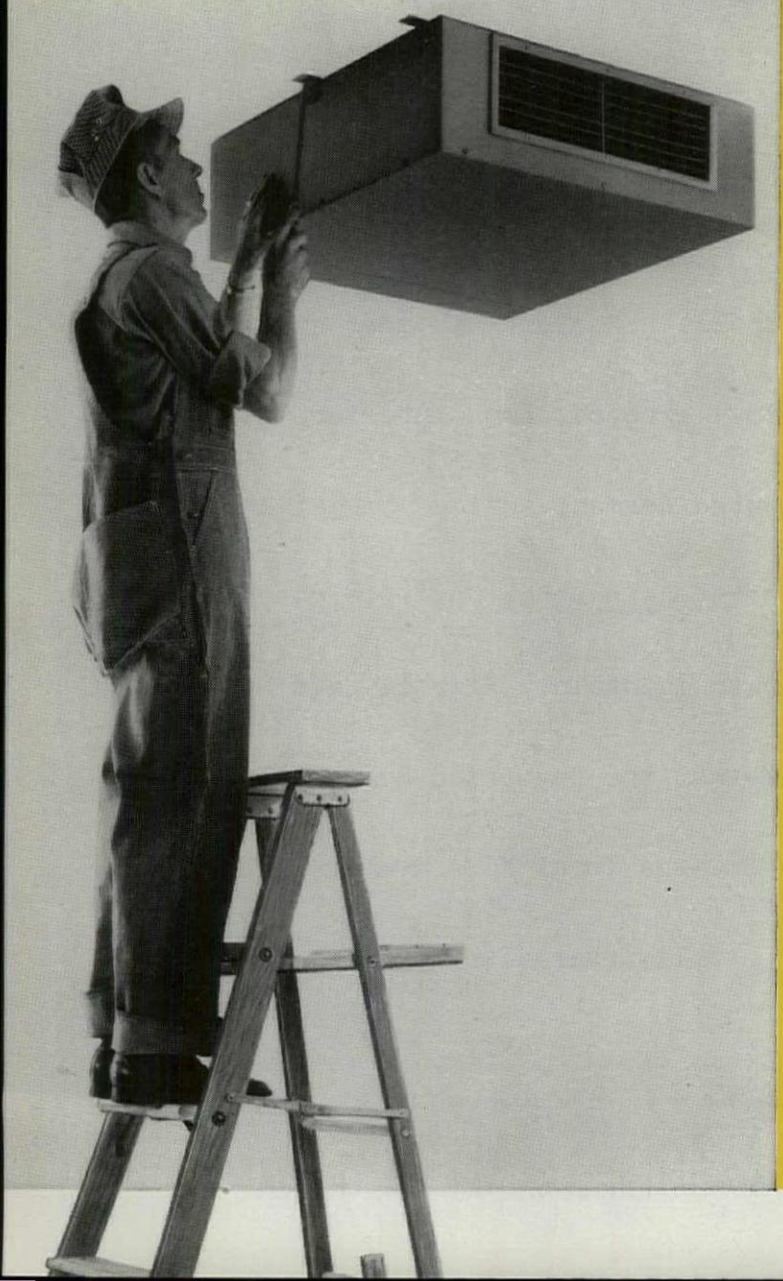


a

a

Space-Saving Heating-Cooling. These new Horizontal Remotaire Heating-Cooling units can be suspended from the ceiling—out of the way—leaving floor space free. They are easy to suspend and conceal in closets and above false ceilings. These new room conditioners heat, cool, filter, ventilate and circulate the room air for year 'round comfort. Horizontal Remotaire Room Conditioners come in three models and four sizes to meet every room need. Shown top to bottom: Model H, ideal for use in a hallway; Model HB, especially suitable for closet installations; Model HR, best to use free-hanging.

Picture studies in function



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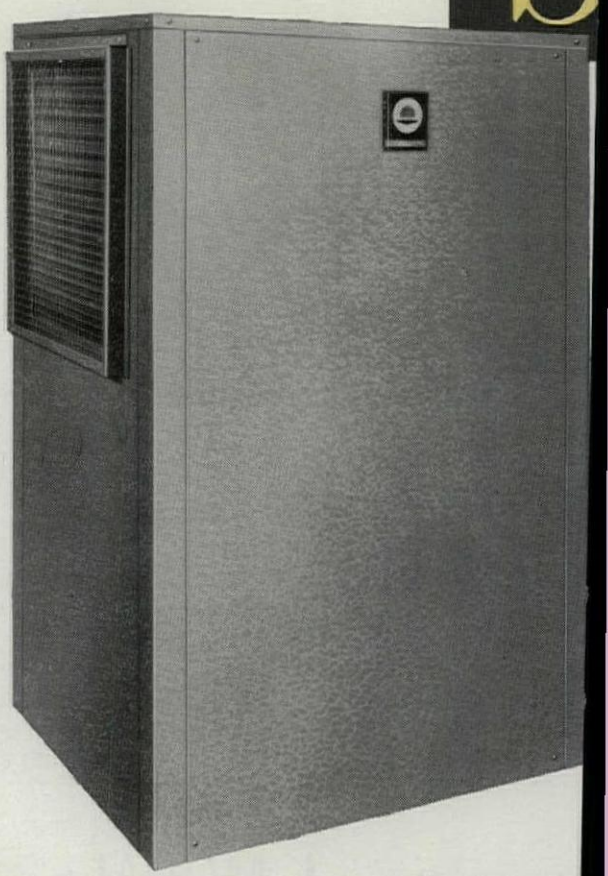

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c

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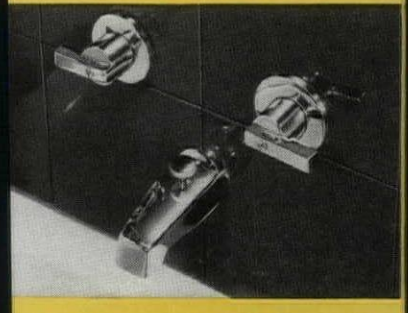

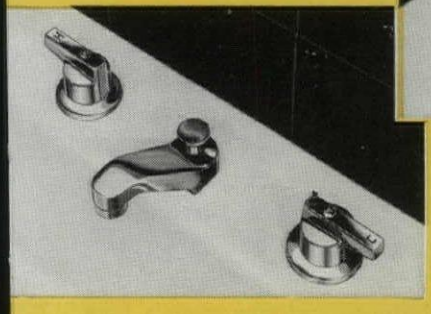

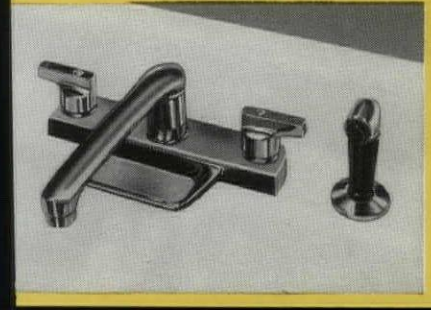

c

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AMERICAN-Standard

reviews

(Continued from page 210)

this work into periods and categories: the early work, the Bauhaus, exhibition design, theater design, buildings for education, buildings for industry, single family houses, prefabricated houses, the slab apartment block, architecture and the changing city structure. Through this scholarly organization runs a constant appreciation of Gropius' vision and philosophy, which transcends and unifies all categories and divisions. For Gropius, from the beginning, was a pioneer, planning for a new way of life. Whether every building was a masterpiece, or even actually built, is quite secondary to what lay behind the concept of its design. He understood, as no one ever had, the potential of the machine. His was, and still is, the rational, humanitarian approach to architecture, in terms of machine production and social objectives, that has done so much to balance opposing philosophies of romantic individualism. Gropius' broad visualization of the role of architecture in relation to society as a whole has helped to define the architect's place in today's complex industrial civilization and has had an incalculable effect on the development of the contemporary style.

While this is common knowledge, there is probably less awareness of how many of the accessories of modern living owe their present character to Gropius' far reaching ideas on design. Students have a proper respect for the noble Bauhaus experiment, but seldom connect it with what they see in Macy's housewares basement. In the chapter on the Bauhaus, Giedion has succeeded in recreating some of the atmosphere of that remarkable esthetic adventure. Mistakes were made, it is true, although they are not mentioned here. Many objects were forced into geometric shapes of extreme artificiality in the name of machine design. The important achievements,

(Continued on page 218)

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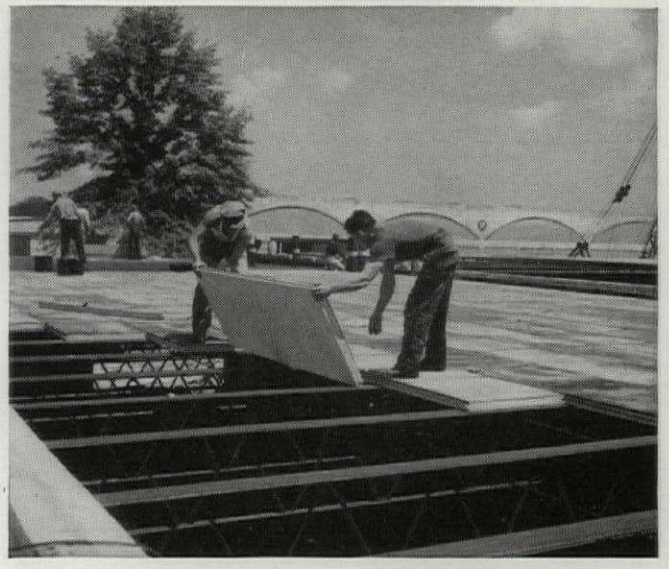

Here is a section of the "Miracle Mile" Arcade located in Monroeville, Pa. It is the 10th Casto Shopping Center with Tectum Roof Decking—a total of nearly two million square feet. Developed by Don M. Casto organization of Columbus. Ohio. Architect: C. Melvin Frank, Columbus. Ohio.

Tectum is more than a product—it's a method! It lets you eliminate 2 out of 3 operations in modern roof construction. Tectum provides you with a (1) roof deck; (2) insulation; (3) acoustical material—all in a *single* plank! Think of this in terms of tremendous savings in time, labor and money.

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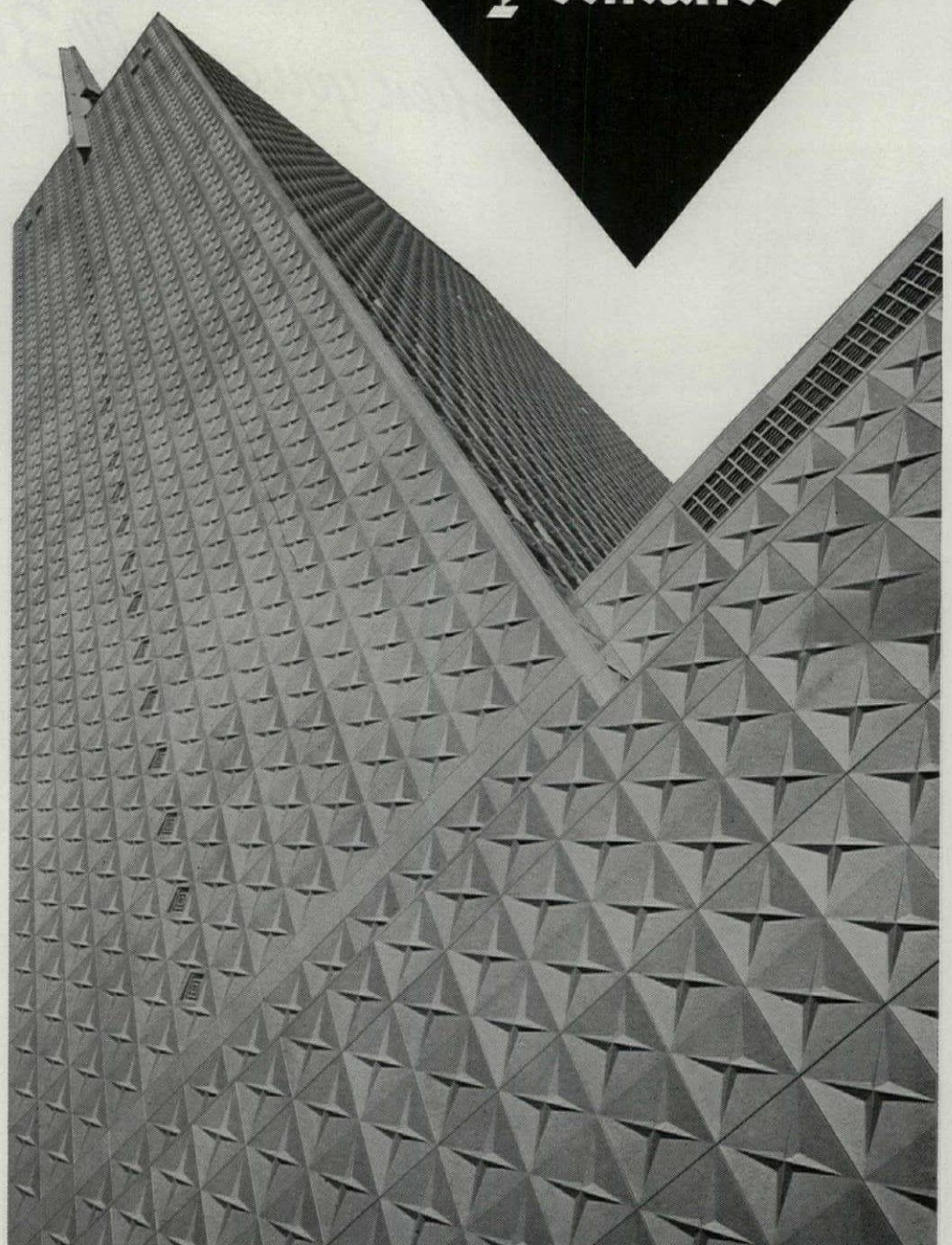

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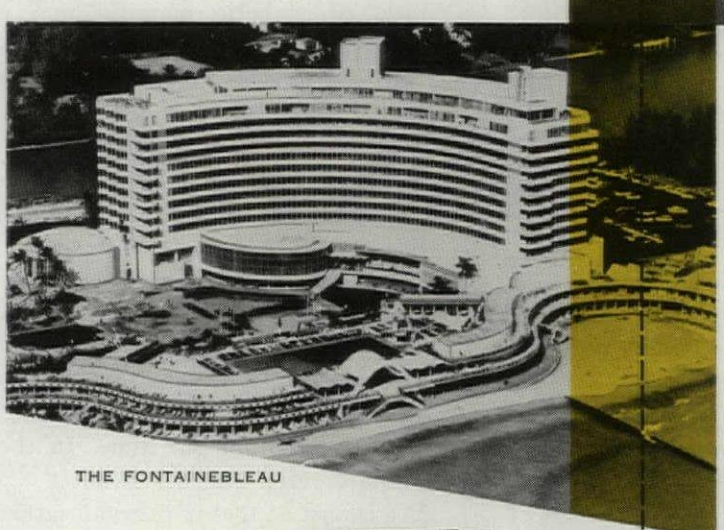
FLORIDA'S FABULOUS FONTAINEBLEAU
From its formal gardens and private yacht anchorage to its superbly decorated guest rooms, this amazing Miami Beach resort hotel is a story 'spectacular' come to life. Architect: Morris Lapidus.

THE BEVERLY HILTON



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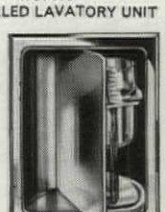

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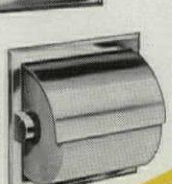

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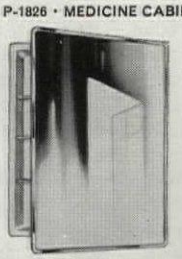

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reviews

(Continued from page 214)

however, were the final renunciation of imitation handcrafts and the rediscovery of the basic forms of beauty and utility, opening the way to the realization of the true esthetic possibilities of mass production. Thirty years later, we are still learning the lessons that were taught at Weimar and Dessau.

As Giedion makes clear, it is as philosopher and teacher that Walter Gropius has played his most important role. First at the Bauhaus, most recently at Harvard, he has popularized the principles of large-scale planning, the techniques of prefabrication and standardization, the necessity of collaboration between all branches of art and industry. He has given his students and coworkers a taste of the satisfactions of co-operative creative effort. Most important of all, he has shared with them an ideal of esthetic morality and a warm sense of humanity. It is unfortunate that so little of this sense of humanity survives the author's precise, academic treatment. There is less suggestion of a living personality than of a selected scientific specimen. Dr. Gropius is caught, fixed, studied, and classified. The book's strong points are its excellent documentation and its emphasis on the intellectual leadership that has profoundly influenced art, industry, and education in our time. In the words of Mies van der Rohe: ". . . You cannot do that with organization . . . [or] propaganda. Only an idea spreads so far." ADA LOUISE HUXTABLE

an appreciation by Neutra

Walter Gropius is more than an architect, more even than an excellent architect. He has fed the most far-reaching and conspicuous contribution into a broad reform movement which long ago began slowly, changed directions several times, as living things will do, but has never been squashed.

Siegfried Giedion is much more

(Continued on page 221)

in the wake of a junior tornado!

Havoc reigns when Junior takes a bath! But, as informed architects and builders know, Pomona's "Space-Rite" Perma-glaze deck tile is impervious not only to Junior's hard, scratchy toys and the dirt and grime of his day's foraging—but also to soapy water and even corrosive chemicals, harmful to ordinary surfaces! That's because only Pomona's exclusive fusing process produces this beautiful pebbled finish of flint-rock hardness. Uniform joints are assured through Pomona's "Space-Rite" feature. Shown here, exquisite new Mercedes Blue in Perma-glaze 6″ x 6″ deck tile.

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modern design specifies stainless steel

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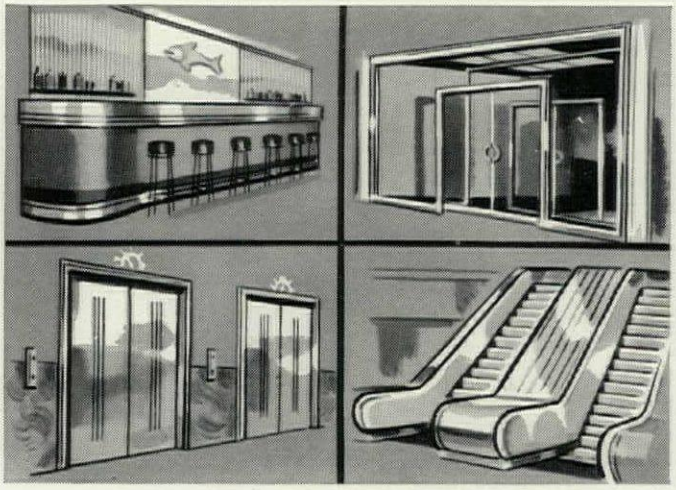

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MANUFACTURERS OF STAINLESS AND CARBON STEELS

reviews

(Continued from page 218)

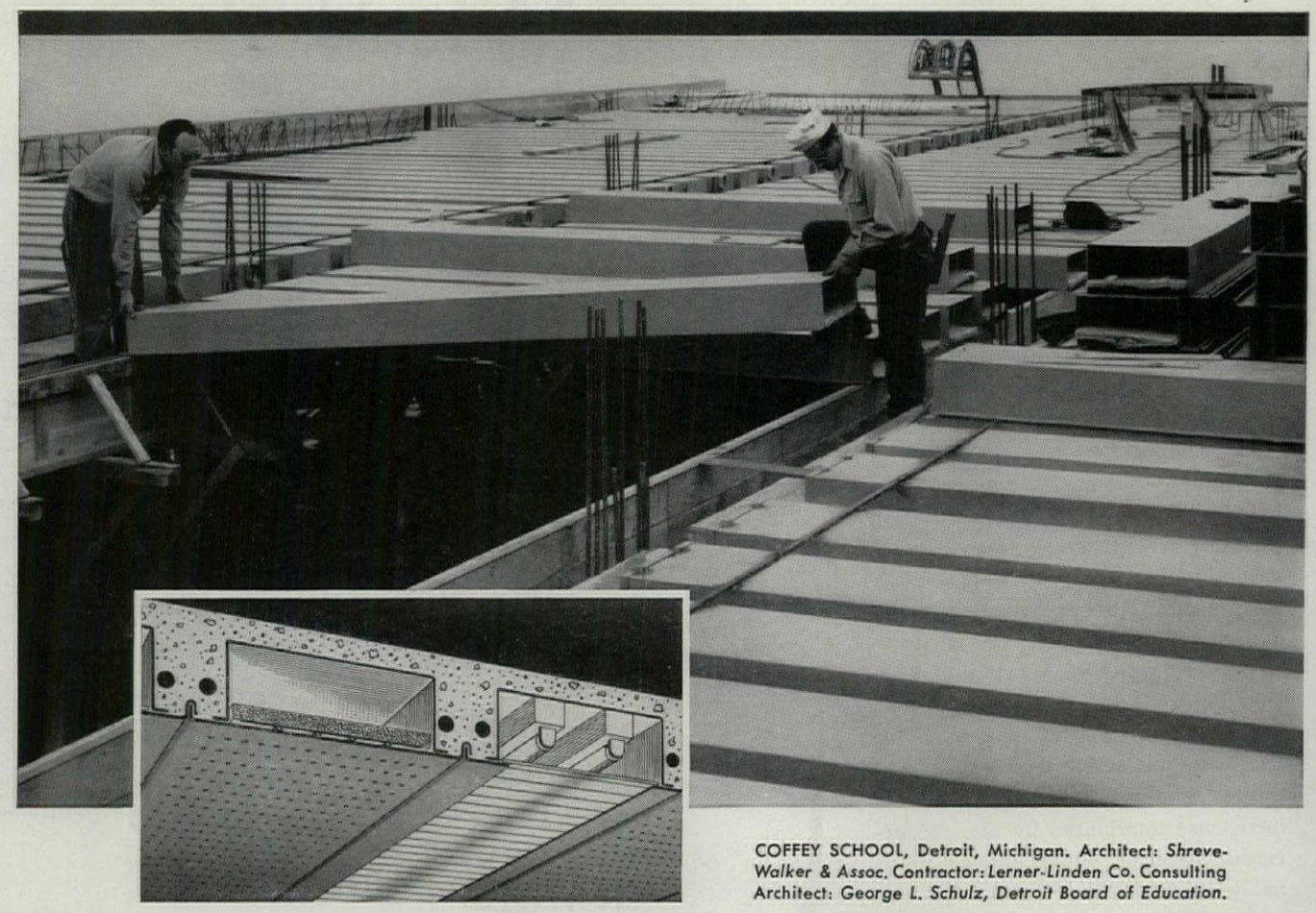
than a biographer and in his excellent style of writing, well echoed in English by Jaqueline Tyrwhitt, he has unrolled a panorama surveying a century, with Gropius at the focus of his penetrating observation of our structural phase of civilization.

Gropius is rightly depicted as a personality that has bridged the gulf between individuals and advocated, in word and practice, the cause of 'stimulated partnership' and the creative team. He has also manifestly bridged the gulf between generations, and won the heart and devotion of other artists, younger men, and of a multitude of students. For CIAM he has acted as a founder and guide. The present reviewer, I believe, was nominated by him to represent, together with Lónberg Holm, as delegate in the U.S.A. for this worldwide organization of spontaneous co-operation. For this and many other reasons I must admit my bias and long partiality for Walter Gropius.

One must admire this profoundly educated man of the world whom Siegfried Giedion describes as an explorer, a university professor, who has made real estate men, industrialists, and mass fabricators sit up on two continents and listen—however gradually and slowly their attitude may be modified by his thinking.

I believe it was in 1928 that I first heard Gropius' voice. It was over the telephone. To my surprise, when I took off the receiver, the friendly voice said: "You perhaps remember my name, Walter Gropius from Berlin? I have heard of you being quite alone here in the Far West and I have come with my wife all the way across the continent for one day's visit." I remember how honored I felt and I did everything to show off the best of my own rather confused Los Angeles, which at that time was one third of what it is now (as to size and disquieting complexity): A then new, well-landscaped industrial

(Continued on page 224)



COFFEY SCHOOL, Detroit, Michigan. Architect: *Shreve-Walker & Assoc.* Contractor: *Lerner-Linden Co.* Consulting Architect: *George L. Schulz, Detroit Board of Education.*

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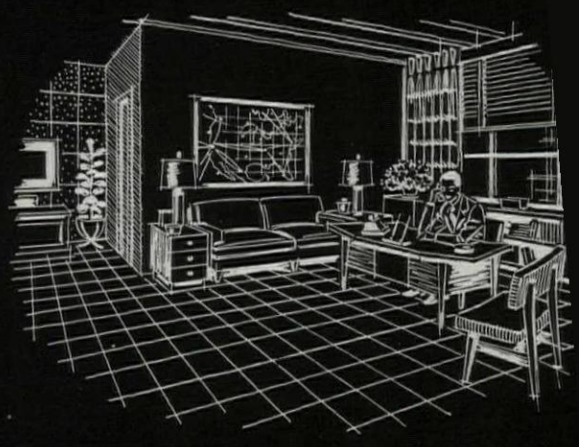

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reviews

(Continued from page 221)

district, my garden apartments, a restaurant rendezvous of screen stars, a great deal of mileage, passed fast before Mr. and Mrs. Gropius. The devastating distances of a motorized city impressed and puzzled them in that one day.

I saw them again, two years later, when upon my return from a pioneering lecture-and-study trip to Japan I was also, as again recently, a guest speaker in Berlin, a vast, always experimentally minded metropolis.

Gropius was then occupied with his tall "slab apartment buildings"; the multistory rows of Dammerstock and Haselhorst had been designed. I did not realize, as my hosts perhaps were able to, that Germany was on the eve of a long night, the night of Nazism which was also to interrupt and bisect the career of Gropius.

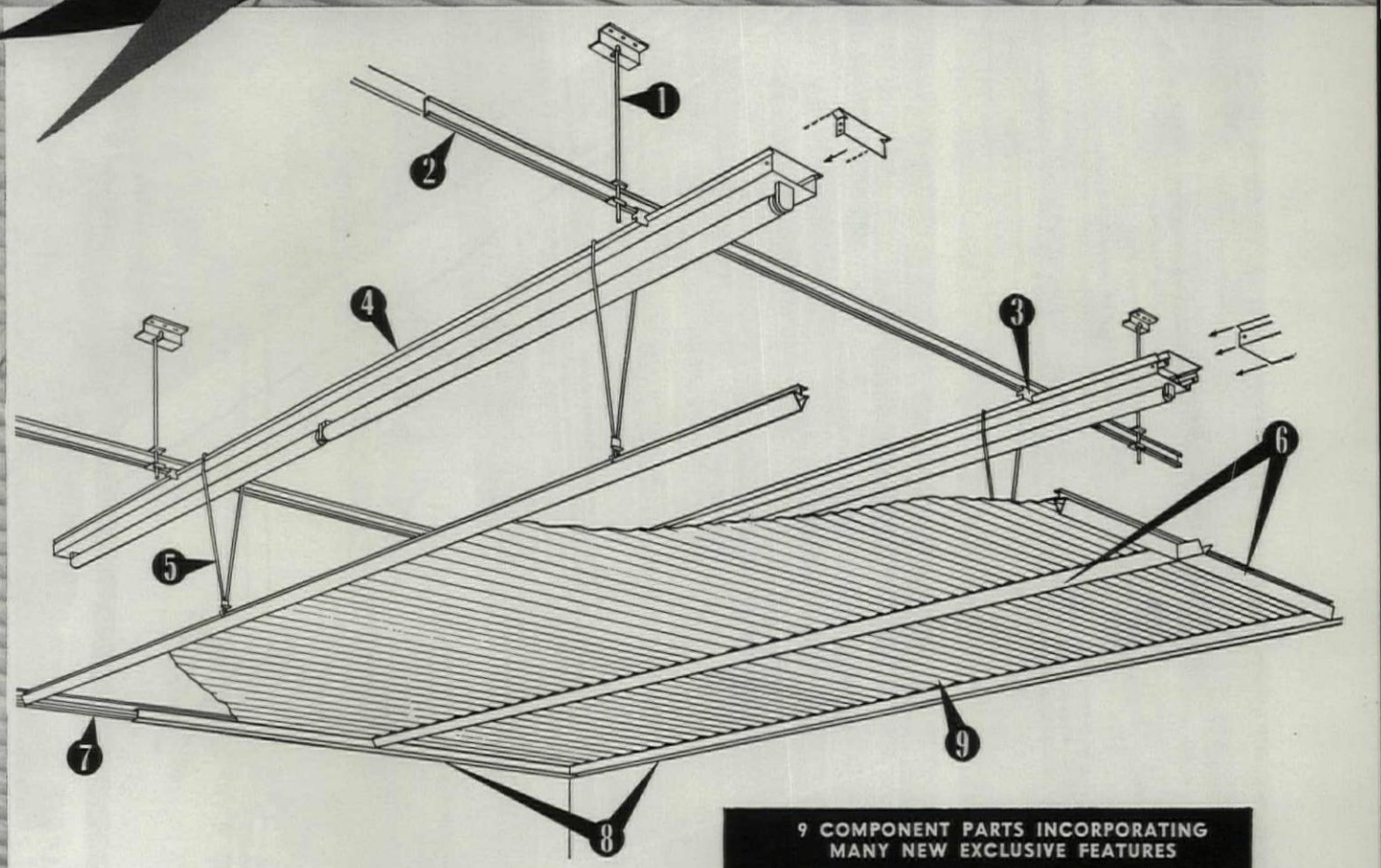
When I returned to America, I was invited by Dr. Alvin Johnson to deliver the first, I believe, three speeches in the just-finished auditorium of the New School of Social Research. And after each I found myself in conversation with a very interested and eloquent man who introduced himself as Joseph Hudnut, Dean of the School of Architecture at Columbia University, who then expressed doubt and curiosity about the coming turn of architectural events. In my speeches I had closely linked the name of Gropius to that of the modern movement in Germany, I had spoken of his fascinating gift to attract collaboration, and it might well be that my words somewhat impressed the future Dean of Harvard's School of Architecture—as they did, fortunately, impress leaders in Chicago where later the Bauhaus idea was to find another distant echo in the heart of our continent. I must well have been the first in New York and Chicago who spoke before large audiences about Gropius, his closest friends, such as Moholy-Nagy and Breuer, and the

(Continued on page 228)

PRESENTING

smithcraft overall illumination

"TODAY'S GREATEST VALUE IN WALL-TO-WALL LIGHTING"



Smithcraft Overall Illumination introduces a truly "custom-made" appearance to wall-to-wall lighting. Each of the corrugated plastic modules is contained in a mitred craftsmanlike framing providing an interesting accent pattern and relief from the monotony of an unbroken expanse of shielding. Framing runners are V-shaped to reflect light and eliminate annoying black bands. The entire system glows with softly-diffused light . . . uniform, comfortable and free from shadows.

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3. **Lighting Strip Hanger** — Slides over strip; locks to supporting channel. Location of strip may be adjusted in both directions.
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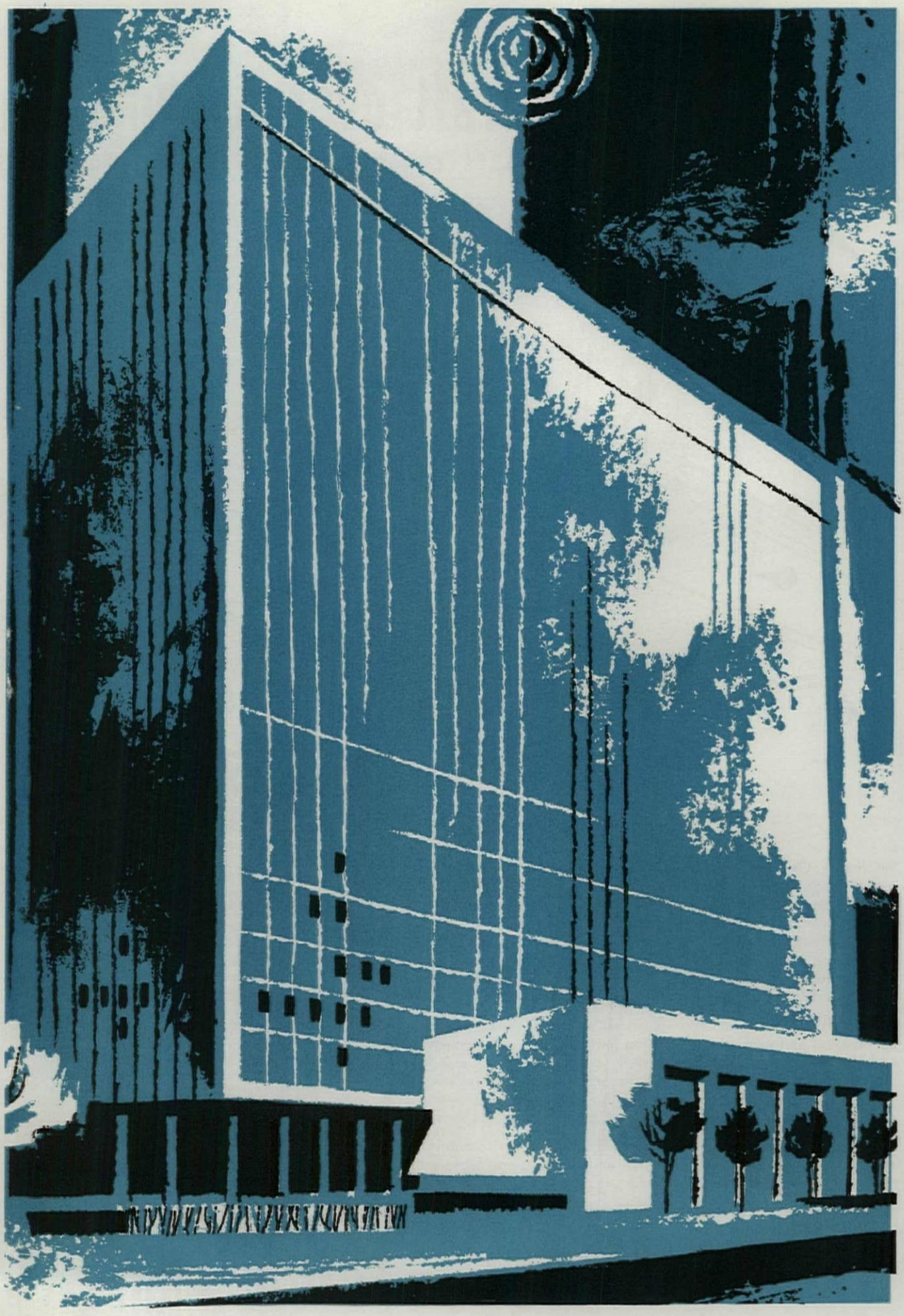


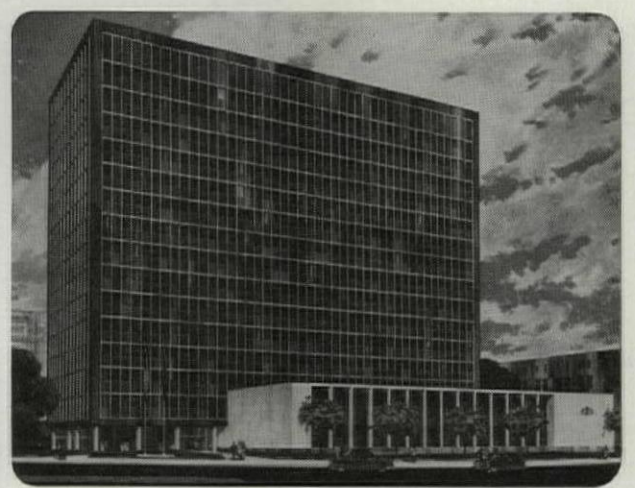
Universal Corporation Engineers, Fabricates, and Erects Colored Alcoa Aluminum Facade for

PENNSYLVANIA STATE OFFICE BUILDING

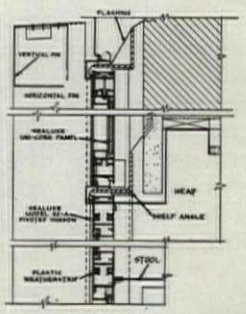
The new Pennsylvania State Office Building adds an outstanding example of Alcoa Architectural Colors to the Pittsburgh redevelopment scene. Universal Corporation, subcontractor for the aluminum and glass facade, is well qualified for this exacting task.

One of the oldest completely integrated fabricators and erectors of aluminum curtain walls, Universal has used Alcoa® Aluminum in many multistoried buildings. Sealuxe products used in the State Office Building are mullions, Model 92-A reversible windows, interior mullion covers, horizontal fins, soffits and coping.

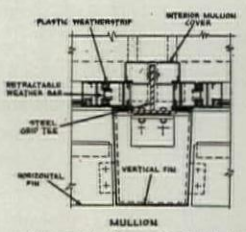
For complete information on aluminum curtain walls, Alcoa Architectural Colors, and qualified architectural metals fabricators, contact your local Alcoa sales office. Or write: ALUMINUM COMPANY OF AMERICA, 1890-L Alcoa Building, Pittsburgh 19, Pennsylvania.



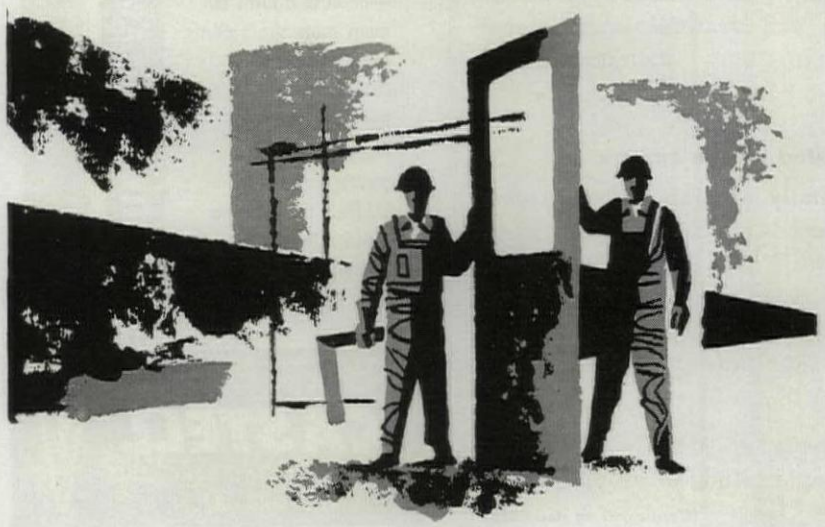
PENNSYLVANIA STATE OFFICE BUILDING, Pittsburgh, Pa. ARCHITECTS: Altenhof & Bown, A.I.A., Pittsburgh, Pa. ALUMINUM CONTRACTOR: Universal Corporation, Dallas, Texas.



WALL SECTION: Lightweight window wall is a lift-in facade section. Combines window and spandrel panel of Alcoa Aluminum in a floor-to-floor unit. Panels are finished in Alcoa Architectural Blue No. 3020, No. 1 Coarse Bark pattern.



MULLIONS: Alcoa satin-finished extruded aluminum. Other Sealuxe products used in building are Model 92-A reversible windows, interior mullion covers, horizontal fins, soffits and coping.



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ALUMINUM COMPANY OF AMERICA

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reviews

(Continued from page 224)

then still-continuing Bauhaus Institute, where I had been invited to spend several weeks in teaching a cosmopolitan group of young students. To all these men of practice in Europe I was, of course, an old resident and citizen of the U.S.A., who had acquired a know-how so different from the European, in fact, had written in 1926 a much-read book on how America builds—or how I hoped it would build.

A few years later, under Hitler, circumstances precariously closed in on the contemporary *avant garde* movement of design in Europe, and for years America fell heir to ideas and personnel which were often regarded as being in conflict with the autochthonous stream of American evolution. The greatness of Louis Sullivan and Frank Lloyd Wright had, against resistance and indifference, not yet been able to swell that stream into a mighty river. With all genius, it evidently took accredited teaching, recognized curricula to do that; and Gropius has proved the first and far-thinking organizer of such teaching and learning. A comprehensive vista about his life and work was and is a needed contribution to the literature of this hemisphere.

The Andrea and Virginia Matarazzo Foundation of São Paulo, Brazil, sponsor of this book on Gropius the worker, team worker, and inspirer of the young, will have the applause of a large and grateful international readership. RICHARD NEUTRA

revealed by the camera

The Family of Man. *The Museum of Modern Art. Simon & Schuster, Inc., 630 Fifth Ave., New York, N. Y., 1955. 226 pp., illus., $10. Paperbound volume: Maco Magazine Corp., 480 Lexington Ave., New York, N. Y., 1955. 192 pp., $1*

The Family of Man is a stirring photographic study of an unique ex-

(Continued on page 232)

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FLOWRITE VALVES

STURDY, PRACTICAL DESIGN
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give close control and they last longer

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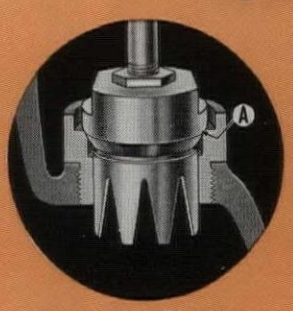

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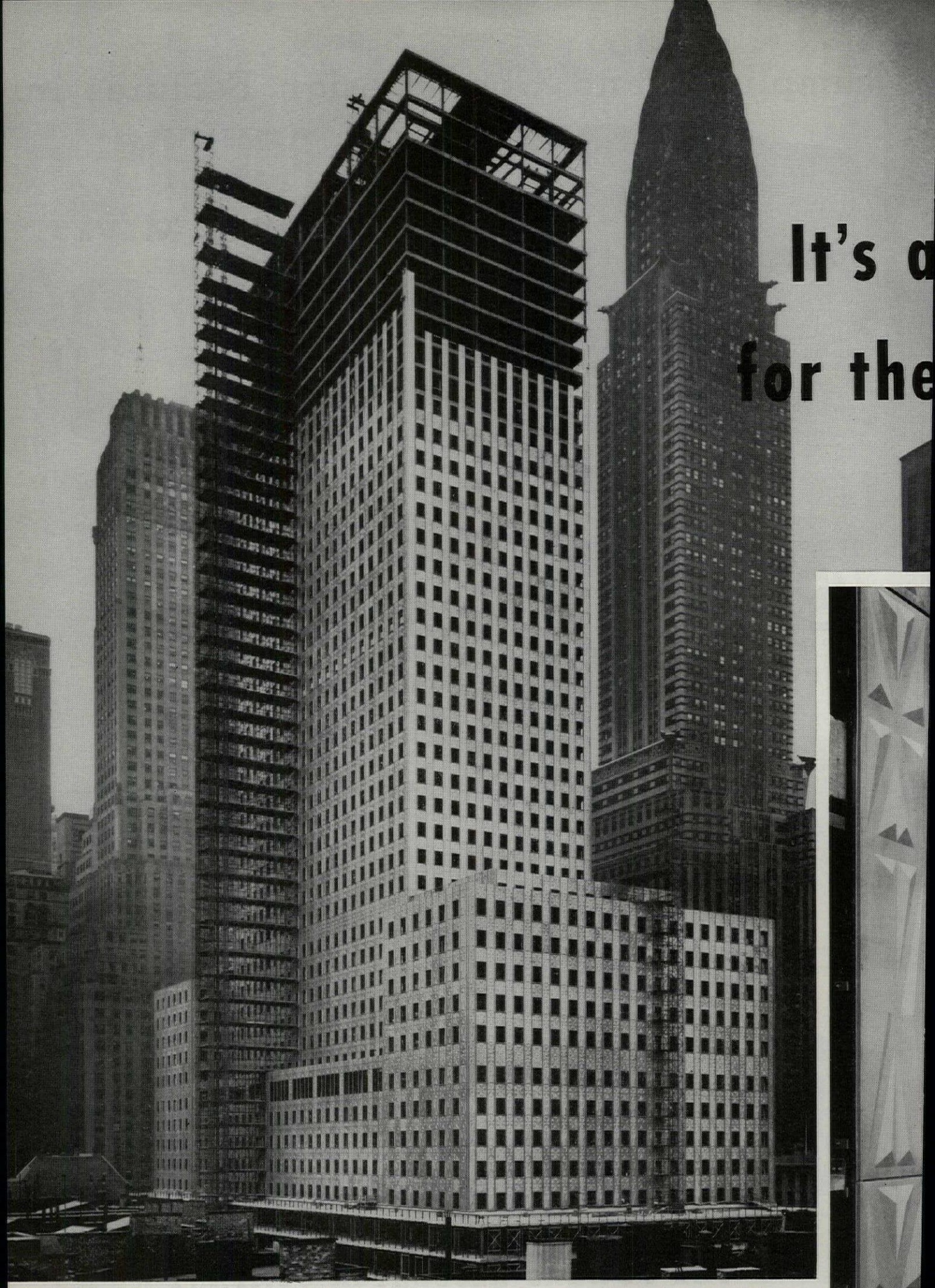

Harrison & Abramovitz, architects—John B. Peterkin, associate
John W. Galbreath Corporation, owner
Turner Construction Company, builder

Stainless Steel skin

largest metal-clad building in the world!

The next time you hit New York City, take special note of the bright new Socony Mobil Building at 42nd and Lexington, because this building is going to make history.

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UNITED STATES STEEL

reviews

(Continued from page 228)

hibition originally presented at The Museum of Modern Art.

Keynoted by a prologue by Carl Sandburg and an introduction by Edward Steichen, who was responsible for this excellent Museum presentation of challenging photography, the minimum of text prevails. Rather, the photographs speak for themselves, bringing forth in their wide universal appeal all human emotions from infancy through old age in all walks of life; giving an insight and an ever-conscious awareness of the essential oneness of mankind.

The bound volume also contains a special portfolio of photographs by Ezra Stoller of the installation at the Museum, which was designed by Architect Paul Rudolph. This book is most appropriately dedicated to the Dignity of Man. E.S.

positive programming

Forbidden Neighbors. *Charles Abrams. Harper & Brothers, 49 E. 33 St., New York, N.Y., 1955. 404 pp., $5*

In this "Study of Prejudice in Housing," the author, a recognized authority on many phases of the subject of housing, has produced a substantial work of major significance and value to those who are or who should be interested in this particular phase.

In addition to a frank, factual, forceful discussion of the serious racial, social, human problems connected with Housing in certain communities and areas of the country, a positive program for public education and for action is outlined, which might tend to ameliorate conditions.

The book offers little of *strictly technical value* for the architect: it does underline a widespread, deep-rooted, dangerous flaw in our national sense of human values.

LAWRENCE E. MAWN

The **best** cellars feature Chase® Copper Tube

You add *extra-value* to the whole home with hot and cold water lines of Chase copper tube. *More years* of trouble-free service, *more efficient* water flow with little or no increase in cost!

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Charlotte†	Denver	Kansas City, Mo.	Newark	Providence	Waterbury

P/A

America's leading architectural magazine, *Progressive Architecture,* naturally leads th field in the incisiveness, accuracy, and authority of its technical articles. These article report on all aspects of related design and engineering fields—construction methods, equip ment, construction materials, environmental control, etc. Because the magazine carefull plans its program of technical material, a collection of articles published over the last fiv years would cover all these aspects fully. Moreover, the articles have been painstaking organized and a wealth of new material added; the index puts all essential information the fingertips of the reader. The result is *Materials and Methods in Architecture* by Burto H. Holmes, Technical Editor of P/A—a book which is sure to be needed on the draftin table of every architect, engineer, designer, and draftsman. It contains 416 pages an over 700 illustrations and sells for $10. Published by Reinhold Publishing Corporatio New York.

MATERIALS AND METHODS IN ARCHITECTURE

Rust Craft Publishers' combined new plant and office was designed by Graham, Anderson, Probst and White, Chicago. *General Contractor:* Aberthaw Construction Company, Inc., Boston.

ARCHITECTURE OF PRINTING PLANT AND OFFICE HARMONIZES WITH NEW ENGLAND SETTING

The white-columned portico and colonial clock tower of Rust Craft Publishers' combined new office and plant at Dedham, Mass., are in keeping with the soundest traditions of New England architecture.

The $3 million building, standing on a 56-acre site, is the home of one of the largest publishers of greeting cards in the country. The modern one-story plant covers 8 acres, and adjoining it at the front is the red-brick two-story office building. A nearby railroad station, "Rust Craft," was especially provided by the railroad to supply both passenger and freight service to the plant.

In keeping with the care with which the building was designed was the selection of materials for both beauty and permanence. Except for the wall-bearing brick piers of the main portion of the office building, the entire framework is of Bethlehem structural shapes. And Bethlehem Open-Web Steel Joists were used in the floor and roof structures of the two-story office building.

The advantages of using Bethlehem Joists were many. They contributed to the strength and rigidity of the finished building, providing a non-warping construction which keeps future maintenance to an economical minimum.

Bethlehem Open-Web Steel Joists reached the job site fully fabricated, marked and ready for placing. They needed only field-welding to secure them in position. Pipes and conduits were run through the open webs, and installation of lighting fixtures and acoustical ceilings was greatly simplified.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.
On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM OPEN-WEB STEEL JOISTS

BETHLEHEM STEEL

notices

p/a congratulates . . .

EDMUND CLAXTON, Director of Research, ARMSTRONG CORK COMPANY, recently named President of BUILDING RESEARCH INSTITUTE; WILLIAM MUIRHEAD, President of WILLIAM MUIRHEAD CONSTRUCTION COMPANY, is Vice-President. Six new board members are: CHARLES W. ATTWOOD, President of UNISTRUT CORPORATION; JOHN F. HENNESSEY, President of SYSKA & HENNESSEY, INC.; ROBERT K. MUELLER, Vice-President of MONSANTO CHEMICAL COMPANY's Plastics Division; OTTO L. NELSON, JR., Vice-President of Housing, NEW YORK LIFE INSURANCE COMPANY; ANDREW PLACE, PLACE & COMPANY; and CHARLES H. TOPPING, Senior Architectural Consultant, E. I. DU PONT DE NEMOURS & COMPANY, INC.

ROBERT L. FISHER, recently appointed manager of contract sales, GOLD SEAL division of CONGOLEUM-NAIRN INC., Kearny, N. J.

J. FRANK BOXWELL, new director of contract hardware distribution, YALE LOCK AND HARDWARE DIVISION, THE YALE & TOWNE MANUFACTURING COMPANY, White Plains, N. Y.

JOHN T. W. BABCOCK, newly appointed permanent secretary to METAL ROOF DECK TECHNICAL INSTITUTE, Chicago, Ill. Address of the Institute is now 53 W. Jackson Blvd., Chicago, Ill.

F. W. MULLER, Manager-Insulation Sales Department, GUSTIN-BACON MANUFACTURING COMPANY, Kansas City, Mo.

ARTHUR H. UHLER, newly elected President, AMERICAN SOCIETY OF ARCHITECTURAL HARDWARE CONSULTANTS.

DUBOSE AVERY, newly appointed Manager of Architectural Sales, ALUMINUM COMPANY OF AMERICA, 1501 Alcoa Bldg., Pittsburgh 19, Pa.

J. C. HAMILTON, recently appointed Manager of Sales, ADVANCE TRANSFORMER CO., 2950 N. Western Ave., Chicago 18, Ill.

ALUMINUM IN MODERN ARCHITECTURE

COMMONWEALTH PROMENADE APARTMENTS

(pictured below)

and 900 ESPLANADE APARTMENTS, CHICAGO.

BUILDERS AND DEVELOPERS:

Herbert S. Greenwald and Samuel N. Katzin

ARCHITECT:

Ludwig Mies van der Rohe, Chicago

ASSOCIATE ARCHITECTS AND ENGINEERS:

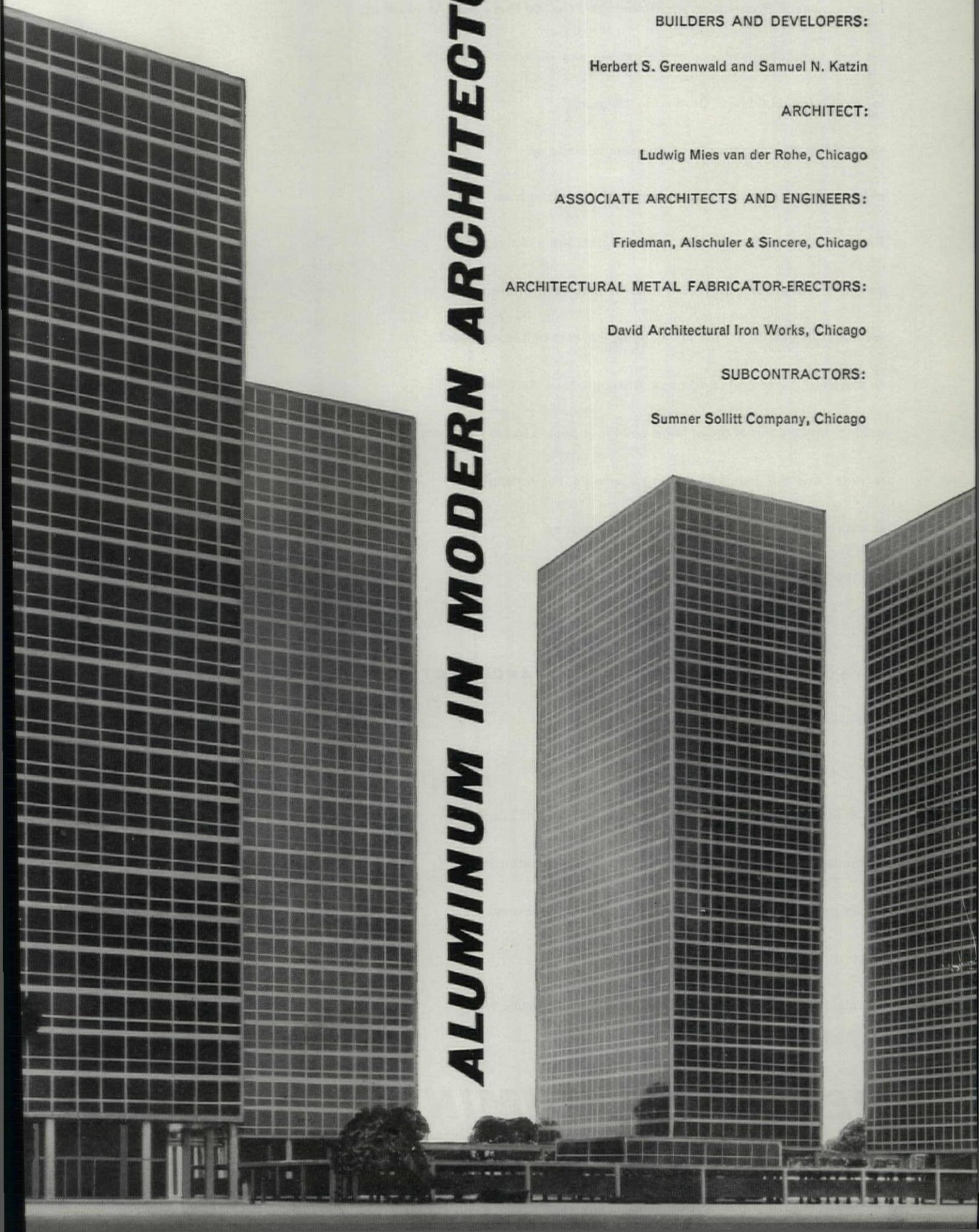
Friedman, Alschuler & Sincere, Chicago

ARCHITECTURAL METAL FABRICATOR-ERECTORS:

David Architectural Iron Works, Chicago

SUBCONTRACTORS:

Sumner Sollitt Company, Chicago



New concept in multi-story exteriors

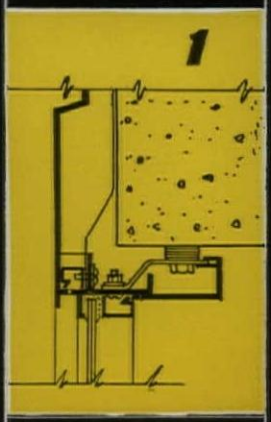
Chicago's newest lake front developments, the Commonwealth Promenade Apartments and the 900 Esplanade Apartments, present a unique advance in modern glass-and-aluminum exteriors for multi-story buildings. On the four 28-story and the two 29-story structures, the skin is made up of large grids prefabricated to nominal 9′ x 21′ sizes from Reynolds Aluminum extrusions. These grids are anodized in complete units, using Reynolds newly expanded anodizing facilities—largest in the industry. A typical grid unit is indicated by the white panel on facing page. Basic joints in the grids are welded. Installation of these large units is expected to set new construction records. And the use of these large elements, eliminating as many field-erection joints as possible, assures maximum weatherproof protection.

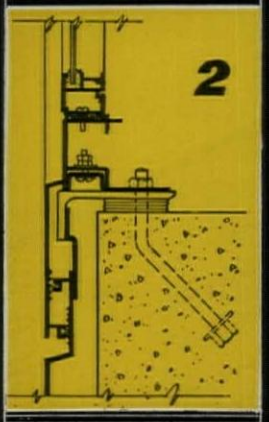
REYNOLDS ALUMINUM SERVICE TO ARCHITECTS

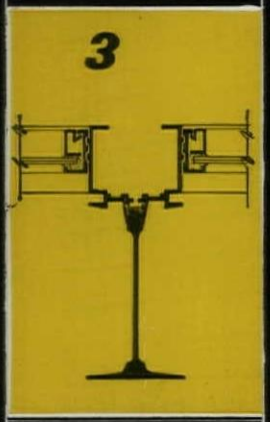
Reynolds Architect Service Representatives offer specialized assistance on aluminum design problems, standard mill products applications and commercially fabricated aluminum building products. They can help coordinate varied aluminum needs for procurement efficiency and economy. Address inquiries to Architect Service, Reynolds Metals Company, Louisville 1, Ky.

REYNOLDS ALUMINUM

Reynolds Metals Company, Louisville 1, Ky.







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2

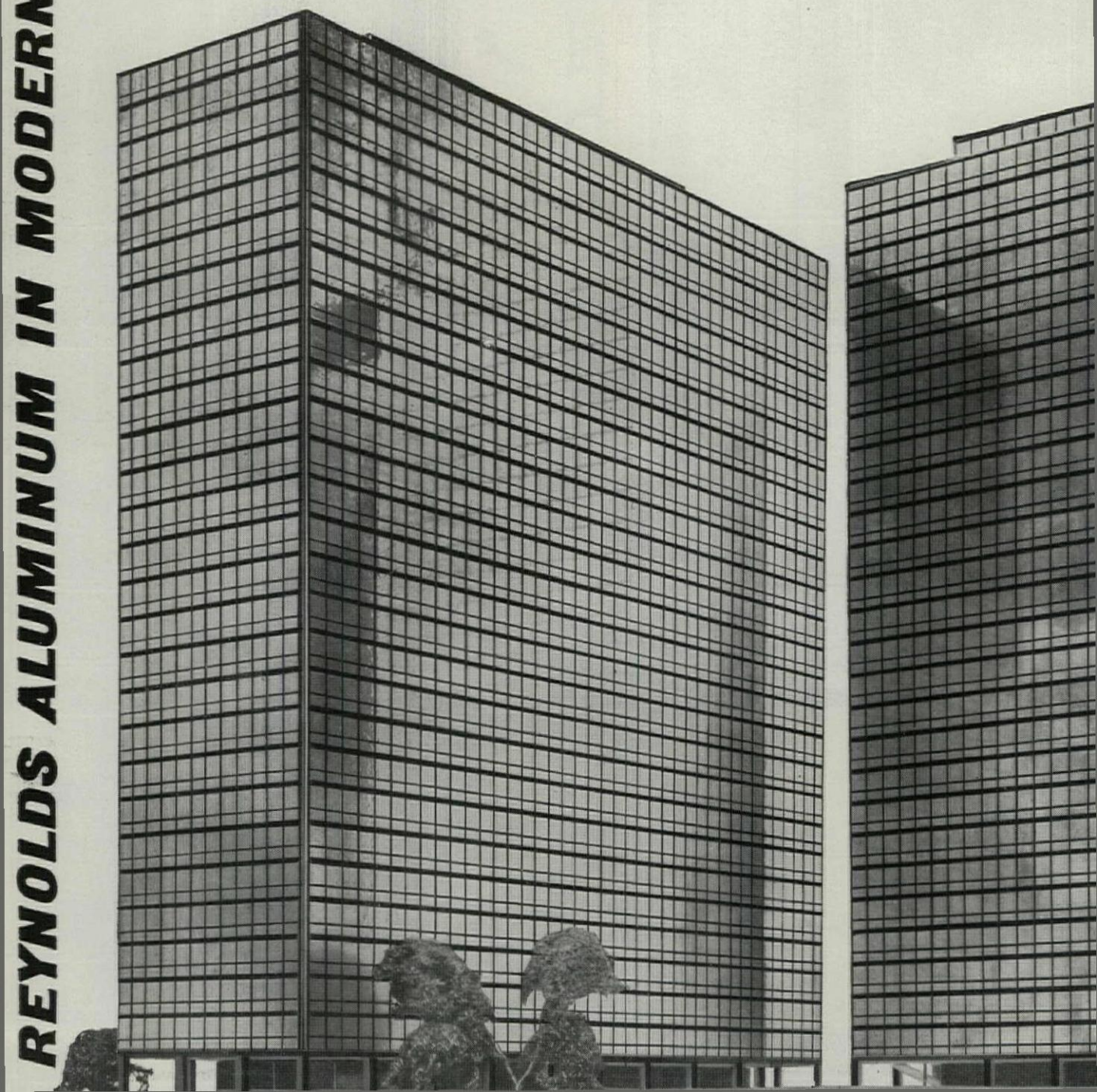
REYNOLDS ALUMINUM IN MODERN ARCHITECTURE

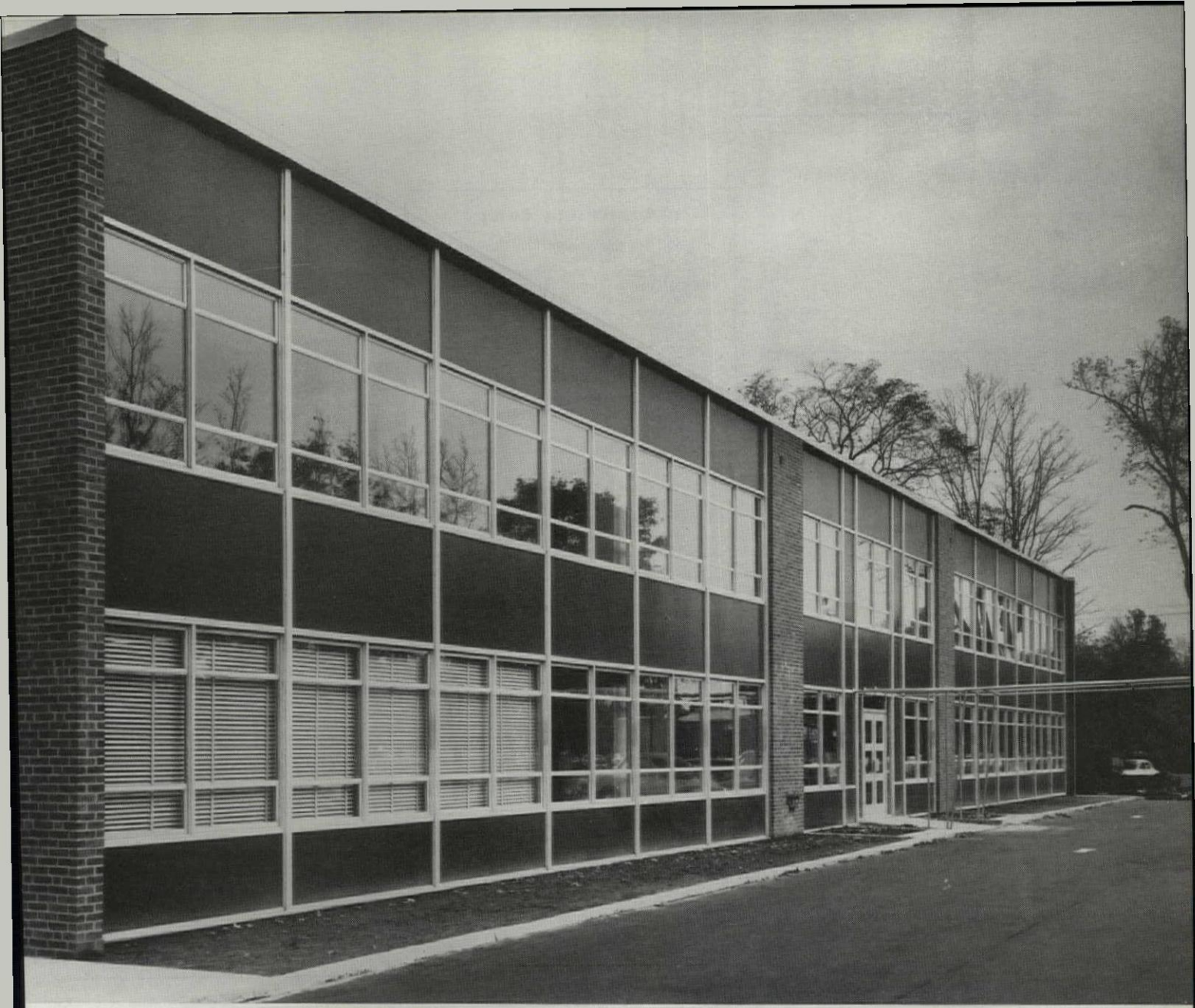
900 ESPLANADE APARTMENTS, CHICAGO

These structures differ from the preceding

Commonwealth Promenade Apartments in that

the aluminum grids are anodized black.





Mathilde Steinam, Stella S. Housman Wing, Monmouth Memorial Hospital, Long Branch, N. J. Architects: Ferrenz & Taylor, New York City. Contractors: Chas. B. Hembling & Son, Red Bank, N. J. Lupton Curtain-Wall System Type G. Width Modules: 8'8". Ventilators project in and project out, with fixed glass between. Opaque Panels: outside, blue-green porcelain enamel flecked with lighter spots, etched aluminum inside. Opaque panels are insulated — made of two components with air space between for drainage. Outside component is sandwich construction with aluminum Honeycomb core. Inside component is 1" Fiberglas cemented to aluminum sheet.

Add Lupton Experience to Your Curtain Wall Designs

When you design with a Lupton Simplified Curtain-Wall System you put "experience" on your side. Lupton Simplified Curtain-Wall engineering is the direct result of fifty years' experience in manufacturing metal windows and exterior components. There is ample construction — in single and multi-story buildings across the country — to prove the System's advantages and benefits.

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Stockton Office and Warehouse: 1441 Fremont Street, Stockton, Calif.
Sales Offices and Representatives in Other Principal Cities

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pa JOBS AND MEN

SITUATIONS OPEN

WANTED—experienced architectural draftsmen. State age, training, experience and salary expected. Whitehouse & Price, 715 Hutton Building, Spokane, Wash.

NATIONAL COMPANY—has opening for an individual with considerable experience in industrial construction to coordinate company's building expansion program to develop building standards for company-wide use and to oversee major construction projects. Send resume of past experience and personal history and salary expected. Box 285, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMAN—for permanent position with an expanding, small sized office, doing all types of quality work in contemporary architecture. Pleasant working conditions. Replies should give age, education, experience, starting salary expected and availability. Brunner, Hoeffel & Bohrer, 17A E. Central Ave., Minot, North Dakota.

ARCHITECTURAL DRAFTSMEN—group leader and good designer to work in a new air-conditioned office with large backlog of public and private work. City of 30,000 with State University. Reply should state age, education, experience, starting salary expected and availability. Wells and Denbrook, Architects, Grand Forks, North Dakota.

WELL-ESTABLISHED ARCHITECTURAL FIRM—eastern Pennsylvania, desires young architectural design, college graduate with two years office practice. Excellent junior partnership possibilities for ambitious and energetic person. Practice includes all phases in medium sized office handling $10,000 to $2,000,000 classes of contemporary work. Give full details. Box 286, PROGRESSIVE ARCHITECTURE.

EXPERIENCED DRAFTSMAN—architectural or engineering-draftsman wanted by a firm doing commercial and institutional work. Send references, experience, samples, salary expected, availability, etc. Monroe, Licht and Higgins, Architects and Engineers, 827 E. Yandell Blvd., El Paso, Texas.

ARCHITECTURAL DRAFTSMAN—design or engineering, experienced man for small expanding office doing contemporary work only. Backlog includes residences, office buildings, schools, commercial buildings, etc. Permanent position for right man. Send full qualification sheet covering experience, samples, references, salary expected, availability and snapshot. Bernard A. Webb Jr., 763 Pine Street, Macon, Georgia.

DELINEATOR—for large architectural office located in the Pacific Northwest. Permanent position. Submit full resume stating experience, education, age and salary expected. Replies will be held in confidence. John Graham and Co., 1426 5th Ave., Seattle 1, Wash.

SMALL PROGRESSIVE FIRM—commuting distance from New York City, desirous of experienced draftsman. Permanent position, good salary, interesting work. Write giving full details. Box 287, PROGRESSIVE ARCHITECTURE.

WANTED—an architectural designer and an architectural draftsman for work in a long-established, medium sized Indiana office. Desirable living and working conditions. Give age, education, experience, availability, starting salary expected. Box 288, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DESIGNER—young architect or architectural graduate as prospective associate in small old established office in fast-growing West Texas city, 120,000 population, good climate, elevation 3,800, good living conditions. Give information on education, experience, age, physical, etc. Box 289, PROGRESSSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMEN — experienced, for position in small office with varied practice, large proportion schools. Firm located in community with mid-western State University. Give experience and desired starting salary in first reply. Box 290. PROGRESSIVE ARCHITECTURE.

WANTED—architect with ideas and connections to promote proposition building with advertisers own material into the water and on edge of water. No capital required. State background and past activities. Box 291, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMAN - DESIGNER — wanted by small, progressive and expanding architectural and engineering office needing capable man to become head of Architectural Department. Excellent future for right man. Opportunity for possible associate membership in firm. Submit resume giving experience, salary requirements, availability, age, etc. Robert L. Brown, Architect and Engineer, Box 1205, Roanoke, Virginia.

ENGINEERS—mechanical and electrical, needed by long established and large architectural firm in Philadelphia. Layout men experienced in electrical lighting and power for commercial buildings. Also layout men for heating, air-conditioning and plumbing. Submit experience, salary, availability. No limit on age if capable. Permanent position. Box 295, PROGRESSIVE ARCHITECTURE.

LEAD DRAFTSMAN, ARCHITECTURAL—This is a truly challenging opportunity presenting an excellent future with an expanding southern Wisconsin manufacturer of architectural sheet metal building products. Job will involve detailing and developing additional application on floor, roof and wall panels, interior partitions and prefabricated buildings. As a lead draftsman or squad boss, will be required to give assistance in guidance to a group of architectural draftsmen. The man who would qualify for this position will enjoy the advantages of our pension, hospitalization and life insurance programs. Numerous employee recreational activities add to the friendly attitude Inland people share. Wisconsin is called the vacation land of the North Central States and abounds with hunting, fishing, boating, and other recreation opportunities. For an expense paid interview with us, give details of your education, experience, age, marital status and salary history. Inland Steel Products Co., "Milcor", 4101 W. Burnham Street, Milwaukee 15, Wis.

THE UNIVERSITY OF ILLINOIS—has an opening for an experienced graduate Registered Architect, capable of assuming major responsibilities relative to a campus building program. Also openings for architectural draftsmen, a mechanical and an electrical engineer, and for an architectural designer. Applicants should indicate age, education, experience and salary desired. Apply to Ernest L. Stouffer, University Architect, 256 Administration Building (W), University of Illinois, Urbana, Illinois.

ARCHITECT—qualified through training and experience to design churches, schools, and other buildings. Give full information as to education, experience, salary requirements and when available. Location Eastern New York. Box 296, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DESIGNERS AND DRAFTSMEN—opportunity to work and grow with an organization specializing in contemporary architecture. This is a small office which has expanded steadily over a 25 year period. Our school work has received national recognition. Completely modern offices with air conditioning. Group hospitalization and other benefits. Send resume of education and experience, stating salary requirements and availability, also snapshot. College men preferred. The Firm of Edmund George Good Jr., 904 North Second Street, Harrisburg, Pa.

WANTED—an architectural or ornamental metal draftsman. Age 25-50 years. Man for this position must be capable of heading up an entire drafting department for an aluminum window and door manufacturing company in central Wisconsin. This position offers fine pay, splendid opportunity for advancement and incentive wage program. Box 297, PROGRESSIVE ARCHITECTURE.

TWO ARCHITECTURAL DRAFTSMEN WANTED—opportunity for advancement in medium sized office doing quality contemporary work on a variety of projects. Pleasant working conditions. Climate and location ideal for hunting and fishing. Prefer men with design, detailing and engineering capabilities. Give education, experience, etc. by contacting McIver, Hess, and Haugsjaa, A.I.A., 603 Strain Building, Great Falls, Montana.

(Continued on page 246)

Advertising Rates

Standard charge for each unit is Five Dollars, with a maximum of 50 words. In counting words, your complete address (any address) counts as five words, a box number as three words. Two units may be purchased for ten dollars, with a maximum of 100 words. Check or money order should accompany advertisement and be mailed to Jobs and Men. c/o Progressive Architecture, 430 Park Avenue, New York 22, N. Y. Insertions will be accepted not later than the 1st of the month preceding publication. Box number replies should be addressed as noted above with the box number placed in lower left hand corner of envelope.

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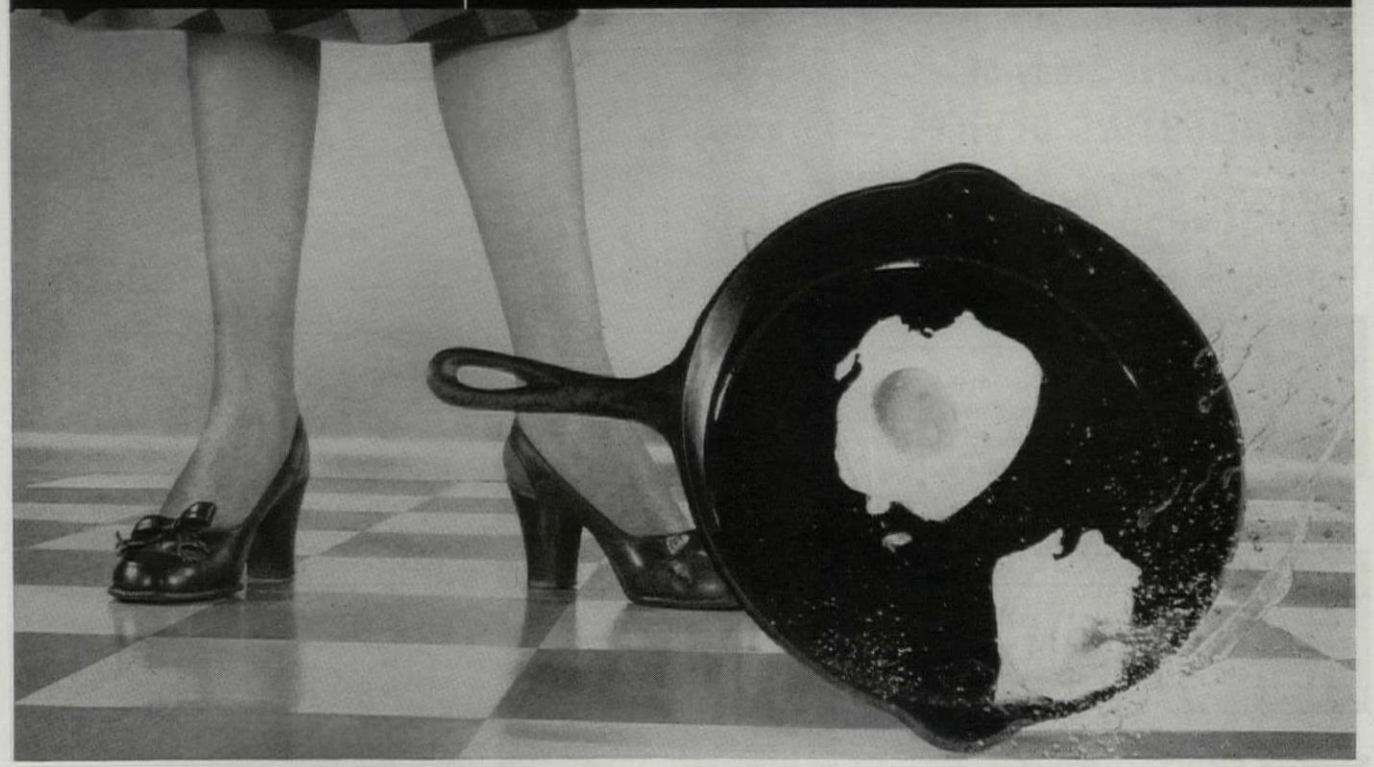

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SERVING INDUSTRY...WHICH SERVES MANKIND

JOBS AND MEN

(*Continued from page 244*)

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ARCHITECTURAL DESIGNER—Southern office of long standing needs a young, contemporary, style designer. Prefer one with college education and good office background. State age, training, experience and salary expected. Box 298, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DESIGNERS—and draftsmen for all types of buildings, headquarters in Richmond, Virginia. Good opportunity for all round experience. Give age, education, qualifications, experience, availability and starting salary. Box 299, PROGRESSIVE ARCHITECTURE.

SITUATIONS WANTED

ARCHITECT—37, university graduate, in private general practice with nine years' varied experience in all phases of practice, including own office for three years. Desires position as associate leading to future partnership with architect producing good contemporary architecture in Texas or Rocky Mountain region. Box 292, PROGRESSIVE ARCHITECTURE.

EXPERIENCED ARCHITECTS SUPERINTENDENT —desires responsible position on large project where ability to coordinate trades, prepare estimates, check materials, interpret plans, etc., liason with owner and contractors, can be depended upon in absence of the architect. At least one year duration. New York City references. Prefer Eastern states. Box 293, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMAN - DESIGNER — registered by examination, architect with long experience in various types of buildings —industrials, commercials, publics, churches, and schools. Excellent recommendations from previous employment. Outstanding renderer. Willing to do routine work and detailing. Not young man, but with high efficiency. Write Draftsman, 21 E. Van Buren, Room 403, Chicago, Illinois.

(*Continued on page 250*)

Foley's Department Store, Houston, Texas
Kenneth Franzheim, architect

stone

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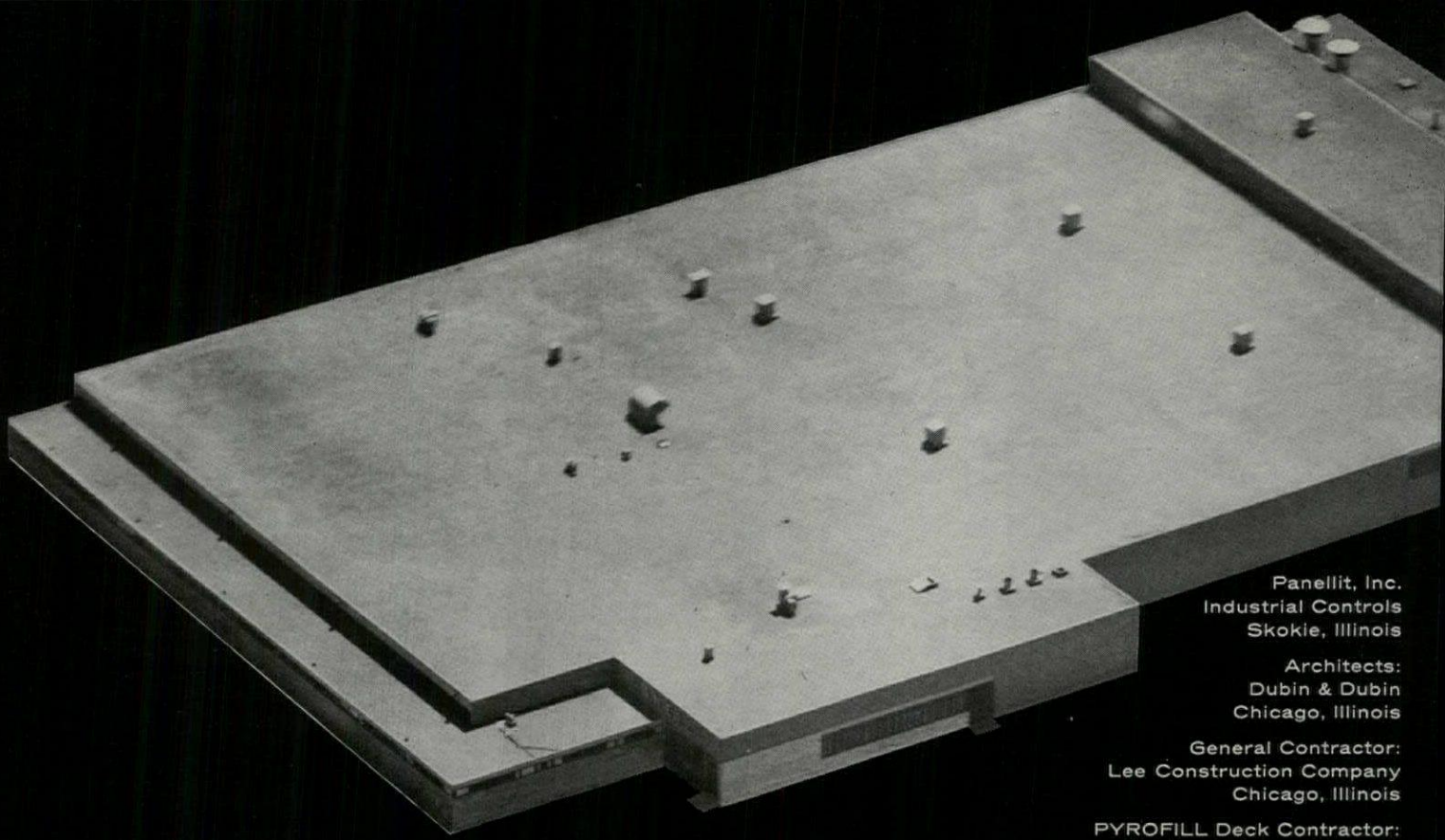

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Skokie, Illinois

Architects:
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General Contractor:
Lee Construction Company
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PYROFILL Deck Contractor:
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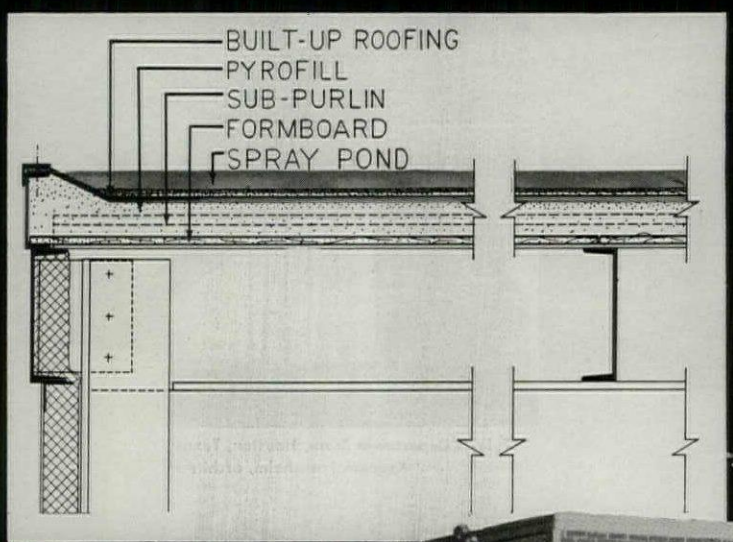
PYROFILL* ROOF



PYROFILL Roof Deck used as a ponded deck serves to reduce the effects of summer heat. In Chicago area, the pond reduces average deck temperatures from 135° to 85°. The U-factor for PYROFILL over SHEETROCK* Formboard is .38.

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INCOMBUSTIBLE . . . PYROFILL is made of fireproof gypsum. Insurance rates are often 30% lower than for combustible construction.

ADAPTABLE . . . PYROFILL provides a monolithic deck for flat, curved or pitched roofs. Exacting insulation or acoustical requirements can be met by varying the type of formboard.

LOW COST . . . PYROFILL is poured in place over permanent formboards, providing an incombustible deck with more advantages at a lower cost.

STRUCTURALLY RIGID . . . Bulb tee sections used to reinforce the PYROFILL slab serve, along with the gypsum, to provide lateral stiffening of the structural steel supports.

STRONG AND DURABLE . . . PYROFILL Roof Decks have a high factor of safety. Decks erected over 30 years ago are still giving excellent service.

LIGHT-WEIGHT . . . PYROFILL weighs only 10 to 12 pounds per square foot in 2½" thickness, permitting important savings on structural steel and footings.

INSTALLS FAST . . . PYROFILL sets in less than an hour and is then capable of carrying normal construction loads. A single crew can pour from 20,000 to 30,000 square feet per day, ready for roof covering.

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FOR MORE INFORMATION, see: Sweets Catalog, Section Un—your authorized PYROFILL Contractor—your U. S. G. Architects' Service Representative—or write United States Gypsum, Dept. PA-7, 300 W. Adams St., Chicago 6, Ill.

UNITED STATES GYPSUM

The Greatest Name in Building

JOBS AND MEN

(*Continued from page 246*)

SITUATIONS WANTED

ARCHITECT—31, university graduate, awarded AIA school medal. NCARB. Five years' experience small office; design, client contact, working drawings, office and job supervision, renderings, excellent detailer. Available after January 1st. Interested in position leading to association or partnership. Box 294, PROGRESSIVE ARCHITECTURE.

GRADUATE OF GEORGIA TECH.—with B. Arch. in 1952, standing in upper third of class, desires position with small to medium size office. Am presently in U.S. Navy attached to submarines. Have been in Europe twelve months, Japan six months, Hawaii twelve months. Lt. Jg. M. H. Baldwin, USNR, USS Greenfish SS-351, c/o Fleet Post Office, San Francisco, California.

REGISTERED ARCHITECT — 30, designer, N.C.A.R.B. certificate, desires to associate with progressive organization interested in doing good contemporary work. Situation will be advantageous to busy, established practitioner or man interested primarily in the contact phases of the business. For complete details write Box 301, PROGRESSIVE ARCHITECTURE.

AVAILABLE—Architectural designer, delineator, project development. An unusual combination of the highly artistic and thoroughly practical. Broad interstate experience, Pan American and foreign projects. All classes buildings, all periods; modern that is outstanding. Very fine education. Color perspectives, interiors, exteriors. Available, large or small offices. Delores, Capitol Hotel, Richmond, Va.

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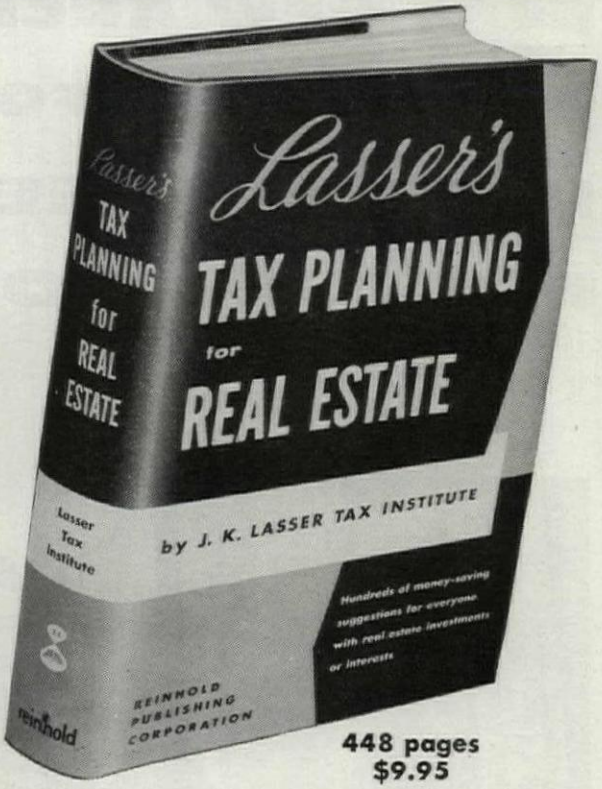

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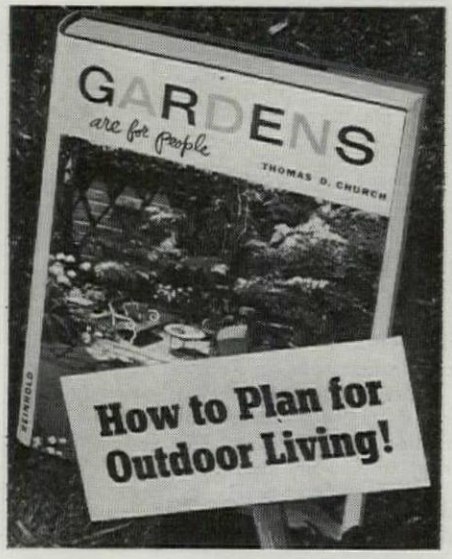

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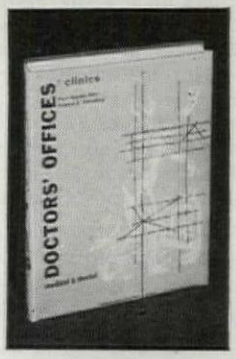

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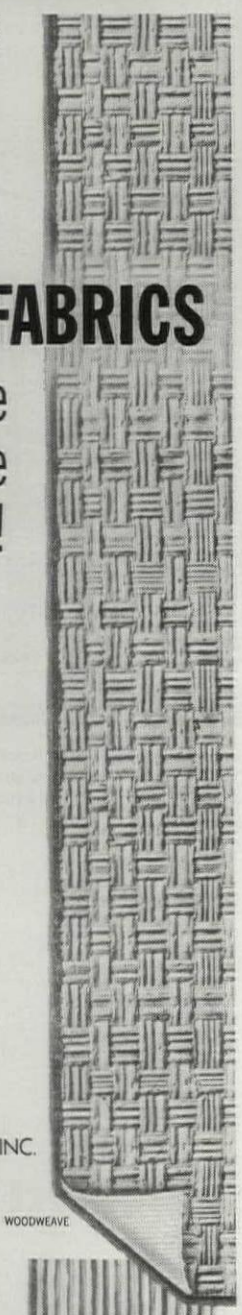

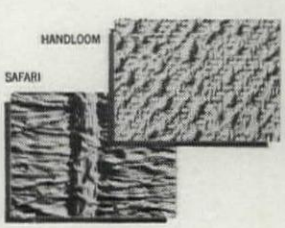

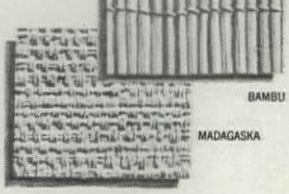

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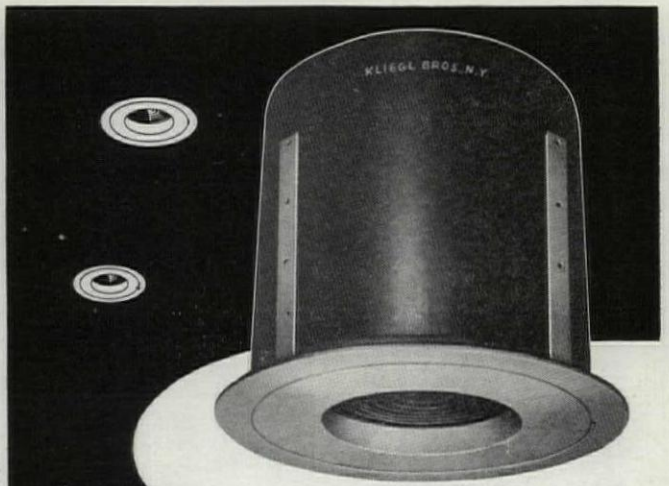

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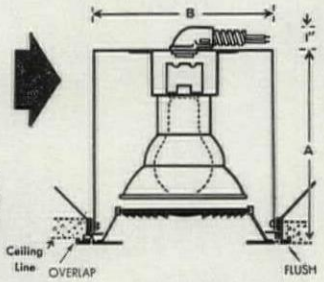

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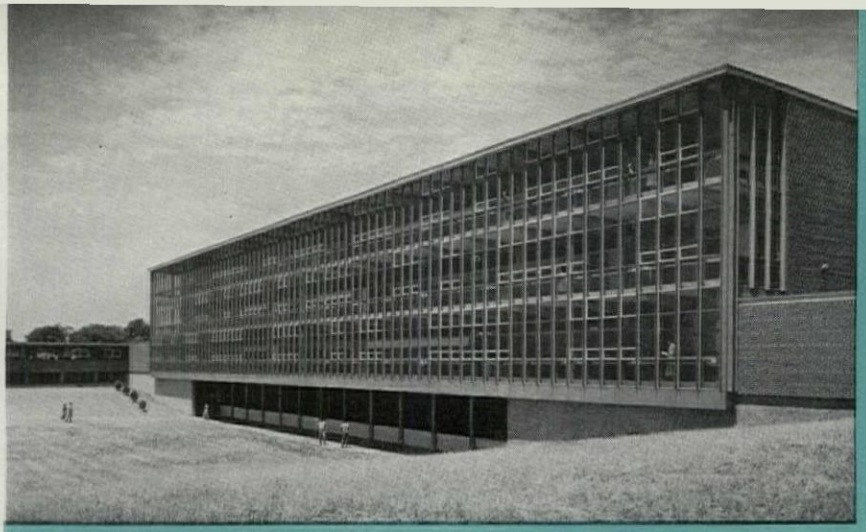
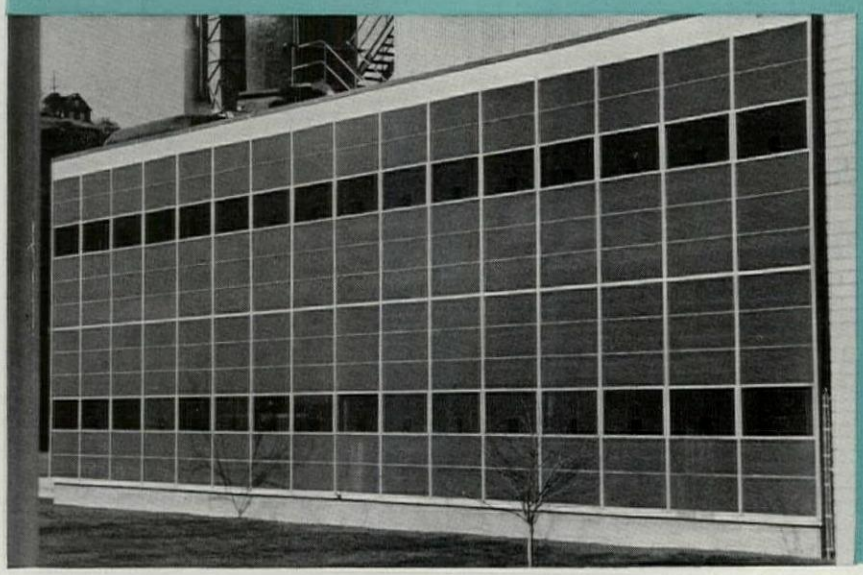
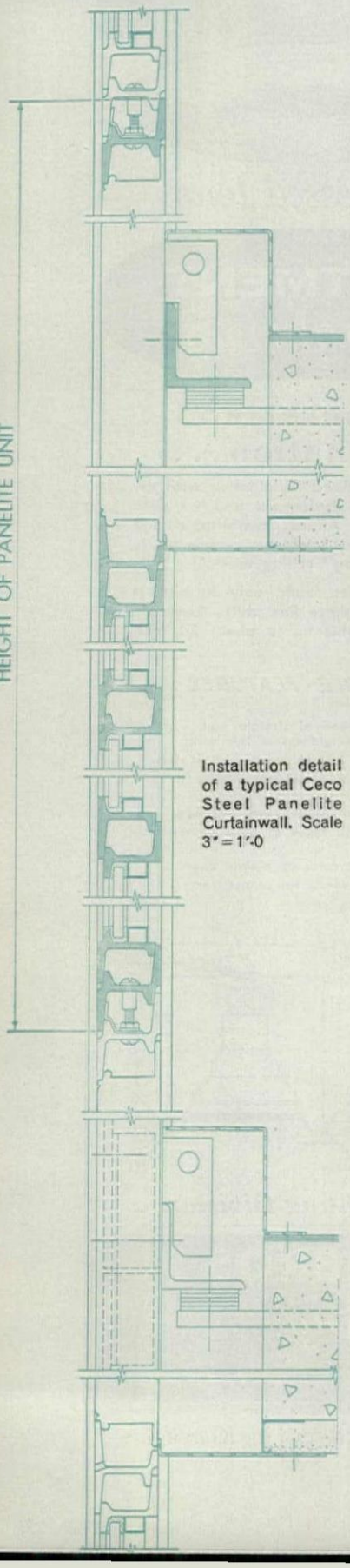


Curtainwall treatment at the Keokuk, Iowa Senior High School and Community College. Ceco Window Engineers co-operated with architects Perkins & Will in working out an unusual mullion treatment.

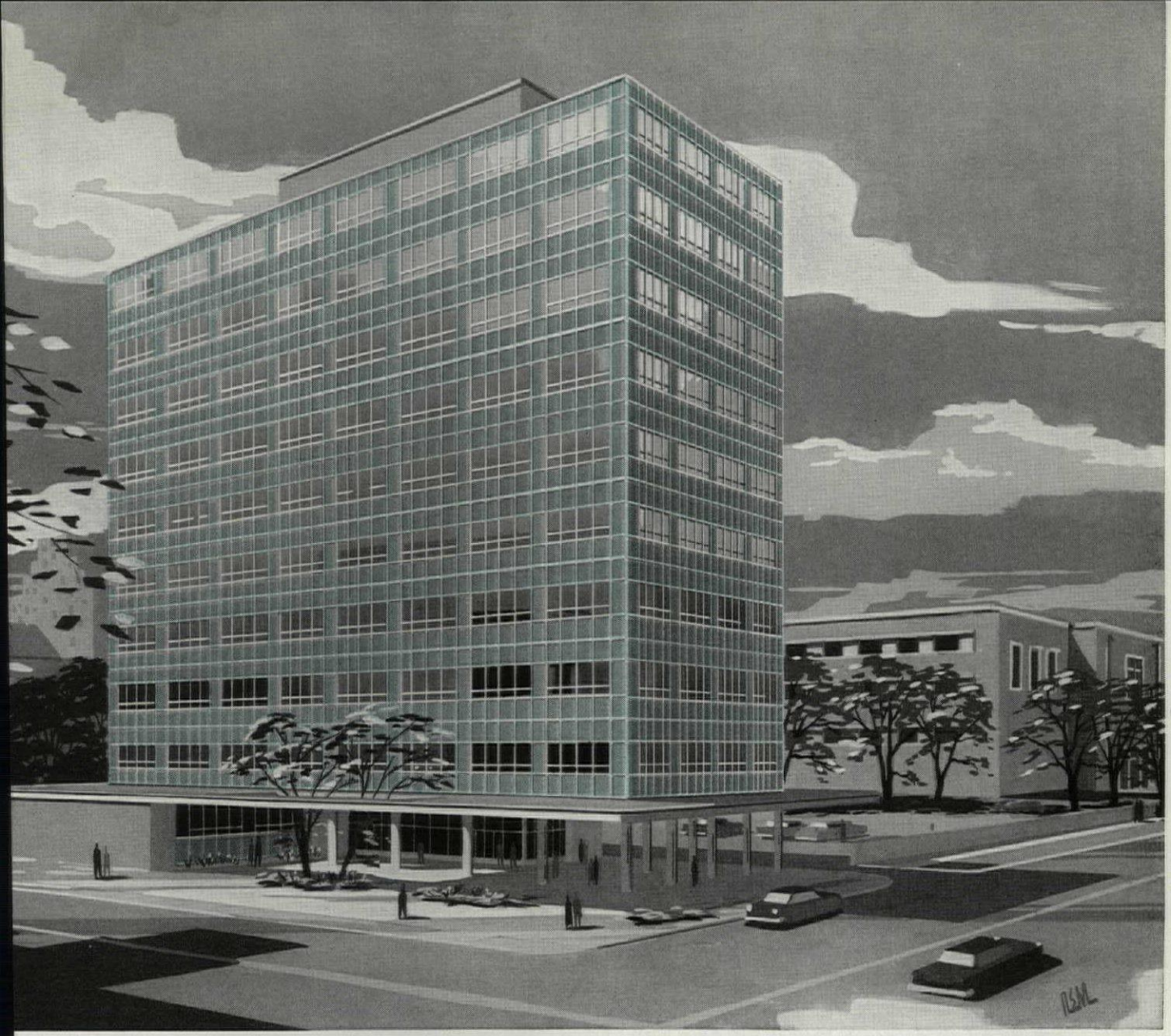


Curtainwall construction was used at Lever Brothers Research Center, Edgewater, N.J. Here again Ceco Window Engineers worked closely with architects Skidmore, Owings & Merrill in achieving proverbial "window skin" of simple modern beauty.



Installation detail of a typical Ceco Steel Panelite Curtainwall. Scale 3" = 1'-0

How to avoid pitfalls in curtainwall window construction



This typical Ceco Panelite application shows only one of the many effects architects can obtain with Ceco Panelite Curtainwall service. There is simple beauty here, accented by color plus pleasing sight lines which result in a modern open effect.

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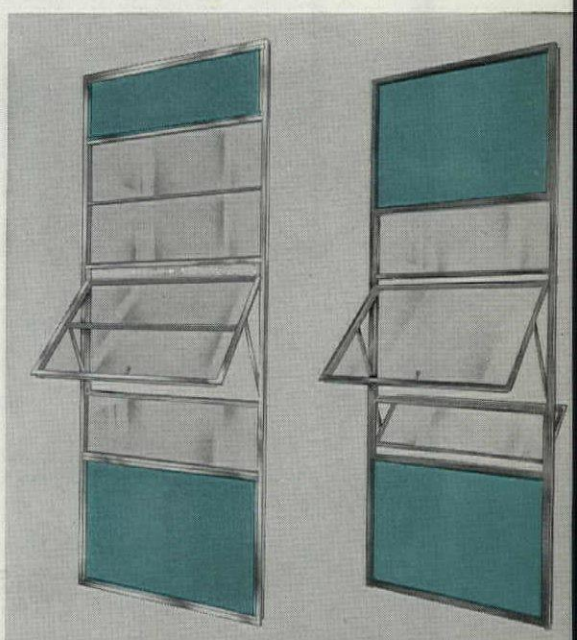

Typical Aluminum Panelite Unit

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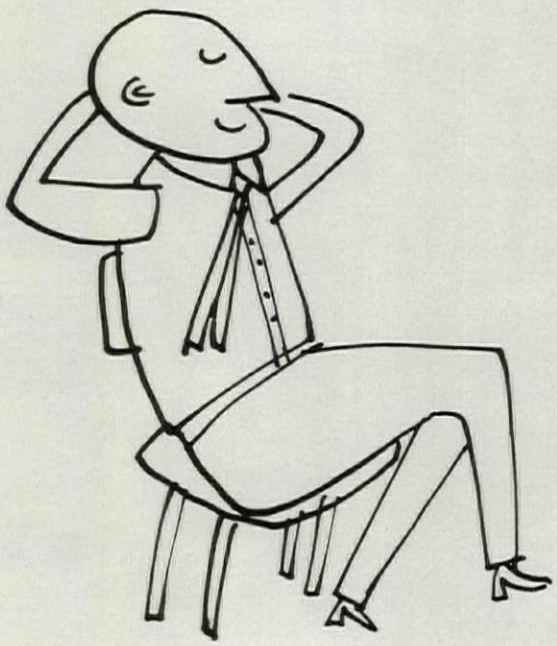

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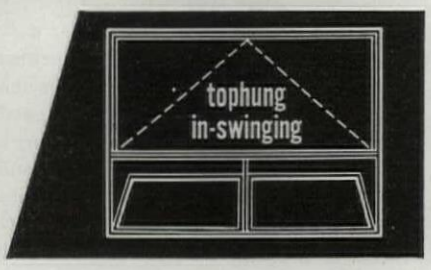

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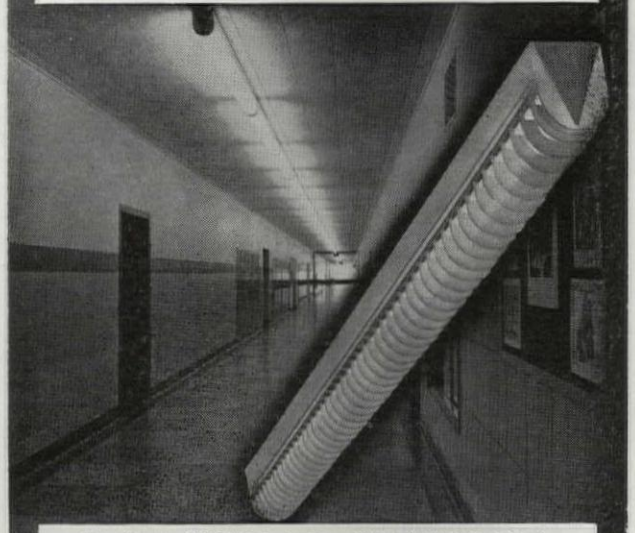

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P.S.

I have been very much annoyed recently by certain rationalizations about the relative position of the architect and other "factors in the building industry," but I have hesitated to write about the subject because I've been afraid that *my* attitude would be misunderstood as biased and rationalized. I think I'd better get it off my chest, however, and if anyone believes it's purely selfish argument, based on P/A's position, let him! Of course it is: I wouldn't be sitting in this chair, banging away at this typewriter in this office, if I didn't believe firmly and strongly in the policies and reasons for existence of P/A.

My gripe is this: I resent the argument that *the architect* is just one member of a "team" of specialists who design buildings and specify materials. I believe that today, when the corporate client, the institutional group client, and the quasi-client (such as the public agency) are posing new problems of client-architect relationship which must be solved, it is extremely dangerous and harmful to the legal and professional position of the architectural office to spread the gospel that decisions about *design* and *specification* are best made by the "team" of client, builder, and architect. I think this position is dangerous (clients and builders want to hear it), legally incorrect (read the general conditions of the contract and see *who* has the responsibility), and misleading (the public is sufficiently confused about the function of the architect).

Do you see why I hesitate to say these things? Not only are they easily misunderstood—to explain the true function of client and builder in the *design* phase of a construction project is not simple—but I am speaking as Editor of a magazine that is published for The Architectural Organization, that exists because of support from design professionals, that brags of its *architectural* circulation. The argument that I object to is espoused by several magazines that have less architectural circulation than we have, and more distribution among builders and certain client groups. So, we each have an axe to grind, admittedly. I happen to think ours is the weapon—or the tool—that is most useful to the architect. And I am convinced that the *facts* of the argument are all on the architect's side.

Let me try to disarm those who will disagree with me by saying, right off the bat, that *of course* today's client—especially the commercial client, the speculative entrepreneur, the corporation—has certain strong opinions about what he wants, and is entitled to those opinions. The Government agency lays down certain rules and standards—too readily I'm afraid, and too rigidly. The builder (often, in speculative work, also the client) knows what he wants, and what he can do within a margin of profit. And I am willing to admit that, at times, the architect has been too weak, has been unable to deal strongly with this new client type.

However, the answer, for the future of architecture and the architect as a professional, is *not* to notify the public that there is now an equally-constituted team of "building professionals," but to bend all possible public relations and public education activities to explaining to that public the true role of each:

Client—employs the services of a professional man, generates the demand for a project, turns for advice and services to a professional who is capable of advising and providing services.

Builder—undertakes for a certain financial reward to erect the building according to the designs of the architect-professional, as expressed in certain legal documents.

Architect and Engineer—are, by training, experience, and developed abilities capable of translating the needs of the client into design—drawings and specifications—from which the builder can estimate, contract, and construct under professional supervision.

If this concept is old-fashioned; if the client can best determine what he needs in the way of technical and esthetic design; if the builder can best decide materials and methods of construction; then the whole present practice of architecture is an anachronism. I don't believe that it is. I think that the key position of the architect is just beginning to be realized. I think that contemporary practice of architecture—the modern office set up to handle large-scale corporate building design and over-all planning, as well as the continuing individual commission such as the church, or the school, or the bank—is just now coming into its own. And, at this crucial time, it seems to me particularly dangerous to be advertising to the general public that "the client's the boss. Under the client—but working in close partnership with him—comes the architect."

I'm the boss when I call in a doctor, too. And I just paid for some legal advice. I was certainly the boss in that deal. I have an idea, however, that doctors and lawyers would get mildly upset if medical magazines and legal journals ran ads pointing to the fact that the client knows best what's good for him. Yet the architectural profession seems perfectly content to have its services rated *under* the client's contribution, on an equal basis with those of the builder.

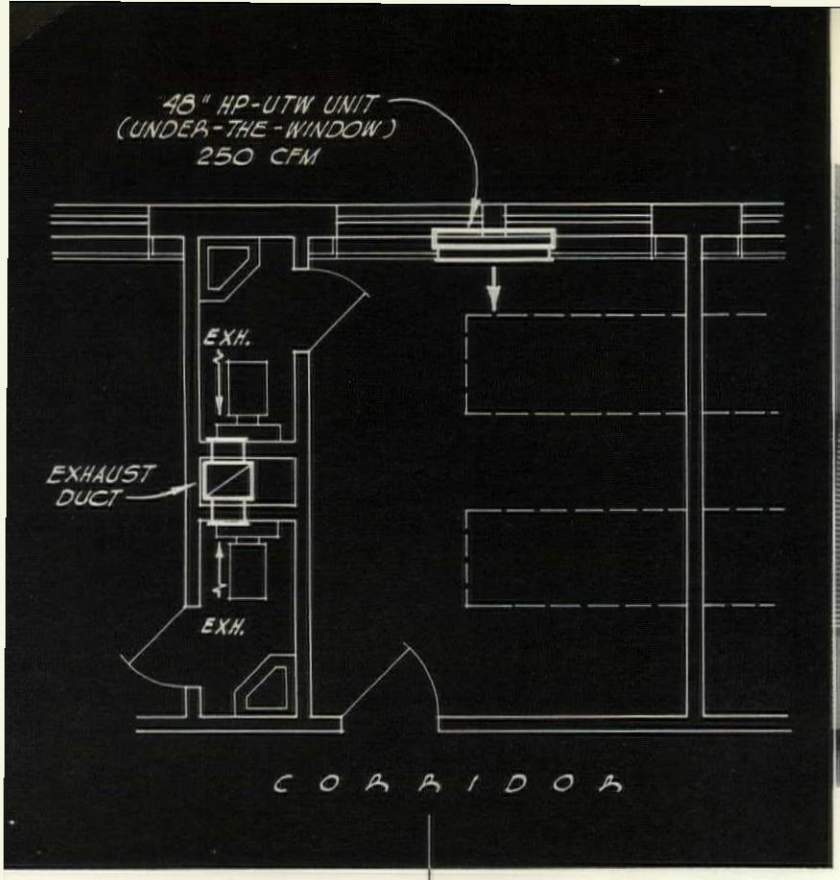
The basic error in the advertised thinking that I am objecting to seems to be misuse of the term "professional." What is a "building professional." In my much-thumbed copy of *The Architect at Mid-Century*, my favorite chapter—on *The Nature of a Profession*—says: "The bases of the professions rest in the fact that laymen, in meeting many problems of daily life, need recourse to special areas of learning involving knowledge, understanding, and insight far beyond their own acquaintance. For assistance in such matters, they must turn, therefore, to those who, through prolonged formal training and experience, command those disciplines and possess the skill to apply them effectively to the practical affairs of others. Thus, a profession differs from a skilled trade by requiring complex intellectual effort rather than mere mechanical dexterity, and from commerce by rendering to the client a personal service compassing a high level of objective counsel, guidance, and art."

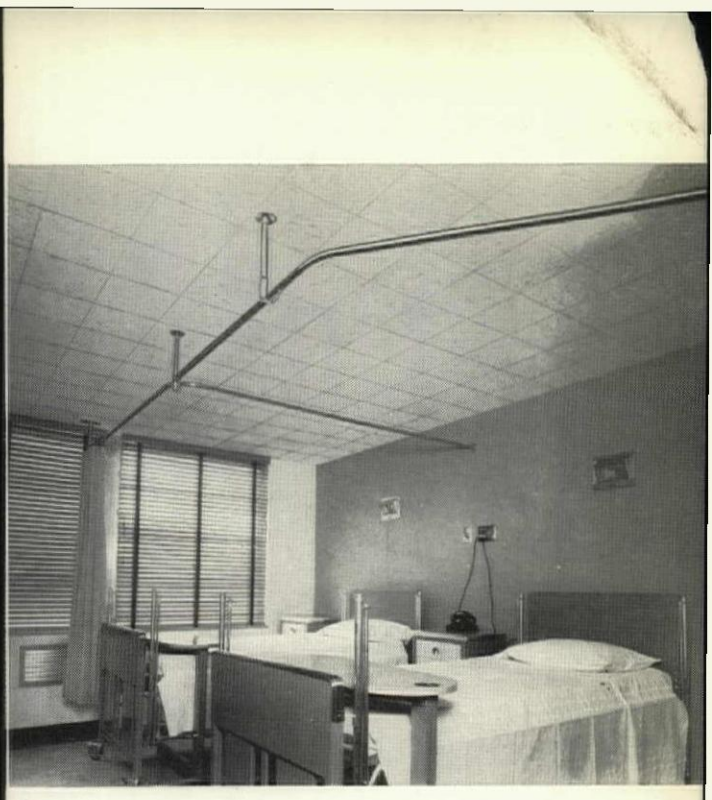
In the design of the physical environment, that sounds like the *architect* the man is talking about—not the owner, the builder, or a "team."

I would be the last to deny that the owner wields authority. I have just been looking into an interesting story that can't be told. An architect specified and detailed a certain wall-surfacing material, basing his recommendation and his specification on exhaustive study of the behavior of various competitive products, and on his own experience. The owner (also the builder) over-ruled the architect, and made a substitution. After all, as another magazine says in an ad, quoting a builder, "the client must be recognized as boss of the building team, the final voice in any decision." Well, the substitute material didn't work. It deteriorated, and the wall leaked and looked like the devil. So an expensive change is being made, with the building only a year old. I can't tell that story: the architect asks me not to, because the owner-builder doesn't want his "professional" mistake publicized.

The architect cannot always insist that his "objective counsel and guidance" be followed. But his professional status, his "prolonged formal training and experience," should, it seems to me, be brought forward to the public—not his occasional need to give way to nonprofessional members of the "team" who are not qualified, either by legal status or by abilities to perform the design and specification function in the construction process.

Thomas H. Creighton





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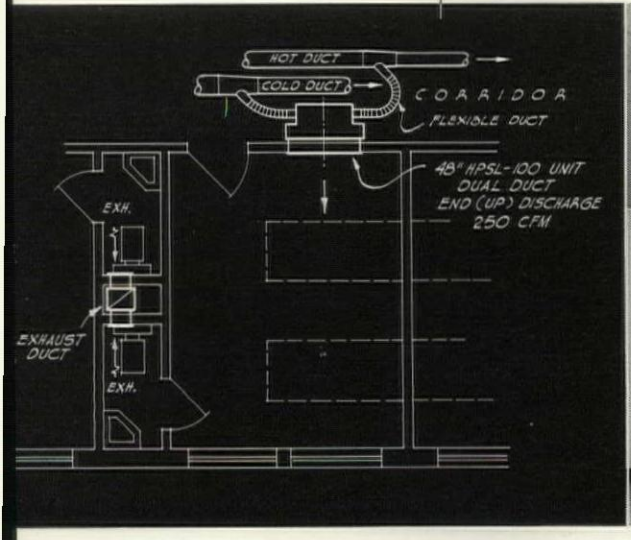

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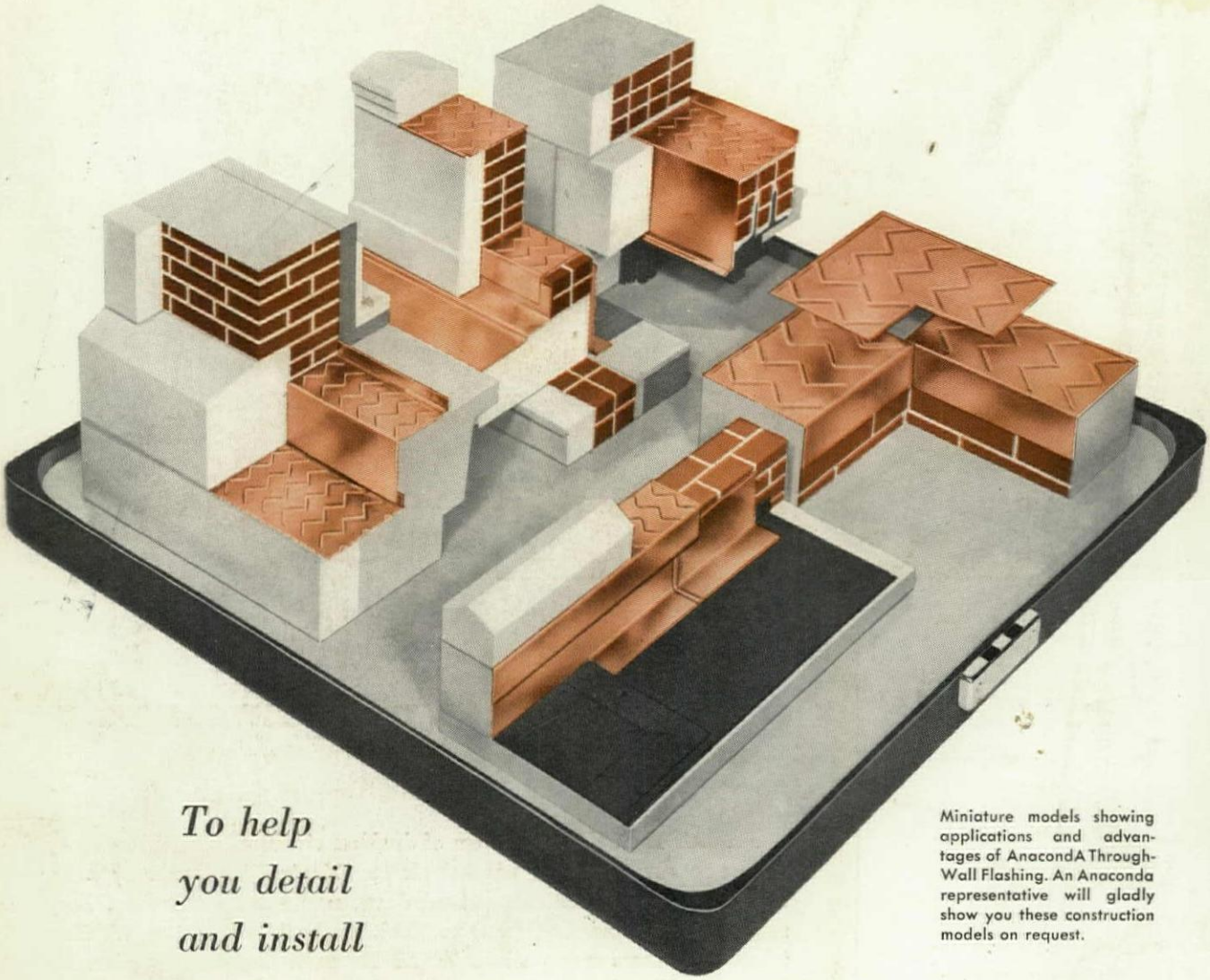

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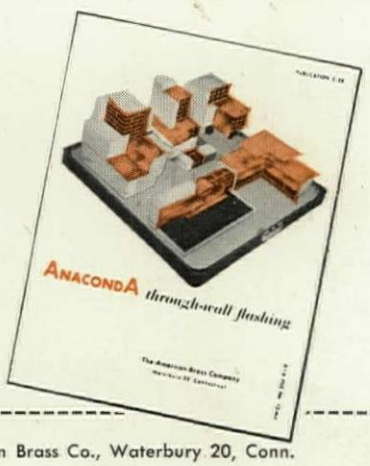

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